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# Learning Styles, Teaching Styles and Oral Skills Teaching. How Do they Differ and How They Can be Matched? The Case of First Year LMD Students at Ferhat Abbas University - Sétif

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**2018**

***About Learning***

***Anonymous***

*He always wanted to say things. But no one understood.*

*He always wanted to explain things. But no one cared. So he drew. **

*And it was after that, that he drew the picture. It was a beautiful picture.*

*He kept it under the pillow and would let no one see it. **

*And then he had to write numbers. And they weren't anything.*

*They were worse than letters that could be something if you put them together.*

*And the numbers were tight and square and he hated the whole thing. **

*He was square inside and brown, and his hands were stiff, and he was like anyone else.*

*And the thing inside him that needed saying didn't need saying anymore.*

*It had stopped pushing. It was crushed. Stiff.*

*Like everything else.*

*(Prashnig, 2004, p. 34)*

* *Parts of the poem deliberately left out.*

## Abstract

The instructions based on students' preferred ways of learning styles are called learning style-based instruction. This study was designed to examine the effectiveness of Learning Style Based Instructional Programme on the Oral Expression Achievement of first year students of English at Mohammed Lamine Debaghine Sétif 2 University, Algeria. The objectives of this study were: 1) to examine the different learning styles of the students, 2) to examine the match or mismatch between students' learning styles and teachers' teaching styles and strategies and 3) to make statistical comparison of the results of the traditional instruction with that of the Learning Style Based Instructional Programme. The design of the study was quasi-experimental specifically the non-equivalent pre-test, post-test control group design. The sample of the study (94) was selected by using a learning style inventory to examine the major learning styles of the participants. Three experimental groups were selected based on the high ratio of the learning style of the participants of the class, like visual students group, auditory students group and kinaesthetic students group and one representing the general students group. Accordingly, three Learning Style Based Instructional Programmes were developed: the Visual Instructional Programme, the Auditory Instructional Programme, and the Kinaesthetic Instructional Programme. Four units related to the "How to" BBC Learning English Programme were selected according to the Placement Test results. The experimental groups were taught through the relevant instructional strategies like visual students group taught through the Visual Instructional Programme, auditory students group through the Auditory Instructional Programme and, kinaesthetic students group through the Kinaesthetic Instructional Programme. The general students group was taught the same four units through Traditional Teaching Method. The standardized scales: Study Habits Inventory, College Academic Self Efficacy Scale and Academic Self Concept Scale were used to measure and collect data about the covariates: Study Habit, College Academic Self Efficacy, and Academic Self Concept respectively of both the experimental groups and the control group. An Oral Expression Achievement Test was used as a pre-test and posttest of this study. In order to test the research hypotheses, the data collected were analyzed quantitatively through the Independent Sample T-test and the Analysis of Covariance at 0.05 level of significance. The P-value was calculated for testing the null hypotheses.The results of pre-test revealed that there were no statistical significant differences in the performance of the experimental groups and the control group. While the results of post-test revealed that there were statistical significant differences in the mean score of both experimental and control groups. Students' achievement scores on post-test were obtained and analyzed for drawing out the conclusion. The results of the study indicated that the adjusted mean scores of the experimental groups was higher than that of the control group. Hence, the results of this investigation statistically support the research hypotheses. It was concluded that the Learning Style Based Instructional Programme had positive effect on the students' Oral Expression Achievement while considering Study Habit, College Academic Self Efficacy, and Academic Self Concept as covariates.

**Dedication**

*I dedicate this thesis to the memory of my beloved father, Raha Messaoud. I miss him every day…*

## Acknowledgments

All praise be to Allah, Lord of the Worlds, and may the peace and blessings be on the most noble of Prophets and Messengers, our Prophet Muhammad, and on his family and all of his Companions. I thank Allah, the Exalted, for giving me enough strengths and patience to tackle every problem with calm and ease for the completion of this PhD thesis.

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My mother, I am speechless! I can barely find the words to express all the wisdom, love and support you've given me. I am eternally grateful. If I am blessed to live long enough, I hope I will be as good a mother to Maylis as you are and have always been to me. I Love You.

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## List of Abbreviations

**AIP**: Auditory Instructional Programme

**ANCOVA:** Analysis of Covariance

**CASE:** College Academic Self Efficacy

**CASES**: College Academic Self Efficacy Scale

**CG:** Control Group

**DF:** Degree of Freedom

**EG:** Experimental Group

**FGD:** Focus Group Discussion

**FL:** Foreign Language

**FSLSM:** Felder-Silverman Learning Style Model

**HBDI:** Hermann Brain Dominance Instrument

**KIP:** Kinaesthetic Instructional Programmed

**KLSI:** Kolb Learning Styles Inventory

**LSBIP:** Learning Style Based Instructional Programme

**LSI:** Learning Style Inventory

**MBTI:** Myers–Briggs Type Indicator

**M:** Mean

**OE:** Oral Expression

**OEA:** Oral Expression Achievement

**OEAT:** Oral Expression Achievement Test

**PPP:** Presentation, Practice, Production

**PLSPQ:** Perceptual Learning Style Preference Questionnaire

**PTSPQ:** Perceptual Teaching Style Preference Questionnaire

**SD:** Standard Deviation

**SPSS:** Statistical Package for Social Sciences

**SSC:** Students Self Concept

**SSCS:** Students Self Concept Scale

**SSH:** Student Study Habit

**SSHS:** Student Study Habit Scale

**VAK:** The Visual learner, the Auditory learner, and the Kinaesthetic learner

**VAKT:** Visual (V), Auditory (A), Kinaesthetic (K) and Tactile (T)

**VARK:** Model which stands for Visual, Vural, Read-write, and Kinaesthetic

**General Introduction**

# General Introduction

## 1. Theoretical Background

Educational research has identified a number of factors for some of the differences in how students learn (Reid, 1987). One of these factors, learning styles, is of widespread interest in the education area (Dunn & Griggs, 1989). The idea of individualized "learning styles" originated in the 1970's and has gained popularity in recent years (Griffiths 2012).

The concept "learning style" has been differently defined in several ways by many researchers. However, the two most representative definitions refer to two fundemental aspects: a) the learning style represents an individual's preferred ways of responding (cognitively or behaviourally) to learning tasks which change depending on the environment or context (Peterson, et al., 2009 as cited in Tulbore, 2012), and b) the learning style refers to the idea that individuals differ in regard to what type of instruction is most effective for them (Pashler et al., 2008).

From these two views, one will notice that the learning style represent a serious issue, both for college students and lecturers (Tulbure, 2012). From the teachers' point of view, the fact that students have diverse leaning styles represents "a constant challenge, since the optimal instruction presupposes diagnosing individuals' learning styles and tailoring instruction accordingly" (Pashler et al., 2008, p. 137). The other way round, the learning style demonstrates a general preference for learning and includes physiological, affective, cognitive, and psychomotor dimensions (Knowles, et al., 2005).

When considering the learning style frameworks, an integral question for instructors and researchers is whether matching teaching styles and strategies with students' learning styles will lead to greater educational success (Tulbure, 2012). For the past three decades, this has been the concern of a classical debate in the subject of learning styles: the debate over the so-called "meshing hypothesis" (Zhang et al., 2012, Pashler at al., 2009). The "meshing

hypothesis" proponents speak of (a) tailoring teaching to the way in which each learner processes, absorbs, and retains new and difficult information (Dunn & Dunn's framework; International Learning Styles Network, 2008), (b) the learner's preferred modes of perception and processing (Kolb's, 1984, 1985, framework), or (c) ''the fit or match between [people's] learning style and the kind of learning experience they face'' (Hay Group, n.d., p. 11).

In this context, three different perspectives have emerged, each being supported by empirical studies (Tulbure, 2012). Thus, a first category of studies support the initial hypothesis (the meshing hypothesis or the matching hypothesis) and reveal the fact that the adjustment of instructional strategies to the students' learning styles enhances the academic achievement (Arthurs, 2007; Beck, 2001; Felder & Brent, 2005; Ford & Chen, 2001; Fox & Bartholomae, 1999; Rogers, 2009; Tulbure, 2010).

The second class of studies suggests that the mismatch, gap or disagreement between teachers' teaching strategies and learners' preferred learning styles would have some really valuable results and useful impacts on learning outcomes (Baker & Cooke, 1988; Cavanagh & Coffin, 1994; Kowoser & Berman, 1996). As Vaughn and Baker (2001, p. 98) claimed, "providing creative teaching-learning style mismatches which decide the students to journey the less dominant traits of their learning style stimulates each of gaining knowledge and flexibility in learning".

The final class of studies displays that the match between the students' learning styles and the instructional strategies did not have an impact on the students' academic achievement (Akdemir & Koszalka, 2008; Massa & Mayer, 2006). Pashler and colleagues (2008) argued that there is no empirical evidence to justify the incorporation of learning style assessments into the educational practice.

From the three previous perspectives and point of views, the "meshing hypothesis" was opted for to be the theoretical framework of this study. Hence, It was hypothesized that

teaching in congruence with learning styles may develop students' Oral Expression Achivement (OEA). A sizable body of empirical research that cannot be disregared suggests that students gain knowledge better when they are taught in forms that are in congruence with their preffered way of learning (Lovelace, 2005; Ogden, 2003; Armstrong & Mahmud, 2008; Chen & Tsai, 2008; Demirbas & Demirkan, 2007; Garcia, Amandi, Schiaffino, & Campo, 2007; Herbert & Stenfors, 2007; Hyde, 2007; Kayes, 2007; Reynolds & Vince, 2004; Welsh, Dehler & Murray, 2007; Sievers, 2007). Does this mean that we should adapt our teaching to fit our students' learning styles? Is it possible to identify the most appropriate teaching strategies for each learning style? If yes, is it possible that the match between these two learning-related concepts can enhance students' academic achievement and learning outcomes? These and more are the issues of the present study.

Leaving from this, an instructional programme was developed in this study by adopting the adequate teaching strategies corresponding to every learning style. To accomplish that, a reference to the research in the literature that represents suggestions about the most appropriate instructional strategies according to the learners' learning preferences was developed and discussed in chapter two.

**2. Statement of the Problem**

From the previous different perspectives and considering the variety of the existent data, one could only say that this issue is controversial and needs further investigation. Although the body size of research on learning styles is enormous, very few studies have opted for an experimental methodology that can test the validity of learning styles theory applied to education (Zhang, 2000). Moreover, of those that did use an adequate and suitable method, countless studies found results that flatly contradict the famous "meshing hypothesis" (Reynolds & Vince, 2007). For that reason, the aim of this study was to examine to what extent, if any, the meshing hypothesis in our EFL Department can prove its validity. In order

to find out roots of this problem which is the mismatch between the teaching strategies, styles and the students learning styles in the EFL classrooms at Sétif 2 University ie, problem that contradicts the meshing hypothesis, a corpus collection was first opted for through conducting series of classroom observations using a checklist (Appendix B) to observe the learning environment, students' ways of learning, ways of teaching, the instructional methods used, the procedures of assessment , evaluation and the kind of classroom interaction.

When teachers are aware about the learning process and adopt methods and strategies to make effective learning environment would be very important since both students and teachers are concerned with the education system. However, through the series of classroom observations, it has been noticed that the instruction in the majority of the Oral Expression (OE) classrooms was still teacher-centered with traditional instruction methods (Lecture Method) and the students' needs, interests and differences were not considered. The learning environment has been in traditional way and dominated with lecture method which was most of the time not interesting for many students. Moreover, it was observed that students expressed boredom and indifference in the disucssions sessions. After conducting a series of classroom observations with OE teachers of English, a focus group discussion (FGD) was conducted (Appendix A) with teachers and semi- structured interviews were opted for with both teachers (Appendix C) and students (Appendix D) for further evidence. Some students who, after being interviewed, argued that they feel totally disconnected from the entire classroom, others stated that they do not enjoy the sessions and emphasized that the classroom is too boring with the same habitual methods of instruction and they did not feel the course was helping them to learn. Moreover, some teachers said that they teach the way they have learnt believing that this is the best option to go for.

However, qualitative tools alone were insufficient to ascertain the research problem. To that end, the researcher opted for a quetionnaire to examine to what extent, if any, the match

or mismatch between the learning and teaching styles exisisted, quantitatively. Hence, a triangular approach utilizing, classroom observation, semi-structured interviews, FGD, and questionnaire presented a full picture of instrument validation. A full discussion of this data collection tools is presented in greater detail in the chapter of research design and methodology.

**3. Aims of the Study**

This study has two aims; the first is the theoretical investigation to review the available literature regarding learning styles that should be related to the study. The focus was also to examine other research findings related to learning styles, teaching strategies and oral language proficiency. The aims of the empirical investigation, is to answer the research questions raised.

The purpose of the present study was to examine the effect of Learning Style Based Instructional Programme (LSBIP) on the students' Oral Expression Achievement (OEA). Therefore, the aims of the empirical investigation are:

- To develop an Oral Expression Achievement Test (OEAT).
- To develop LSBIP.
- To study the effectivness of LSBIP on students' OEA considering Study Habit (SH), College Academic Self Efficacy (CASE), and Academic Self Concept (ASC) as the covariates.

**4. Research Design and Methodology**

This study was conducted to examine the effectiveness of Learning Style Based Instructional Programme (LSBIP) on first year EFL students' Oral Expression Achievement (OEA) at Sétif 2 University. After taking a Placement Test about the participants' language level, it was determined that students were on the level of intermediate level . Accordingly, four teaching units were selected from the BBC Learning English Programme. A learning

style inventory (VAK) was used to identify the students' learning styles and to select the groups for the experiment. Accordingly, one group was Visual student group (EG1), the second was Auditory student group (EG2), and the third was Kinaesthetic student group (EG3) and the fourth was control global student group (CG4). The research design in this study was a pretest-posttest control group quasi-experimental design. The reason for the quasi-experimental research design was that the participants (94) in the experimental group and the control group were not subjected to a random assignment (intact groups ).

Before the treatment, the pre OEAT was applied to both of the groups. After that, the experimental groups (EG1, EG2, EG3) were treated with the three LSBIPs: Visual Instructional Programme (VIP), Auditory Instructional Programme (AIP) and Kinaesthetic Instructional Programme (KIP) while, the control group (CG4) was treated with the traditional teaching method (Lecture Method). The students' College Academic Self Efficacy (CASE), Study Habit (SH) and Academic Self Concept of students were also measured using the College Academic Self Efficacy Scale (CASES), Study Habit Inventory (SHI), and Academic Self Concept Scale ( ASCS) respectively. At the end of experiment, to measure the Oral Expression Achievement (OEA) of the given units, a post OEAT was administered over all the four groups. The data collected was analyzed using proper statistical techniques: the Independent T-test which was used to compare the pre-test results and the analysis of covariance (ANCOVA) used to compare the post-test results. A discussion of research desing and methodology is presented in greater detail in chapter four.

**5. Research Questions and Hypotheses**

The main purpose of the present study is to examine the effectiveness of LSBIP on students' OEA. Prior research and theory served as the foundation upon which the study was developed. In an attempt to expand knowledge in the field of education, the current study states the following research questions, hypotheses and accordingly their null hypotheses:

1/ Is there a match or mismatch between teachers' teaching styles, strategies and students' learning styles?

2/ To what extent, if any, VIP improves students' OEA considering CASE, SH, ASC as the covariates?

3/ To what extent, if any, AIP improves students' OEA considering CASE, SH, ASC as the covariates?

4/ To what extent, if any, KIP improves students' OEA considering CASE, SH, ASC as the covariates?

*Hypothesis One*

There would be statistically significant difference between adjusted mean OEA scores of Visual students taught through the VIP and General students taught through the Traditional Teaching Method considering CASE as a covariate.

*Null hypothesis One*

There would be no statistically significant difference between adjusted mean OEA scores of Visual students taught through the VIP and General visual students taught through the Traditional Teaching Method considering CASE as a co-variate.

*Hypothesis Two*

There would be statistically significant difference between adjusted mean OEA scores of Visual students taught through the VIP and General visual students taught through the Traditional Teaching Method considering SH, as covariate.

*Null hypothesis Two*

There would be no statistically significant difference between adjusted mean OEA scores of Visual students taught through the VIP and General visual students taught through the Traditional Teaching Method considering SH, as covariate.

*Hypothesis Three*

There would be statistically significant difference between adjusted mean OEA scores of Visual students taught through the VIP and General visual students taught through the Traditional Teaching Method considering ASC as a covariate

*Null hypothesis Three*

There would be no statistically significant difference between adjusted mean OEA scores of Visual students taught through the VIP and General visual students taught through the Traditional Teaching Method considering ASC as a covariate.

*Hypothesis Four*

There would be statistically significant difference between adjusted mean OEA scores of Auditory students taught through the AIP and General Auditory students taught through the Traditional Teaching Method considering CASE as a covariate.

*Null hypothesis Four*

There would be no statistically significant difference between adjusted mean OEA scores of Auditory students taught through the AIP and General Auditory students taught through the Traditional Teaching Method considering CASE as a covariate.

*Hypothesis Five*

There would be statistically significant difference between adjusted mean OEA scores of Visual students taught through the AIP and General Auditory students taught through the Traditional Teaching Method considering SH as a covariate.

*Null hypothesis Five*

There would be no statistically significant difference between adjusted mean OEA scores of Visual students taught through the AIP and General Auditory students taught through the Traditional Teaching Method considering SH as a covariate.

*Hypothesis Six*

There would be statistically significant difference between adjusted mean OEA scores of Auditory students taught through the AIP and General Auditory students taught through the Traditional Teaching Method considering ASC as covariates.

*Null hypothesis Six*

There would be no statistically significant difference between adjusted mean OEA scores of Auditory students taught through the AIP and General Auditory students taught through the Traditional Teaching Method considering ASC as covariates.

*Hypothesis Seven*

There would be statistically significant difference between adjusted mean OEA scores of Kinaesthetic students taught through KIP and General Kinaesthetic students taught through the Traditional Teaching Method considering CASE as a covariate.

*Null hypothesis Seven*

There would be no statistically significant difference between adjusted mean OEA scores of Kinaesthetic students taught through KIP and General Kinaesthetic students taught through the Traditional Teaching Method considering CASE as a covariate.

*Hypothesis Eight*

There would be statistically significant difference between adjusted mean OEA scores of Kinaesthetic students taught through KIP and General Kinaesthetic students taught through the Traditional Teaching Method considering SH as a covariate.

*Null hypothesis Eight*

There would be no statistically significant difference between adjusted mean OEA scores of Kinaesthetic students taught through KIP and General Kinaesthetic students taught through the Traditional Teaching Method considering SH as a covariate.

*Hypothesis Nine*

There would be statistically significant difference between adjusted mean OEA scores of Kinaesthetic students taught through KIP and General Kinaesthetic students taught through the Traditional Teaching Method considering ASC as a co-variate.

*Null hypothesis Nine*

There would be no statistically significant difference between adjusted mean OEA scores of Kinaesthetic students taught through KIP and General Kinaesthetic students taught through the Traditional Teaching Method considering ASC as a covariate.

**6. Significance of the Study**

From both the qualitative and quantitative analysis of the exploratory phase results ( see chapter 6), it was evident that there is a gap between the teaching styles, strategies and the students' learning styles. This problem was behind the idea of this research topic. It was thus born out of a desire to provide teachers with an alternative approach to curricular and instructional methods by choosing a broad variety of learning experiences to attract a wide spectrum of learning styles; teachers can maximize the learning potential in a class. Moreover, the researcher developed the LSBIP was developed and was based on visual, auditory and kinaesthetic students' learning style (VAK). If the teaching strategies used during the three programmes (the VIP, the AIP, and the KIP) proved to be effective, teachers can take advantage of it.

**7. Scope of the Study**

Obviously, the findings of the study cannot be applied in all the condition. Henceforth, it is important to know the scope of the study. The present study was carried out with first year EFL students at Mohamed Lamine Debaghine Setif 2 University. Out of 465 students, 94 participated in this study. The four units (1) Discuss, (2), Instructions, explanations and

advice, (3), Complaints, apologies and excuses (4) Good news, bad news ) were the lessons used in the LSBIP under the topic of "How to" from the BBC Learning English Programme.

The current study followed the quasi-experimental method in order to collect data using quantitative measurements. In a quasi-experiment, the control and treatment groups differ not only in terms of the experimental treatment they receive, but also in other, often unknown or knowable, ways. Thus, it is extremely important to statistically control for as many of these differences as possible. The discussion of these statistical measures is introduced in chapter four and chapter six.

**8. Thesis Organization**

This thesis is presented in seven chapters. The researcher had first to start with the general introduction where the statement of the problem, research questions, hypotheses, null hypotheses and, the aims of the study were explained. It also sets out the significance and the contribution of the study. The first three chapters are theoretical chapters which represent the theoretical foundation of the problem. The first chapter deals with the concept of learning, learning theories and their significance in teaching and learning process. The second chapter tackles the learning style theories and inventories and, the third chapter deals with the oral language proficiency which represents the measured dependent variable (DV) in this study. The fourth chapter represents the research design and its bases. This chapter describes the population and sampling of the study, selection and development of the tools used, procedures adopted for data collection and tackles the issue of reliability and validity of the research tools used. The fifth chapter explains the development of the LSBIP where the VIP, AIP, and KIP were developed by adopting the appropriate teaching strategies. The sixth chapter provides the information on the presentation, analysis, and discussion of the collected data. Finally, chapter seven presents the conclusions, implications of the study, and the recommendations for future researches, Ministry of Higher Education, and for educators.

## 9. Identification of Variables

Variables in any scientific research can be manipulated, controlled or observed. The following variables were involved in the present study.

**Independent Variables:** Independent variables are the conditions or characteristics that the experimenter manipulates or controls to acertain their relationship to observed phenomena. In the present study, the independent variable was 'Learning Style Based Instructional Programme.' The three levels of the independent variables were: (1) Auditory Instructional Programme (2) Visual Instructional Programme and (3) Kinaesthetic Instructional Programme

**Dependent Variable:** The dependent variables are the conditions or characteristics that appear, disappear or change as the experimenter introduces removes or change the independent variables. In the present study the dependent variable was the students' Oral Expression Achievement (OEA).

**Co-variates:** Student's personal domains which were controlled statistically, using statistical technique ANCOVA were as: 1. College Academic Self Efficacy, 2. Study Habit, 3. Academic Self Concept. These variables were controlled statistically; because it was not possible to make all study groups equal regarding all these three variables.

## 10. Operational Definitions of Terms

The operational definitions of the terms used in the present study are given below:

**Learning Style:** The way in which a learner processes and remembers new information (Dunn & Dunn, 2005) is called a learning style. There are main three types of the learning style: (1) Auditory Learning Style, (2) Visual Learning Style and (3) Kinaesthetic Learning Style.

**Learning Strategies:** Are defined as "specificactions, behaviors, steps, or techniques-- such as seeking out conversation partners, or giving oneself encouragement to tackle a difficult

language task -- used by students to enhance their own learning" (Scarcella & Oxford,1992, p. 63).

**Learning style Inventory:** A learning style inventory is a questionnaire used to identify individuals' preferred learning styles. In this study, students learning styles were identified through a learning style inventory. According to it, there are three categories of students based on which learning style of students can be identified (Burns & Grove, 2007).

**Learning Style Based Instructional Strategy:** Different teaching-learning techniques, methods and approaches appropriate to three learning style e.g., Visual learning style, Auditory learning style and Kinaesthetic learning style was considered as Learning Style Instructional Based Strategy

**Visual Instructional Programme:** It is consisted of the teaching strategies using visual experiences to teach the content points.

**Auditory Instructional Programme:** It is consisted of the teaching strategies using listening experiences to teach the content points.

**Kinaesthetic Instructional Programme:** It is consisted of the teaching strategies using writing, doing experiences to teach the content points.

**Academic Achievement:** It refers to the achievement levels of students in all academic content areas (English language arts, mathematics, science, and social studies,) as indicated by results of a standardized achievement test.

**Oral skills:** Most papers use the term "communicative competence" to describe students' oral and written skills in language learning. In this study, "oral skills" means the skills required to use spoken English effectively and appropriately in social situations. In this study, Oral Skill means the ability to manipulate the spoken language conventionally. It focuses on students' oral competency mainly on students' oral test scores.

**Oral Expression Achievement:** Scores on oral expression achievement test that was developed by the researcher as defined by the proposed oral profiency criteria of the following components: pronunciation, grammar, vocabulary, fluency of speech, listening comprehension (Oller, 1979).

**Teaching Styles:** Are a manifestation of one's own learning style combined with the way the teacher was taught (Silver et al., 1996).

**Teaching Strategy:** "Teaching strategy is a particular set of steps to evoke from learners a specific set of desired behaviors" (Silver et al., 1996, p.8)

**College Academic Students Self Efficacy:** The Score obtained from the students' responses on College Academic Student Self Efficacy developed by Owen and Froman (1988).

**Study Habit:** The Score obtained from the students' responses on 'Study Habit Inventory' developed by Pallaviben Patel was termed as Study Habit.

**Student Self Concept:** The Score obtained from the students' responses on Students Self Concept Scale developed by Reynolds et al., (1980).

**Instructional Strategies:** Are teaching methods and practices utilized to conduct a learning activity as reported by the teachers. In this study, they refer to techniques, methods, and activities.

**Covariate:** Covariate – (also called a "concomitant" or "confound" variable) a variable that a researcher seeks to control for (statistically subtract the effects of) by using such techniques as Multiple Regression Aanalysis (MRA) or Analysis of Covariance (ANCOVA) (Leech, Barrett, & Morgan, 2005; Vogt, 1999). The CASE, SH, and ASC were considered as covariates in this study.

**Traditional Teaching Method:** In this study, the "traditional teaching method" refers to a teacher-centered teaching. Under this approach, delivering material is through lectures rather than the facilitation of communication among students.

**Chapter One: Learning Theories**

# Chapter One

# Learning Theories

## Introduction

Learning theories are conceptual systems demonstrating how information is absorbed, prepared, processed, and retained during learning processes. Cognitive, emotional, and environmental influences, as well as prior experience, all play a part in how understanding, or a world view, is acquired or changed and knowledge and skills retained (Knud, 2004; Ormrod, 2012).

This chapter provides clear information about at an introductory level on the learning theories most commonly referred to. An understanding of some learning theory is of crucial importance for effective teaching and learning processes. It clarifies the most useful aspects of theories from many different fields of knowledge, like psychology, philosophy, linguistics and information technology (Cotton, 1995). Useful tips and ideas are offered from a wide range of schools of thought.

## 1.1. Concept of Learning

Learning is something about which we all have understanding and in which we have all participated (Bouton, 2007; Schwartz, Wasserman, & Robbins, 2002). Learning proceeds in a number of diverse ways, and has been described and explained by many different interested researchers and opinion makers over many years. It is possible to find a range of definitions of the process of learning.

- Learning is a change in behavior as a result of experience or practice.
- The acquisition of knowledge.
- Knowledge gained through study.

- To gain knowledge of, or skill in, something through study, teaching, instruction or experience.
- The process of gaining knowledge. A process, by which behavior is changed, shaped or controlled.
- The individual process of constructing understanding based on experience from a wide range of sources (Pritchard, 2013, p. 1).

Cambridge Advanced Learner's Dictionary defines the word learn as:

- To get knowledge or skill in a new subject or activity.
- To make yourself remember a piece of writing by reading it or repeating it many times.
- To start to understand that you must change the way you behave.
- To be told facts or information that you did not know (p. 815).

A basic understanding of the learning processes is essential for those who intend to develop activities that will have the potential to lead to effective learning taking place in the classrooms; that is, teachers . We need to be aware that strategies are not the same as theory (Pritchard, 2013). Theory is something that is able to explain what is observed, upon which strategies-what is actually done in the classroom to achieve particular learning outcomes- are based (Pritchard, 2013, p. 3). Certainly, it is possible to teach would-be teachers a range of approaches (strategies) to adopt in their work with learners, and this will lead to trainees having knowledge of the strategies under consideration but to approach this teaching without considering the underlying theory would be to leave the job only half completed and provide the trainees with little understanding of the reasons of such approaches (Montgomery, 2005).

Many different theorists, researchers and educational practitioners has defined the concept learning in numerous ways. While universal agreement on one single definition is non-existent, numerous definitions employ common statements. The following definition by

Schunk, 2000, p.2 as cited in Royer, 2005, p. 279**)** involves these main ideas: "Learning is an enduring change in behavior or in the capacity to behave in a given fashion, which results from practice or other forms of experience".

Without a doubt, many learning theorists will oppose this definition of learning presented here. Be that as it may, it is not the definition that isolates a given theory from the rest. The major constracts among theories lay more in interpretation than they do in definition (Ertmer & Newby 2013). These constracts spin around a number of key issues that eventually delineate the instructional prescriptions which sream from each theoretical perspective (Ertmer & Newby, 1993).

Schunk (1991) states five definitive questions that serve to distinguish each learning theory from the others:

(l) How does learning occur?

(2) Which factors impact learning?

(3) What is the role of memory?

(4) How does transfer occur? and

(5) What types of learning are best explained by the theory?

Expanding on this original list, Burger, Webber, and Klinck (2007) have included two additional questions important to the instructional designer:

(6) What fundamental assumptions/principles of this theory are related to instructional design? and

(7) How should instruction be organized and structured to encourage learning?

### 1.2. A Brief Historical Perspective

William James, (as cited in Pitchard, 2013) an American philosopher and physician, is considered to have been in at the very beginning of the serious study of mental processes. He said, in 1890, that psychology was the "science of mental life". "It is from this approximate

starting point that the study of the mind and of human behavior- and, in particular, the study of learning- began to grow" (Pitchard, 2013, p. 3).

### 1.2.1. Behavioral Theory and Learning

According to Woollard (2010), Behaviourism is a theory of animal and human learning that centers upon the behavior of the learner and the alter in behavior that happens when learning takes place. It is a theory of learning focusing on observable behaviours and discounting any mental activity. Learning is defined simply as the acquisition of new behavior ( Charles & Soltis, 2004).

"Behaviorism was, and is, a moment primarily in American psychology that rejected consciousness as psychology's subject matter and replaced it with behavior" (Leahey, 2000, p. 686). Behaviorism has been deeply studied, however, theorists proceed to have trouble agreeing on a single definition for behaviorism (Mills, 1998). The ideas of behaviorism have their roots in the late nineteenth and early twentieth centuries, although it is possible to race some ideas back to Tomas Hobbes (1588-1679) and David Hume (1711-76) as cited in Pritchard, 2013). John Watson (1878-1958), an American working in the realm of this new philosophy of psychology, is widely accepted as one of the earliest proponents of behaviourism. He was the first who used the term 'behaviourism'. He came to the perspective that psychology could only become a true science if it became a process of detailed objective observation and scientific measurement (Pritchard, 2013).

Watson mirrored Pavlov's research findings on animal responses in his conditioning experiment with a young child whom he conditioned to fear a white rabbit by repeatedly pairing it with the loud clang of a metal bar. The child's conditioned fear of a white rabbit was so ingrained in his behavior that he became fearful of other white furry objects such as a Santa mask and Watson's white hair (Watson & Rayner, 1920, as cited in Eysenck, 2004).

"The behaviorism of Watson and Skinner is based on a positivistic approach to science, that is, a reductionist view in which all that can be addressed is the relation between sensory stimuli and the unique corresponding response" (Webb, 2007, p. 1086). However, Skinner eventually came to the realization that human beings go beyond just responding to the environment. He found that they also react to the environment based on prior experiences (Skinner, 1974, as cited in Weegar & Pacis, 2012). According to Rotfeld (2007), the term behaviourism provided a "direction for social science research that would allow control and measurement of all relevant variables by ignoring human thought or cognition" (p. 376). Consequently, behaviorists were not curious about in what might occur in people's minds; as they were only inquisitive about behavioral reactions. As a result, these reactions were measured in connection to test stimuli. In other words, behaviorists saw this as a way for them to be seen as logical with the same way as the hard sciences of chemistry or physics are seen (Weegar & Pacis, 2012). By narrowing down their focus, the behaviorists gave for more prominent utilize of factual examination of statistical analysis of experimental results. Their goal was to achieve a greater use of scientific methods for developing stronger theories (Westen, 2002).

Behavior theorists, thus define learning as "nothing more than the acquisition of new behavior" (Alao, et al., 2010, p.47). Behaviorists call this method of learning 'conditioning'. Two different types of conditioning are described and demonstrated as "viable explanations of the way in which animals and humans alike can be 'taught' to do certain things" ( Pritchard, 2013, p. 7). Experiments by behaviorists recognize conditioning as a widespread learning process. There are two distinctive sorts of conditioning, each yielding a distinctive behavioral design:

- ***Classic conditioning:*** *"* occurs when a natural reflex responds to a stimulus. The most popular example is Pavlov's observation that dogs salivate when they eat or even see

food. Essentially, animals and people are biologically wired so that a certain stimulus will produce a specific response" (Wright, 2006, p. 168).

- ***Behavioral or operant conditioning:*** operates when a response to a stimulus is reinforced. Basically, "operant conditioning is a simple feedback system: If a reward or reinforcement follows the response to a stimulus, then the response becomes more probable in the future. For example, leading behaviorist B.F. Skinner used reinforcement techniques to teach pigeons to dance and bowl a ball in a mini-alley" (Wright, 2006, p.168).

There have been critisism of behaviorism, counting the following:

- Behaviorism does not account for all sorts of learning, since it underestimates the functions of the mind.
- Behaviorism does not explain some learning–such as "the acknowledgement of new language patterns by young children–for which there is no reinforcement mechanism". (Wright, 2006, p.169).
- Research has shown that animals adapt their reinforced patterns to new information. For instance, "a rat can shift its behavior to respond to changes in the layout of a maze it had previously mastered through reinforcements" (Alao, et al., 2010, pp. 53, 54).

What educators can do under this theory? According to Skinner as quoted in saying, "Teachers must learn how to teach…..they need only to be taught more effective ways of teaching." (as cited in Michie, et al., 2011). Skinner supported the view that positive reinforcement should be positive so that it would be more effective in ameliorating and changing behavior than punishment with clear implications for the then widespread practice of rote learning and punitive discipline in teaching and learning processeseducation. He recommended that any age-appropriate skill can teach using five principles to cure learning issues ( Michie, et al., 2011):

1. Give the learner immediate feedback.

2. Break down the task into small steps.

3. Repeat the directions as many times as possible.

4. Work from the simplest to the most complex tasks.

5. Give positive reinforcement.

Teachers, who reward or punish student behaviors, often use behaviorism (Woollard 2010). Utilizing behaviorist theory within the classroom can be rewarding for both students and teachers. Behavioral change happens for a reason; students work for things that bring them positive sentiments, and for endorsement from individuals they like and respect. They change behaviors to satisfy the desires they have learned to value (Standridge, 2002). They generally avoid behaviors they associate with unpleasantness and develop habitual behaviors from those that are repeated often (Parkay & Hass, 2000). The complete basis of behavior modification is that most behavior is learned. In the event that behaviors can be learned, at that point they can moreover be unlearned or relearned (Parkay & Hass, 2000).

Parkay and Hass (2000) claims that a behavior that goes unrewarded will be diposed of and by overlooking an undesirable behavior will go distant toward killing it. When the teacher does not react furiously, the issue is constrained back to its source--the student. Behaviorist learning theory is not only crucial in developing desired behavior in mainstream education; special education instructors have classroom behavior modification plans to implement for their students. These plans garantee success for these students in and out of school (Standridge, 2002).

### 1.3.2. Piaget's Cognitive Theory and Learning

In the late 1950s, learning theory shifted away from the use of behavioral models to an approach that relied on learning theories and models from the cognitive sciences (Gardner, 1985, as cited in Dumont, et al., 2010). Cognitivism was very popular in the 20$^{th}$ century and

is based on exploring the mind while observing the change of the outside behavior (Skinner, 1945). Many theorists such as Piaget, Vygotsky, and Gagné disagreed with behaviourism because they were convinced that learning could also occur without external stimuli (Gagné et al., 1985; Piaget & Inhelder, 1969, as cited in Vanderzanden et al., 2007, p. 69). According to their vision the human mind is an input –output model of information. They argued that "if learners can apply certain rules, concept and knowledge, of for instance procedural steps in different scenarios than the transfer of such knowledge has occurred" (Vanderzanden, 2007, p. 69).

In education, cognitivism focuses on the accurate transmission of knowledge of the objective reality of the world from a teacher to students. Success is achieved when, at the end of the lesson, the students have the same mental construct of the objects being studied as that of the teacher (Leonard, 2002). Unlike behaviourism which involves no interest in studying internal mental states, but rather in external outputs, learning products, and behavioral change, "cognitivism is completely concerned with an internal, symbolic mental processing system that focuses on learning schemas and that focuses on how the brain receives, internalizes, and recalls information" (Leonard, 2002, p. 30).

Numorous psychologists were not satisfied with behaviourism. There was a conviction among a few that there was as well much of a focus on single events, stimuli and overt behaviour (Leonard, 2002). Such feedback was particularly solid from those who saw themselves as Gestalt psychologists (Gestalt meaning configuration or pattern in German). For them, perceptions or images ought to be drawn closeras a design or an entirely instead of component parts. Where behaviourists looked to the environment, those drawing on Gestalt turned to the individual's mental processes. In other words, they were concerned with cognition – the act or process of knowing (Smith, 1999).

Jean Piaget with other researchers, in addition to the recognition of the contribution of environment, they investigated changes in inner cognitive structures. Piaget identified four stages of mental growth (sensorimotor, preoperational, concrete operational and formal operational). Jerome Bruner explored how mental processes might b connected to instruction (emphasizing, among other things, learning through discovery). Robert M. Gagné created a model that highlighted eight distinctive forms of learning – behaviourists identifying only a fragment of human capabilities (Smith, 1999). Compared with behavioral theory, cognitive psychology centers on internal events. Hartley (1998) has usefully drawn out some of the key principles of learning associated with cognitive psychology. As he puts it: "Learning results from inferences, expectations and making connections. Instead of acquiring habits, learners acquire plans and strategies, and prior knowledge is important" (1998, p. 18). The principles he identifies are:

- ***Instruction should be well-organized***: The hallmark of good instruction is that it is clearly organized. Well-organized materials easier to learn and to remember than is badly organized material.
- ***Instruction should be clearly structured:*** Subject matters are said to have inherent structures – logical relationships between key ideas and concepts – which link the parts together. Well-structured materials are easier to learn and to remember.
- ***The perceptual features of the task are important***: Learners attend selectively to different aspects of the environment, so the way a problem is displayed is important in helping them to understand it (giving learners an outline in advance that conveys the structure of the topic to be covered provides an appropriate illustration.
- ***Prior knowledge is important***. For people to acquire something new it must fit in with what they already know. New materials must fit in with what has gone before, and to indicate in which ways it is new or different.

- ***Differences between individuals are important as they will affect learning*:** As well as differences in intellectual ability and personality, differences in 'cognitive style' or methods of approach also affect learning.

- ***Cognitive feedback gives information to learners about their success or failure concerning the task at hand*:** This feedback may be intrinsic or extrinsic. In stimulus-response theory the term 'reinforcement' is often used in this sense of 'providing information' rather than simply as a 'reward'. Reinforcement can come through giving information – a 'knowledge of results' – rather than simply a reward. Finally, learning with understanding is better than learning by rote, or learning without understanding

Teachers must arrange a developmentally fitting curriculum that upgrades their students' coherent and conceptual development. Instructors must play roles as attention getter, organizer, connector and repeater opens opportunities for practicing, rehearsing, encoding emphasize the critical role that experiences–or interactions with the surrounding environment–play in student learning (Shaw et al.,1970).

There are five main teaching implications drawn from Piaget's theory (Slavin, 2005):

1. The process of children's thinking should be the focus and not only its products. Other thn looking for simply appropriate answer, teachers' concern should be on the student's understanding and on the process they utilize to reach the correct.

2. Teachers should acknowledge the important role of children's self-initiated, active involvement in learning activities. In a classroom based on Piaget's theoty, children ought to be encouraged to discover themselves through unconstrained interaction with the environment, instead of the presentation of ready-made knowledge.

3. The focus should be on the practices that aim to make children adult like in their thinking. Piaget's point of view is that not accelerating children's process through the stages which might be even worse than no teaching at all.

4. while Piaget's theory confirms that children go through all the same developmental stages; they do so at different rates. Hence, instructors should focus on arranging classroom activities for both individuals and groups other than for the whole class group.

5. The educational implication of Piaget's theory is the adaptation of instruction to the learner's development level. It is important that the content of instruction needs to be consistent with the developmental level of the learner.

According to Piaget's theory, the teacher's main role is the facilitation of learning by providing various experiences for the students. "Discovery Learning" provides students with opportunities to explore and experiment, while encouraging new understandings (Shaw, et al,1970). Opportunities that permit students with diverse cognitive levels to work together frequently offer assistance for less mature students to progress and reach to a higher understanding of the material. One future suggestion for the instruction of students is the use of hands on encounters to assist students learn (Wood, 2008). Some general suggestions include:

- The incorporation of visual aids and concrete props.
- Make learning process easier by using familiar examples to explain complex ideas.
- Faciliting assimilation of new concepts and information by providing the student with the opportunities to classify and organize the information.
- Incorporate issues that need logical and analytical thinking. In this case, the "brain teasers" are the best way to do this.

### 1.3.3. Constructivism Theory and Learning

Constructivism is another theory that has been used to guide educational practice. Constructivist theory advocates for students to create their own understanding through active involvement in the learning process. This theory has evolved from information processing theory (Anderson, Reder, & Simon, 1998, as cited in Thomas et al., 2008, p. 24) and Piaget's

theory. Bruner (1973) noted the benefits of active versus passive learning during his information processing research, making him a pioneer in constructivist theory. Social and cognitive constructivism has further defined the theory.

Social constructivism (Durbin, 1996) suggests that information in interpreted by the learner based on personal experience and context, so what is learned in the same situation varies from person to person. Cognitive constructivism is the bases for some language, math and science practices, so educators often refer to this as “constructivist theory”.

There are several guiding principles of constructivism (Alao et al., 2010):

1. Learning is a dynamic process in which the learner employs sensory input and develops meaning out of it. The more traditional formulation of this idea involves the terminology of the active learner (Dewey's term) emphasizing the fact that the learner must do something; that learning is not the inactive acceptance of information which exists "out there" but that learning includes the learner’ s engagement with the world.
2. “People learn to learn as they learn: learning both of constructing meaning and constructing systems of meaning. For example, if we learn the chronology of dates of a series of historical events, we are simultaneously learning the meaning of a chronology. Each meaning we construct makes us better able to give meaning to other sensations which can fit a similar pattern” ( Alao et al., 2010, p. 63-64)
3. The most vital activity of constructing meaning is mental: it happens within the intellect. Physical activities, hands-on experiences may be fundamental for learning, particularly for children, but it is unsufficient; we have to provide learning experiences in which both the mind and the hands can work altogether (Dewey labeled this reflective activity.)
4. Learning includes language: the language we utilize impacts learning. On the experimental level, researchers have noticed that individuals talk to themselves as they learn. On a more common level, there is a collection of contentions, displayed most compellingly by

Vigotsky, that language and learning are inseparably intertwined. This point was clearly emphasized in Elaine Gurain's reference to the requirenment to honor native language in developing North American exhibits. The need to have material and programs in their own language was a critical request by numorous individuals of many Native American communities.

5. Learning is a social action: our learning is intimately related with our association with other human beings, our istructorss, our peers, our family. Our efforts to educate would be more rewaeding when we recognize this point other than trying to ignore it. Dewey pointd out that much of traditional and conventional instruction is oriented towards isolating the learner from all kinds of social interaction, and towards percieving instruction as a one-on-one relationship between the learner and the learned material. However, (in Dewey's formulation) education should admit the social aspect of learning and employs discussions, conversation, interaction with others, and the application of knowledge as a fundamental aspect of learning.
6. Learning is contextual: we do not learn disconnected from realities that are divorced from the rest of our lives: we learn in relation to what else we know, what we accept and believe, our judgements and our fears. On reflection, it gets clear that this point is really a corollary of the perspective that learning is active and social. We cannot seperate our learning from our lives.
7. Learning requires knowledge: new knowledge cannot be assimilated whithout having some structure from previous knowledge to build on. The more we know, the more we become ready to learn. subsequently any effort to educate must be associated to the state of the learner must give a path into the subject for the learner based on that learner's previous knowledge.

8. Learning takes time: learning is not instantaneous. For effective learning we have to revisit ideas, try them out, play with them and utilize them. This cannot happen in the 5-10 minutes. In case you reflect on anything you have got learned, you quickly realize that it is the product of repeated exposure and thought. Even, or particularly, moments of profound insight, can be traced back to longer periods of planning.
9. Motivation is a key component in learning. Not only is it the case that motivation assists learning, it is fundamental for learning. This perspective of motivation is broadly conceived to incorporate an understanding of ways in which the knowledge can be utilized. Unless we know "the reasons why", we may not be very included in utilizing the knowledge that may be ingraining in us.

According to (Zhu, 2011, p. 52), constructivism could have an impact on learning through the following points:

- ***Curriculum***: Constructivism calls for the disposal of a standardized educational programs. Instead, it encourages using educational curricula customized to the students' previous knowledge. It emphasizes as well hands-on problem solving.
- ***Instruction*****:** The theory of constructivism enables instructors to focus on making associations between realities, facts and fostering new understanding in students. Instructors tailor their instructional strategies to student responses and ask students to analyze, interpret, and predict information. Instructors also depend to a great extent on open-ended questions and promote extensive dialogue among students.
- ***Assessment***: Constructivism calls for the elimination of grades and standardized testing. Instead, assessment becomes part of the learning process so that students play a larger role in judging their own progress ( Zhu, 2011, p. 52).

### 1.3.4. Vygotsky' Theory and Learning

Len Vygotsky's social development theory is an attempt to define human cognition in relation to the social interaction of the individual within his or her culture (Leonard, 2002). According to Vygotsky, human consciousness is completely a result of socialization and enculturation. Social interaction plays a fundamental role in the development of all cognitive abilities, including thinking, learning and communicating (Leonard, 2002).

The social cognition-learning theory declares that culture is the prime determinant of individual improvement. "Humans are the only species to have created culture, and every human child develops in the context of a culture" (Lawrence, 2008, p.36). Therefore, a child's learning development is influenced in different ways huge and little by the culture–including the culture of family environment–in which he or she is enmeshed (Doolittle, 1997). Mishra (2013) represents a summary of Vygotsky's perspective in the following:

1. Culture represents two types of contributions to a child's cognitive and intellectual development. *First*, culture anables children acquire much of the content of their knowledge. *Second*, the environmental culture provides a child with the processes or means of their thinking, what Vygotskians call the instruments of intellectual adaptation. Biefly speaking, according to the social cognition-learning model, children can learn both how to think and what to think through culture.
2. Through dialectical processes, a child can enhance cognitive development and learn through problem-solving experiences shared with someone else, usually a parent or an educator but usually a sibling or peer.
3. At first, the individual interacting with a child expects most of the responsibility for directing the problem solving. However, gradually this responsibility gradually transfers to the child.

4. Language is an essential form of interaction through which individuals (adults) transfer to the child the rich body of knowledge that exists whithin the culture.
5. As learning advances, the child's language comes to serve as his/her essential devices of mental and intellectual adjustments. Eventually, children can use internal language to coordinate their own behavior.
6. Internalization alludes to the process of learning–and in this manner internalizing–a rich body of knowledge and devices of thought that first exist exterior the child. This happens essentially through language.
7. A distinction exists between what a child can do by himself and what the child can do with others' assistance. Vygotskians call this difference the zone of proximal development (ZPD).
8. Since much of what a child learns comes from the culture around her and much of the child's problem solving is interceded through an adult's assistance and help, it would be wrong to focus on a child in isolation. Such focus does not reveal the processes by which children acquire new skills.
9. Interactions and cooperation with surrounding culture and social agents, such as parents and more competent peers, contribute altogether significantly to a child's mental and intellectual development.

Vygotsky' theory can be applied in the curriculum, instruction, and assessment. The question is how?. Mishra (2013) emphsizes the significance of interaction and explains that since children learn much through interaction, curricula should be designed to implement interaction in the learning envireonment between learners and learning tasks. In instruction, we find that most children can often perform tasks that they are incapable of completing on their own so they need adult help. With this in mind, scaffolding–where the adult continually accommodate the level of his or her assistance according to the child's level of performance–

is an effective form of teaching. Scaffolding not only produces immediate results, but also instills the skills necessary for independent problem solving in the future (Mishra, 2013). Moreover, different cooperative learning activities can be designed for groups of children at different levels that can help each other acquire the knowledge.

Assessment methods must take into consideration the zone of proximal development (Mishra, 2013). The level of actual development is what children are capable of doing on their own and what they can do with help is their level of potential development. Two children might have the same actual development level, but providing the appropriate help from an adult, one child might be able to solve many more problems than the other one. Assessment methods must target both the level of actual development and the level of potential development (Doolittle, 1997)

A modern educational application of Vygotsky's theories is "mutual teaching", used to make students capable to learn from content. In this strategy, instructors and students work together in learning and practicing four key skills: summarizing, questioning, clarifying, and predicting (Mishra, 2013). The teacher's part in the process is diminished over time (Ghorbani, 2013). Moreover, Vygotsky's theory is related to instructional concepts such as "scaffolding" and "apprenticeship", in which an instructor or more progressed peer help to structure or organize a task so that a novice can work on it effectively. Vygotsky's theories also feed into the current interest in collaborative learning, suggesting that group members should have different levels of ability so more progressed peers can offer assistance to less advenced members work inside their (ZPD) (Ghorbani, 2013).

### 1.3.5. Multiple Intelligences Theory and Learning

This theory of human intelligence, developed by psychologist Howard Gardner, presents a way to understand the intellect; it looks at how each of us comprehends, examines, and responds to outside stimuli to solve a problem or anticipate what will come next; this

theory shifted the focus from the static measure of 'how smart students are' to the dynamic question; 'how are students smart?" (Livo, 2000, p. XV).

Gardner recognizes background experiences and learning styles as vital elements in students' educational development. Gardner stated in his book Frames of Mind: The Theory of Multiple Intelligences, "We are all so different largely because we all have different combinations of intelligences. If we recognize this, I think we will have at least a better chance of dealing appropriately with the many problems that we face in the world" (cited in Livo, 2002, p. xv). He believes that intelligences change and develop, that cultural conditions, experiences, and history affect each one of us. Further, he rejects the static concept of inherited versus learned ideas and emphasizes the interaction of environmental and genetic factors (Livo, 2002).

Gardner has developed educational strategies, based on his original seven intellectual capacities, to improve students' learning. Gardner labels each of these ways a distinct "intelligence"–in other words, a set of skills allowing individuals to find and resolve genuine problems they face. Gardner's seven intelligences (Armstrong, 2009) are:

***Verbal-Linguistic***–The ability to use words and language.

***Logical-Mathematical***–The capacity for inductive and deductive thinking and reasoning, as well as the use of numbers and the recognition of abstract patterns (Armstrong, 2009, p.123).

***Visual-Spatial–***The ability of objects visualization and spatial dimensions, and make internal images and pictures.

***Body-Kinaesthetic–***The body's capacity and ability to control physical motion.

***Musical-Rhythmic***–The ability to recognize tonal patterns and sounds, as well as sensitivity to rhythms and beats.

***Interpersonal–***The capacity for person-to-person communications and relationships.

***Intrapersonal–***The spiritual, inner states of being, self-reflection, and awareness.

Gardner's Theory of Multiple Intelligences has several implications for teachers in terms of classroom instruction. The theory states that "all seven intelligences are needed to productively function in society and teachers, therefore, should think of all intelligences as equally important" (Stockard, 2001, p. 167). This contradicts to great extent is in great contrast the conventional instruction frameworks systems which ordinarily put a strong emphasis on the development and use of verbal and mathematical intelligences (Jackson,2006). Hence, the Theory of Multiple Intelligences indicates that teachers ought to recognize and teach to a broader range of abilities and aptitudes (Gardner & Hatch, 1989).

Another implication (Fogarty & Stoehr, 1995) is that teachers should structure the presentation of material in a style which engages most or all of the intelligences. For example, when teaching about the revolutionary war, an instructor may demonstrate the students battle maps, play revolutionary war songs, organize a role play of the signing of the Declaration of Independence, and make the students read a novel about daily lifr during that period ( Fogarty & Stoehr, 1995) . This kind of demonstration not only excites students about learning, but it also allows a teacher to reinforce the same material in a variety of ways (Stockard, 2001). By implementing a wide range of intelligences, he added, educating in this way would provide a deeper understanding of the subject material.

According to this theory, everyone is born possessing the seven intelligences. Nevertheless, all students will come into the classroom with distinctive sets of progressed intelligences, this implies that each child will possess his own unique set of mental strengths and weaknesses (Lazear, 1992). These sets determine how simple or troublesome it is for a student to acquire knowledge when it is presented in a specific way. This is commonly alluded to as a learning style. Numerous learning styles can be found inside one classroom. Subsequently, it is impossible, as well as impractical, for a teacher to accommodate every lesson to all of the learning styles found within the classroom (Lazear, 1991). Nevertheless

the instructor can explain to his/her students how to utilize their more progressed intelligences to help in the understanding of a subject matter which normally employs their less progressed intelligences (Lazear, 1992). For example, the instructor can use a particularly song about the revolutionary war to teach musically intelligent child about what happened.

Traditional teaching focus more on the verbal-linguistic and logical-mathematical intelligences ( Wandberg & Rohwer , 2002). Gardner suggests a more equilibrium curriculum that includes the arts, self-awareness, communication, and physical education. Moreover, Gardner advocates teaching strategies that incorporate and appeal to all the intelligences, including role playing, musical performance, cooperative learning, reflection, visualization, storytelling, simulations, and demonstrations.

### 1.3.6. Control Theory and Learning

Glasser (1986) stated that children have five basic needs that must be met before we can address academic issues. Those are the need for survival, love, power, freedom and fun. This theory, called "Control Theory of Motivation", states that behavior is never caused by a response to outside things (stimulus). Instead, the control theory states that "behavior is inspired by what a person wants most at any given time: survival, love, power, freedom, or any other basic human need, such as the need for fun" (Smith, 2001, p. 179).

According to Glasser (1986, cited in Felix & Mednick, 2008), if students are not motivated to do their work, it is because they view that work as irrelevant to their basic human needs. In reaction to complaints that today's students are "unmotivated," Glasser validates that all living creatures "control" their behavior to maximize their need fulfillment and satisfaction. Glasser states that, if students are unmotivated towards learning, simply because they perceive their learning as insignificant and not ralted to their fundamental human needs. He asks us to ponder such questions as: do students in your school find satisfaction in

being in your teachers' classrooms? Do your students ever feel important anywhere in your school?

Davis (2011) in his paper states that there are two types of teachers: boss teachers use rewards and punishment to coerce students to comply with rules and complete required assignments. Glasser calls this "leaning on your shovel" work. He demonstrates how a lot of students know that the required assignments they do–even when their teachers rewards them–is in deed a low-level work. On the other hand, the second type is the lead teachers who completely avoid coercion. Instead, they provide the intrinsic rewards of doing the assingnments obvious to their students, correlating any suggested assignments to the students' fundamental needs. Moreover, they only use grades as temporary indicators of what has and hasn't been learned, rather than a reward. Lead teachers will "fight to protect" highly engaged, deeply encouraged students who are doing good work from having to accomplish meaningless requirements (Davis, 2011).

According to Bourassa and Mednick (2006, cited in Davis, 2011), control theory impacts learning through the following: educators have to discuss both method content and with their students. Students' fundamental needs literally provide assistance to shape how and what they are taught. instructors depend on cooperative learning, dynamic learning techniques that upgrade the control of the students. Lead instructors make beyond any doubt that all assignments meet some degree of their students' need satisfaction and fulfillment. This secures student loyalty, which carries the class through whatever relatively insignificant tasks could be fundamental to fulfill official needs ad necessities. Moreover, Glasser (1986) suggests that educators should give more significant assignments; provide students with more opportunities to discuss the way they progress. Teachers just provide "good grades"–those that certify good work–to fulfill their students' need for power. Courses for which a student doesn't earn a "good grade" are not recorded on that student's transcript.

### 1.3.7. Neuroscience Theory and Learning

According to Edelman et al., (1992), Neuroscience is "the study of the human nervous system, the brain, and the biological basis of consciousness, perception, memory, and learning. The nervous system and the brain are the physical foundation of the human learning process" (Siegel, 2011, p. 84). Edelman et al., (1992) added that Neuroscience links our observations about cognitive behavior with the actual physical processes that support such behavior. Edelman et al., (1992) state that this theory is still "young" and is undergoing rapid, controversial development. Some of the key findings of neuroscience are (Siegel, 2011):

- ***The brain has a triad structure***: Our brain actually consists three brains: the neocortex or thinking brain that portrays reasoning, language, cognition and and higher intelligence. The lower or reptilian brain that portrys basic sensory motor functions. The mammalian or limbic brain that manipulates feelings, memory, and biorhythms.
- ***The brain is not a computer***: The structure of the brain's neuron associations is adaptable, flexible, redundant, and loose. It's incomprehensible for such a system to operate like a linear or parallel processing computer. However, the brain is better presented and portrayed as a self-organizing framework.
- ***The brain changes with use, throughout our lifetime***: Mental concentration and exertion changes the physical structure of the brain. As we utilize the brain, we fortify certain designs of connection, making each association much easier to form next time, and this how memory develops.

According to Edelman et al., (1992) when educators take neuroscience into account, they organize a curriculum around real experiences and integrated, "whole" ideas. Further, they emphasize on the idea that instruction should be implementd in the way that promotes

complex thinking and the "growth" of the brain. Neuroscience proponents advocate continued learning and intellectual development throughout adulthood (Siegel, 2011).

### 1.3.8. Learning Styles Theory and Learning

Felix and Mednick, (2008) argues that this theory of learning emphasizes the fact that individuals perceive and process information in very different ways. The learning styles theory advocates that how much individuals learn has more to do with whether educational experiences  teaching are adjusted toward their preferred learning style than whether or not they are "smart". In fact, educators should not ask, "Is this student smart?" but rather "How is this student smart?" (Weyers, 2005, p.33).

The concept of learning styles is established in the classification of psychological types. The learning styles theory is based on an inquiry illustrating that, as the result of heredity and current environmental drequirenments, distinctive individuals have an tinclination to perceive and process information differently. The different ways of doing so are generally classified as(Felix & Mednick, 2008):

1. ***Concrete and abstract perceiver:*** Abstract perceivers take in information through analysis, observation, and thinking. Concrete perceivers, however, absorb information through direct experience, by doing, acting, sensing, and feeling.

2. ***Active and reflective processors*****:** "Reflective processors make sense of an experience by reflecting on and thinking about it"  (Bopp & Smith , 2011, p. 235). Active processors make sense of an experience by immediately using the new information. Conventional education tends to favor abstract perceiving and reflective processing. Other sorts of learning aren't compensated and reflected in teaching, evaluation, and curriculum, nearly as much (Bopp & Smith , 2011).

According to (Zhu, 2011, p. 52), constructivism could have an impact on learning through the following points:

- ***Curriculum*:** Instructors must put emphasis on emotions, feeling, sensing, and imagination, in addition to the traditional skills of analysis, reason, and sequential problem solving.
- ***Instruction*:** Teachers should design their instruction methods to connect with all four learning styles, using various combinations of experience, reflection, conceptualization, and experimentation. Instructors can introduce a wide variety of experiential elements into the classroom, such as sound, music, visuals, movement, experience, and even talking.
- ***Assessment*:** Teachers should employ a variety of assessment techniques, focusing on the development of "whole brain" capacity and each of the different learning styles.

The application of learning styles theory and research proceeds to hold great guarantee for for practitioners in education realm as a potentially effective components for empowering teachers as well as learners to manage their own learning better throughtout their teaching and learning processes (Rayner, 2000; Coffield et al., 2004) . However, a number of pertinent issues which are significant in the ongoing debate regarding the value of learning styles in education have been raised ( Sadler-Smith & Evans, 2006 ).

Central to the debate is "the question of how do educators gain a working vocabulary around the concept of learning styles which may be incorporated into their day to day practice and thereby enhance the learning process?" (Sadler-Smith & Evans, 2006, p. 77). This and other issues will be tackled in the following chapter where the confusing terminology of the concept learning styles, the critical issues with (relability and validity) with the models of styles and other isuuse are discussed in the next chapter.

## Conclusion

Since the crucial role of catalyst for learning falls to teachers, it is very important that they have a deeper understanding and awareness of the diverse ways in which learning can be developed. This implies that teachers have to know about what is lately considered as most significant of learning theory and the ways in which the theory can be put into practice. If we look back at this chapter, we can notice that in a teacher's bank of knowledge and understanding about learning there is a place somewhere for behaviorism, cognitive and constructivist theory, metacognition, and social constructivism; for an understanding of learning styles and multiple intelligence theory; and for a knowledge of what the neuro-psychologists, and others, are concerned with effective learning contexts and practices.

Knowing about learning theories, teachers must meanwhile be able to interpret and then apply to practice what it is that they know. All the stated learning theories though they differ in principles they do share the fact that teachers should be provided with appropriate activities and contexts that are supposed to be effective and lead to the promotion of effective and enjoyable learning. While research in this area continues to grow, limited research correlating learning styles to learning outcomes has hampered the application of learning style theory to actual classroom settings. Despite these obstacles, efforts to better define and utilize learning style theory is an area of significant growing research. A better knowledge and understanding of learning styles may become increasingly critical for classroom sizes increase and technology keep advancing and continue to mold the types of students entering higher education. To that end, the next chapter represents a comprehensive understanding of learning style approach/theory.

# Chapter Two

# Learning Styles

## Introduction

When investigating issues regarding learning styles, it is easy to become overwhelmed by the variety of terminology used and the inventories and indexes available which claim to measure some aspect of a learning style. In regard to terminology, there are cognitive styles, learning strategies, teaching styles, learning styles, and instructional strategies. The two last concepts are the variables of this study. This chapter attempts to discuss some theories of learning style, and addresses some measurement devices as well as explores the area of learning styles and academic achievement. Moreover, this chapter tackles the issue of whether matching teachers' teaching strategies to students' learning styles can lead to an improvement in learning effectiveness.

## 2.1. Learning Styles: Definitions of Terms

More than 35years ago, Dunn and Dunn (1981) declared that we can no longer assume that all students learn through whichever strategy the teacher prefers to use. In admiting the importance of fitting and adapting curriculum and instruction to learners' aptitudes, Keefe (1979) movingly states "learning styles diagnosis opens the door to placing individualized instruction on a more rational basis. It gives the most powerful leverage yet available to educators to analyze, motivate, and assist students in school, as such, it is the foundation of a truly modern approach to education" (p.124).

Although widespread agreement supports the existence of individual differences and learning styles, researchers often define this concept differently (Dunn & Dunn, 1981). According to Lesia (2014, p. 35) "learning styles are simply different approaches or ways of learning, It is probably the simplest definition but it does not explain precisely what we need to. More deeply, Felder and Henriques (1995, p. 21 as cited in Sinagatullin, 2009, p.94)

explain the meaning of learning styles as “the ways in which an individual characteristically acquires, retains and retrieves information”.

Felder and Henriques (1995) define numerous dimensions of learning style thought to be particularly related to foreign and second language education, states ways in which certain learning styles are prefferd by the teaching styles of most language instructors, and proposes steps to address educational needs of all students in foreign/second language classes. Felder and Henriques (1995 as cited in Ryan, Cooper, & Bolick, 2015) summarizes that students learn in many ways- by seeing and hearing which is sometimes called modality model, reflecting and acting that is in some sources named as model of behavior or exposing with time, reasoning logically and intuitively which is connected with the way we receive information and lastly memorizing and visualizing.

Felder and Silverman (1998) state that learning styles are a collection of multiple modes that determine how an individual perceives, processes and understands information. Learning styles are Claxton and Murrell (1987) state that learning styles are the modalities by which students most effectively learn. A learning style does not preclude that individuals learn in numorous ways and utilizing different devices, rather it demonstrates that a favoured learning staretgy exists by which information is achieved, reflected upon (Werner, 2003).

Keefe (1979) stated that a learning style could be described as a student’s consistent way of responding to and using stimuli in the context of learning. This definition deals with a biological point of view in that he defined learning styles as the “composite of characteristic cognitive, affective, and psychological factors that serve as relatively stable indicators of how a learner perceives, interacts with, and responds to the learning environment” (p.59).

This definition differs slightly from Foley (1999) who defined learning styles as the unique behaviour of learners adapting to their environment. According to Curry (1987) learning styles relate to the differences in cognitive approaches and processes of individual

students' learning. According to Dunn (1983), learning style is an approach used by individuals to absorb, retain and process new information. According to Atkin (2006), the different ways of learning and making meaning of information is called learning style. "Learning Styles" refer to student's preferences for some kinds of learning activities over others. A student's learning style has to do with the way he or she processes information in order to learn and apply it" (Peacock, 2001). According to Stewart and Felicetti (1992), learning styles are those instructional circmstances under which a student is most likely to learn. Thus, learning styles are not really concerned with "what" learners learn, but rather "how" they prefer to learn".

Some psychologists tend to prefer the term also called cognitive styles (Burns & Seligman, 1989 as cited in Burger et al., 2007). Differences in cognitive style have to do with "characteristic modes of perceiving, remembering, thinking, problem solving and decision making, reflective of information-processing regularities that develop around underlying personality trends" and not with intelligence (Ridding & Cheema, 1991; Roberts & Newton, 2000).

Another source emphasizes the fact that individuals perceive and process information in very different ways. This learning styles theory implies that how much individuals learn has more to do with whether the educational experience is geared toward their particular style of learning than whether or not they are "smart". In fact, educators should not ask, "is this student smart? But rather "how is this student smart?" (Papanikolaou, 2001).

Guild and Garger (1985) noted that learning style is a unique aspect of our humanity; it is the way we perceive the world and governs how we think, make judgments and form values about experiences and people. This unique aspect of our humanness is what we call style. They noted that these basic and consistent personality traits influence many aspects of personal and professional behaviour, which if they affect learning, can be called learning

styles. On the other hand, Keefe (1979) contends that styles are characteristic cognitive, affective and psychological behaviours that serve as relatively stable indicators of how learners perceive, interact with and respond to the learning environment.

Riding and Rayner (1998) described learning style as a countenance of individuality consisting of qualities, activities or behaviours sustained over a period of time, while Jackson (2005) explained it as "reflecting the biological basis of personality and its modification by conscious processes" (p.5).

Another approach to learning style is based on a social psychology perspective that emphasizes small group dynamics and role playing. Fuhrmann and Grasha (1983 as cited in Davis, 2009 .p. 397) described learning style as social interaction; it illustrates the different roles used by students in the classroom in interacting with their classmates, teachers and course content. This view is consistent with Jonassen and Grabowski (1993) who outlined that learning style is a preferred educational or instructional activity to absorb and process information. According to Dunn (1983), learning style is an approach used by individuals to absorb, retain and process new information. These definitions reveal that:

1. Learning styles are simply different approaches or ways of learning.
2. Learning style refers to students' preferences for some kinds of learning activities over others.
3. learning styles are characteristic approaches to learning and studying.
4. Students who recognize their own style are more likely to be better achievers, having higher grades, have more positive attitudes about their studies, feel greater self confidence and exhibit more skill in applying their knowledge in courses.
5. Learning style refers to prefer mode of problem solving, thinking or learning used by an individual.
6. Learning style means the different ways of learning and making meaning of information.

There exists a range of learning styles and models accessible which have been developed during the past few decades. Some learning style researchers try to eliminate confusion about the concept (Magoulas & Chen, 2006). According Nielsen (2012) said in one such attempt suggested by Curry 1983 learning styles approaches were categorized into three levels. This was called Curry's onion model (Figure 2.1) as cited in Coffield et al., 2004.

This model attempts to explain how learning style can be viewed as both a structure and a process, both relatively stable and at the same time open to modification. Curry's model argues that all learning-style measures can be classified into three groups or 'strata resembling layers of an onion". His model consisted of:

***1/ Outermost layer of the onion:*** curry refers to this as instructional preference, and of all measures of learning styles this is the most unstable. Learning environment and individual and teacher expectations can influence instructional preferences. An example of this a learning-styles measure at this level would be the 'Learning Preference Inventory'

***2/ Middle layer of the onion:*** Curry refers to this as the informational processing style. This learning style reflects the individual's intellectual approach to integrating or assimilating information. This type of learning style is more stable than instructional preferences but may still be influenced by learning strategies. An example of a learning-style measure at this level would be the "Learning Style Inventory' (Kolb, 1976)

***3/ Innermost layer of the onion:*** Curry refers to this as cognitive personality style, which is defined as the individual's approach to assimilating and adapting information. This dimension does not interact with the environment, although this dimension fundamentally controls all learning behavior. An example of a learning-style measure at this level would be the Myers-Briggs Type Indicator (Myers, 1962 as cited in Bentham, 2002).

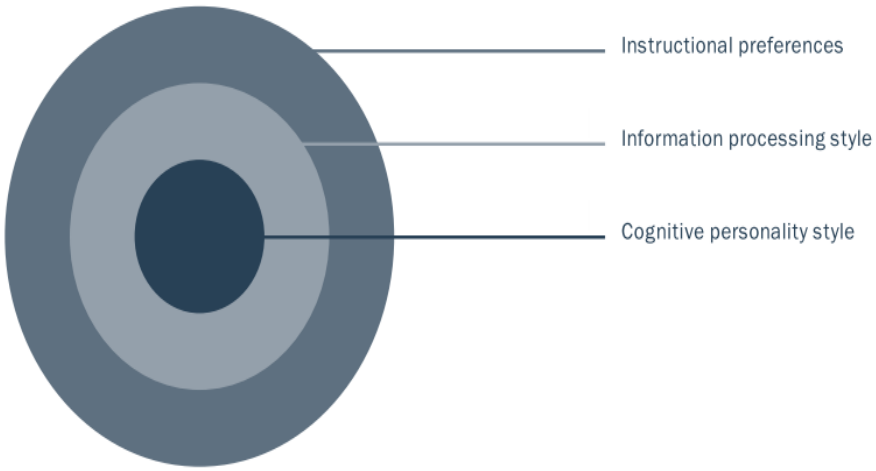


**Figure 2. 1. Representation of Curry's Three Strata Onion Model**

De Bello (1990) stated that a generic definition of learning styles would be explaing how learners receive, process and maintain information. Moreover, De Bello assessed eleven learning style models which had been developed in American educational systems and categorized learning style models into two categories - multidimensional, which were inclusive of cognitive, affective and psychological characteristics; or one-dimensional, which had a single variable, either cognitive or psychological (De Bello,1990). Besides, Reid (1995) seperated learning styles research into three major categories: cognitive learning styles, sensory learning styles and personality learning styles.

Felder (1996, p.18) differentiates between learning styles as follows; "Students have different learning styles – characteristic strengths and preferences in the ways they take in and process information". A few students tend to focus on information, facts, data, and calculations; others are more comfortable with speculations and numerical models. A few react emphatically to visual forms of data, like pictures, diagrams and schematics. Some lean toward more verbal form-written and spoken clarification. Some prefer to learn actively and interactively; others work more introspectively and independantly ( Felder, 1996).

What can be deduced from the previous section is the lack of a clear and conclusive definition of the concept of learning styles which may obliges researchers to define learning style

according to their academic and experiential background, with the term referring of all the elements a learner needs to achieve his educational goals. Learning style is the natural capacity of a learner to adjust his or her sensory receptors to the accessible learning environment in order to retain information and process it according to his or her experiences and subsequently share the output with society (De Vaus, 1993).

## 2.2. Learning Styles Theories/ Models

Since there are many and different ways of looking at learning style, here are some of the classification systems that researchers have developed (Reynolds, Caley & Mason, 2002). Research in learning styles demonstrates a number and variety of theories. The question is which is right, or accurate? In the field of psychology, we have to remember that these are theories and there is no right or single answer (Field & Field, 2007).

### 2.2.1. The Myers–Briggs Type Indicator (MBTI)

This model classifies students according to their preferences on scales derived from psychologist Carl Jung's theory of psychological types (Bayne, 2004). It measures individual's personality differences over four dimensions, and is often used by psychologists in career counseling and group dynamics analysis. The four dimensions are outlined as follows:

***1/ Extraversion /Introversion:*** A person's Extravert1/Introvert preference indicates how he/she gathers energy. Extraverts find themselves energized by people and activities in the world external to themselves. Conversely, Introverts gather energy from their own internal world of thoughts, ideas, and viewpoints.

***2/ Sensing /Intuition:*** A Sensor notices and attends to details. Sensors respond best to facts, actualities, and react to exactly what was said rather than implication. On the other hand, Intuitors are big picture people. They notice patterns, like to make sense of complexity, and read between the lines.

***3/ Thinking/Feeling:*** The Thinking/Feeling characteristic describes information individuals' use in decision-making. The Thinker uses logic to reach decisions, while the Feeler considers values, beliefs, and how actions affect other people when making decisions. The Thinker tends to be objective, whereas the Feeler is more likely to have a subjective bias.

***4/ Judging /Perceiving:*** The Judging/Perceiving dimension describes how people organize their lives. Judgers manage their time by defining schedules and using "to-do" lists. Being on time is important to the Judger, and they prefer to make decisions quickly in order to achieve closure. The Perceiver prefers spontaneity, likes to leave their options open, and tends to be less affected when faced with unexpected events (Bayne, 2004, p. 47).

The MBTI type preferences can be combined to form 16 different learning style types. For example, one student may be an INFJ (introvert, intuitor, feeler, and judger). An other student can be an ESTJ (extravert, sensor, thinker, and perceiver) and another may be an INFJ (introvert, intuitor, feeler, and judger). The MBTI is a widely used in both education and business to explore leadership styles, teaching/learning styles, and communication styles. A learner may use all four functions at different times; however, each learner prefers using one perception or judgment function (Amory, 2012).

### 2.2.2. Hermann Brain Dominance Instrument (HBDI)

This model classifies students in "term of their relative preferences for thinking in four different modes based on the task specialized functioning of the physical brain (Field & Field, 2007, p.33). The four modes or quadrants in this classification scheme are:

***1. Quadrant A (left brain, cerebral):*** Logical, analytical, quantitative, factual, and critical.

***2. Quadrant B (left brain, limbic*)**: Sequential, organized, planned, detailed, and structured;

***3. Quadrant C (right brain, limbic):*** Emotional, interpersonal, sensory, kinaesthetic, and symbolic;

4. ***Quadrant D (right brain, cerebral):*** Visual, holistic, innovative (Field & Field, 2007, p.33).

The model serves as a teaching and learning tool enabling educators to design and deliver content to students in ways that not only reach each learner by accommodating their learning preferences, but also address learning avoidance. Students should be made aware of the fact that in order to "realize their full potential, they need to develop skills in all four thinking modes, in this manner students' potential can be fully developed" (Hermann, 1996, p. 152).

A ccording to Hermann (1995), educators should be aware of the fact that students with the same preferred thinking style will find it easier to communicate and understand each other, compared to students who have opposite preferences of thinking. It is also important to note that even though two people can have almost identical profiles, they will be different thinkers with differing abilities and competencies because of clustering that takes place within each dominant quadrant (Hermann, 1995).

### 2.2.3. Felder-Silverman Learning Style Model (FSLSM)

**Unlike the majority of** other learning style models which classify learners into a few categories, Felder and Silverman portey the learning style of a learner in more detail through categorizing the preferences on four dimensions (Passey & Tatnall, 2014). Another main difference is that "FSLSM is based on tendencies, indicating that learners with a high preference for certain behavior can also act sometimes differently" (Passey & Tatnall, 2014, p. 68).

There are four dimensions in FSLSM. Each learner is characterized by a specific preference for each of these dimensions. The first dimension distinguishes between an active and a reflective way of processing information. Active learners learn best by working actively with the learning material, by applying the material, and by trying things out. Furthermore,

they tend to be more interested in communication with others and prefer to learn by working in groups where they can discuss about the learned material. In contrast, reflective learners prefer to think about and reflect on the material. Regarding communication, they prefer to work alone or maybe in a small group together with one good friend (Graf, 2007).

Graf (2007) claims that the second dimension encompasses sensing versus intuitive learning. Learners who are in favor to sensing learning style like to learn facts and concrete learning material. They like to solve problems with standard approaches and also tend to be more patient with details. Furthermore, sensing learners are considered to be more realistic and sensible; they tend to be more practical than intuitive learners and like to relate the learned material to the real world. However, intuitive learners laen to learn abstract learning material, such as speculations and their subsequent meanings. They are "more able to discover possibilities and relationships and tend to be more innovative and creative than sensing learners" (Adelsberger et al., 2008, p. 184).

The third, visual-verbal dimension classifies learners who tend to remember best and cosequently like to learn from what they have seen (e.g., pictures, diagrams and flow-charts), and learners who get more out of textual representations, regardless of whether they are written or spoken (Adelsberger et al., 2008). In the fourth dimension, the learners are differntiated according to their understanding. Sequential learners tend to retain information in small incremental steps and therefore develop a linear learning progress. They prefer to use logical stepwise paths to figure out solutions. On the other hand, global learners tend to use a holistic thinking process. They prefer to learn the information and the learning material nearly randomly without looking for connections but after get the whole picture (Adelsberger et al., 2008). Then they are capable find out solutions, solve complex problems, find connections between different areas, and put things together in new ways but they have obstacles in demonstrating how they did it. Because "the whole picture is important for global learners,

they tend to be more interested in overviews and in a broad knowledge whereas sequential learners are more interested in details" (Wallace et al, 2008, p. 55).

### 2.2.4. Kolb's Experiential Learning Model

Kolb, the founder of the experiential learning theory, believes that experience is a very vital factor in learning. According to this theory, learning is the active process of the individual's interaction with his/ her environment and life occasions. The way in which information is presented will affect the student's ability to learn (Salehi, 2007). Students learn in many different ways; some individuals grasp new material when it is presented using a kinaesthetic style and others prefer an audio/visual style. Some individuals learn new subject with role playing or when using a problem based method. Regardless of the style of learning, most teachers use only a small number of teaching styles (Salehi, 2007). For example, lecture is presented and followed weeks later with an exam or demonstration may be used and at the end student's performance will be evaluated (Nilson, 2010). Ronkowski (1997) proposed that implementation of teaching methods developed using Kolb's learning style theory generally has a positive outcome for learning.

Kolb's work is based on the theories of Jean Piaget, John Dewey, and J.P. Guilford, and is supported in the literature as being a valid instrument to test learning styles. Kolb's LSI classifies the learner into one of four learning styles: 1) Converger, 2) Diverger, 3) Assimilator, and 4) Accommodator. In addition to learning styles, Kolb defined four learning cycles. These cycles include: 1) Concrete Experience (CE), which consists of learning from feelings or reactions to new experiences, 2) Reflective Observation (RO), which consists of learning from listening and observing, 3) Abstract Conceptualization (AC), which consists of learning from thinking or analyzing problems in a systematic method, and 4) Active Experimentation (AE), which consists of learning by doing (Russian, 2005). Bell and Griffin, (2007) state that each individual has his own strengths within each of the four stages and this is the basis of his preferences for learning style.

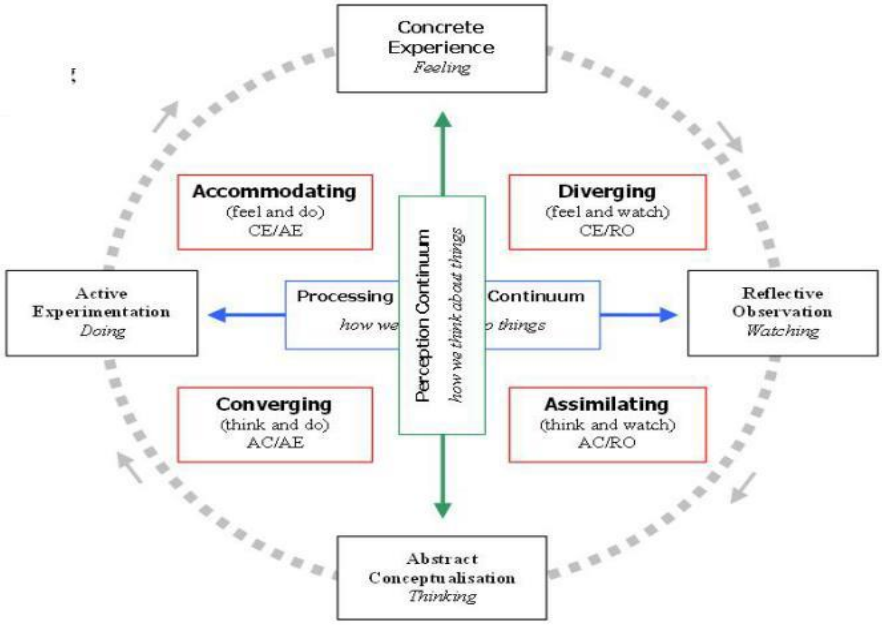


**Figure 2.2. Kolb's (1984) Experiential Learning Model and Four-Learning Styles**

According to Kolb, everybody goes through these stages and this cycle is probably repeated several times before learning becomes finalized. The point is, however, that not all learners can be successful in all of the stages of this cycle as they are in others. On the basis of his studies in this respect, Kolb proposes four styles of learning. According to him people are eventually placed at the end of either of the two extremes. Thinking Feeling Observing Acting Assimilators prefer to learn using Reflective Observation and Abstract Conceptualization. The learner integrates observations into the world of existing concepts. Convergers learn using Active Experimentation and Abstract Conceptualization. Kolb describes it as someone who learns by thinking and doing (Salehi, 2007).

Moreover, Accommodators learn using 'Active Experimentation and Concrete Experience'. The learner takes new concepts/experiences and adjusts them to relate in the real world. These students are motivated by being actively involved in the learning process. Divergers learn using 'Concrete Experience and Reflective Observation'. These students prefer specific information presented in a detailed, systematic and reasoned manner. Divergers need time to reflect on the information presented (Salehi, 2007).

Although these types of learners incorporate Concrete Experience into their style, they prefer to watch before getting involved. Concrete Experiencing (CE), Active Experimentation (AE), Reflective observation (RO), Abstract Conceptualizing (AC), Assimilation Accommodation Divergent Convergent Students move between learning cycles. Kolb states that the actual process of growth in any single individual probably proceeds through successive oscillations from one stage to another (Russian, 2005).

Danish and Awan (2009) and Hsu (1989), drawing on the Kolb theory, claim that the learning process is composed of two dimensions: perceiving and processing information (see Figure 2.2). The first dimension, perceiving information occurs during concrete experiences. The second dimension, processing information, occurs through reflective observation. It involves the process of learning by watching or listening, and active experimentation. In summary, Kolb's learning styles theory proposes four types of learner: assimilators, convergers, divergers and accommodators. The convergent learner featured in this theory is similar to the kinaesthetic learner in VARK theory.

### 2.2.5. Field-dependent and Field-independent Model

According to Keefe (1979, p.9, as cited in Blakely &. Tomlin, 2008, p. 233), "field dependence/independence measures the degree to which an individual uses "an analytical as opposed to a global way of experiencing the environment". Field dependent individuals engage a global organization of the surrounding field, and perceive parts of the field as fluent.

In contrast, field independent learners discern discrete parts of the field, distinct from the organized background. On the one hand, field dependent learners depend on cues and structure from their environment and then make the learning process contingent on their experience in that environment. Field dependent learners tend to have short attention spans, are easily distracted, and prefer casual learning environments. In addition field dependent learners choose instructional situation that elicit their feelings and experiences. Field

dependent persons are also more socially oriented, less achievement-oriented and less competitive, than field independent individuals (Blakely & Tomlin, 2008, p. 233). According to Wooldridge (1995, p. 51, as cited in Blakely &. Tomlin, 2008, p. 233), "field dependent individuals are interpersonally oriented and rely heavily on external stimuli. This motivates them to look toward others for reinforcement of opinions and attitudes".

On the other hand, field–independent individuals, overall, are more analytical and independent than field dependent learners. In addition, these learners are characterized by their analytical approach and abilities to problem solving. These analytical learners tend to be more independent, more intrinsically motivated, and task oriented in their learning process than field dependent individuals. Field dependent learners are also more focused and disciplined learners, and they are characterized by a longer attention span greater than contemplative disposition than are field dependent learners. Thus, field independent individuals depend more on internal than external cues, and prefer formal learning environments conducive to their competitive and achievement-oriented learning styles (Witkin et al., 1971; Witkin et al., 1977; Witkin & Goodenough, 1981; Wooldridge, 1995, as cited in Blakely &. Tomlin, 2008, p. 233).

Furthermore, Wooldridge (1995, as cited in Blakely &. Tomlin, 2008, p.52 ) reports in his review of the literature that field dependent individuals require more structure in terms of objectives and planned activities in human relations training, lecture outlines, or in the "inherent organization of the task material itself, than do field independent learners. This appears to be true regardless of the amount of material learned. At the same time, these studies also indicate that field dependent learners, in contrast to their counterparts, "….. prefer less structured learning environments such as discussion or discovery. Enjoy analytical activities, are individualistic in their thinking and readily engage in activities in the classroom. Field dependent students are extrinsically motivated, very aware of the social environment,

take a more communal view in their thinking, and will not engage in activities until they have checked them out to see if they make sense or are safe ” (Wooldridge, 1995, p. 52 as cited in Blakely & Tomlin, 2008, p. 233).

### 2.2.6. Dunn and Dunn Learning Style Model

According to Dunn and Dunn, (1992, p. 6) this model developed is based on certain assumptions. First, most individuals can learn; Second, instructional environments, resource, and approaches respond to diversified learning style strengths; Third, everyone has strengths, but different people have very different strengths; Fourth, individual instructional preferences exist and can be measured reliably; Fifth, given responsive environments, resource, and approaches, students attain statistically higher achievement and attitude test scores in matched, rather than mismatched treatments; Sixth, most teachers can learn to use learning styles as a cornerstone of their instruction; seven, many students can learn to capitalize on their learning style strengths when concentrating on new/ or difficult academic material.

The Dunn and Dunn Learning Style Model is classified into five categories called stimuli (Dunn & Dunn, 1992), each of which possessing elements that directly affect an individuals' ability to master new or difficult information or skills (see Figure 2.3). Each of these elements can influence how an individual reacts, depending on how the learner processes them. This model has its foundations in cognitive and brain-lateralization theory (Dunn & Griggs, 2000), whereby individuals process information either by inherent traits or by functions of the brain's hemisphere. This model defines how individuals process information and that there exists diverse learning style preferences and needs (Honigsfeld & Dunn, 2006).

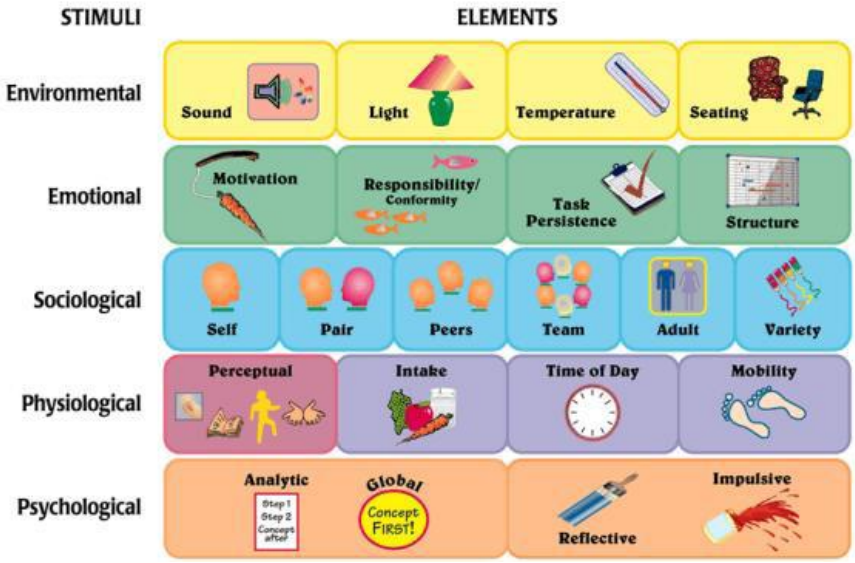


**Figure 2.3: Dunn and Dunn-learning Styles' Model**

**Source: www.cluetoyou.com**

According to Rayner (2000), these five stimuli are as follows: firstly, instructional environment. He explains that environmental stimuli consist of a light element, a sound element, a design element and the temperature. These stimuli include preferences for loud versus quiet, low versus bright lights, warm versus cool temperature and formal versus informal settings (Dunn & Griggs 2000). The second set of stimuli relate to emotional states. Dunn et al., (1981) defined the elements of these stimuli as including motivation, persistence, responsibility, and structure. These stimuli relate to high or low motivation, persistence, responsibility and preference for structure and choices. The third sets of stimuli are sociological. These include preferences for variety versus a patterned or routine way of working and the desire to work alone or in groups or pairs under the supervision of an authoritative adult (Dunn et al., 2000). The fourth sets of stimuli are physiological. This includes perceptual strengths, as well as preferences over time of day, intake of food and mobility (Dunn et al., 2000). Hall (1993) stated that this element consists of a perceptual element which mainly emphasizes viewing, listening and touching. Intake is the second element in this category which relates to the requirement of eating and drinking during the

learning process. The time element refers to a student's energy level during the day at varied time periods or intervals. The last element is mobility. In this element of learning style preference, students' ability to sit for a long period of a specific duration when they are interested in the topic at hand is analysed. This element is related to the level to which students prefer to move their body while learning. The fifth sets of stimuli are psychological, indicating processing tendencies. Two elements of learning styles are grouped in these stimuli (Dunn et al., 2000). Ryner (2000) showed these elements as global versus analytical. This element is concerned with identifying whether students learn most effectively when they reflect on the total topic of learning or when they approach the task in a sequential way.

Students who are interested in global learning are more concerned with the end outcomes and the total meaning. Students with analytical preferences, however, prefer one detail at a time. The third element is impulsive versus reflective. This element relates to the pace of thinking. The preference of students to draw conclusions and make decision quickly is analysed (Dunn et al., 2000).

### 2.2.7. Gregorc Learning Style Model

Gregorc's Model of learning styles focuses on two key aspects of how people process information: 1) whether they prefer to work on a concrete or abstract level and 2) whether they tend to analyze issues in a sequential or a "random" fashion ( for example, by adopting a holistic approach or by emphasizing one's intuitions, instincts or emotions) (Newton, et al, 2001, pp. 105-106). These dimensions give rise to four types of people/learners (see Figure 2.4).

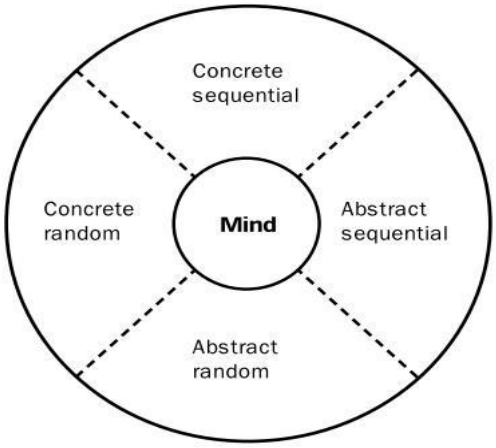


**Figure 2.4: Gregorc's (1985) Learning Styles Model**

According to Gregorc Model, concrete sequential (CS) learners enjoy dealing with the physical world revealed by their often acute senses. They like hands-on experiences and find satisfaction in real products and results. Favoring step-by step linear analysis, they tend to proceed in a methodical and deliberate way, seeking proof via their senses. They tend to focus on details and to be precise and accurate in their work. CS learners use terms in a literal sense and might find theoretical or metaphorical notions confusing or wasteful. They are good at planning their time, feel comfortable following instructions and like to work within structured environments. On the sartorial front, CS people tend to be meticulously dressed and color coordinated. On a negative note (assuming one likes neat dressers), they might have trouble understanding feelings, choosing from many options and taking new approaches. Additionally, they might suffer from being excessively conformist.

Abstract sequentials (AS) share the deductive approach to problems of CS learners, but feel more comfortable dealing with theories and models than with the "real world". This combination of traits yields a person who is intellectual, logical and analytical. AS types love to debate, often with precise, polysyllabic language, and are inclined to be absent-minded. Rather than concentrating on physical objects and material reality, the AS individual focuses

on knowledge, concepts and ideas. These are patient learners who feel most comfortable when they follow traditional procedures and have time to learn material thoroughly. Like CS folk, AS individuals tend to be neatly dressed but to prefer moderate colors. Drawbacks include a tendency to be sarcastic and opinionated, traits that can make it difficult for an AS type to participate cooperatively in group discussions. AS people might have verbalizing emotion in a constructive way and, like CS sorts, can experience difficulty writing creatively and taking a risk. (Newton et.al, 2001, pp. 106)

Learners of the abstract random (AR) variety feel most at home in an abstract world of felon and emotion. Rather than viewing situations in a two-dimensional, deductive manner, they are prone to seeing web-like, multidimensional patterns. Their thinking leans towards the emotional, physic and perspective and they employ fantasy and metaphoric language more effectively than other learners do. AR learners are appreciative of the arts, color and nature and are good at absorbing entire themes. They find great satisfaction in personal interactions and are particularly effective at empathizing with people and sensing shifting moods within a group. Given their artistic temperament, it perhaps is predictable that ARs like to dress in bright colors that are not necessarily coordinated. Like other learners, AR people have their shortcomings. They tend not to be on time because they see routines as boring. Their need to evaluate affairs on their own terms can make them appear stubborn. Their holistic orientation can make it difficult for them to recall specifics, give exact answers, memorize material or work step by step on project. (Newton, et.al, 2001, p. 106)

Concrete random (CR) learners inhabit a world that is concrete in its activity and yet still illuminated by rather abstract intuition. Like their AR relatives, CRs gravitate towards three- dimensional patterns and put a premium on their instincts, often leaping from fact to theory without being able to show how they reached their conclusions. CR individuals use language that is dramatic and colorful, but they tend to leave sentences dangling. They prefer

to work independently and are more responsive to practical demonstrations and personal proofs than to the words of an outside authority. CRs are very curious; they are also prolific, unconventional thinkers who like to create new ways of doing things. Proffering a hands-on approach to learning, they enjoy experimenting. In terms of weaknesses, CR people have difficulty meeting time limitations, finishing a project if a new idea hits or choosing one answer. They do not enjoy preparing formal reports and find it frustrating to listen to a lecturer without being able to interact (Newton et al., 2001, p. 107).

Gregorc's categorization of learning styles is similar to Kolb's, except that Gregorc believes that an individual's style is static, even in light of the changing educational setting. Thus, even through maturity and further learning, an individual still approaches learning in the same way (Lowenstein & Bradshaw, 2004). Gregorc theory defines individual learning styles as inborn predispositions and proposes that it is the teachers' responsibility to adapt the instructional materials to match the students learning strength (Taylor, 2003, as cited in Lowenstein & Bradshaw, 2004).

### 2.2.8. Fleming Learning Style Model (VARK Theory)

The phrase "I am different, not dumb" reflects the basic belief present throughout Neil Fleming's written contribution to the learning style community. Fleming is the creator of the VARK model which stands for visual, aural, read-write, and kinaesthetic (see Figure 2.5). The VARK Learning Style Model represents one preference: the mode of perceiving information in a learning context. This system addresses how individuals take in and put out information. By "utilizing a simple 16 questions assessment tool, users obtain a profile of their preferences and have access to information about how to enhance their own learning using the strengths indicted by the questionnaire" (Allen et al., 2010, p.95).

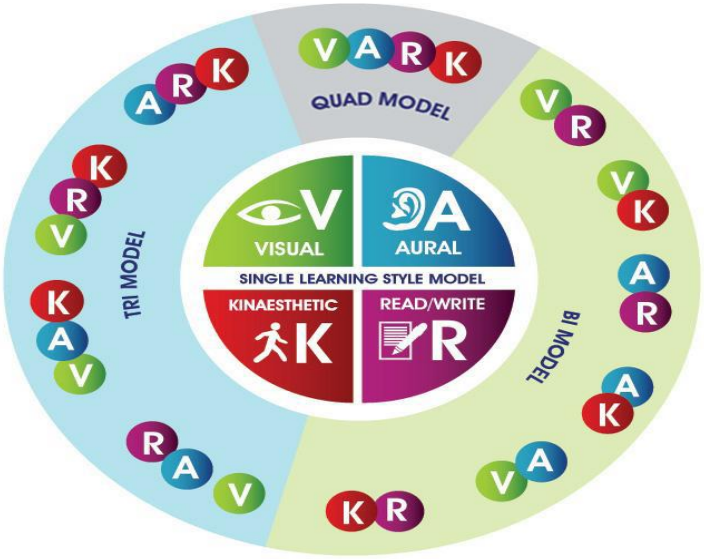


**Figure 2.5: Fleming's (2001) Learning Style Model**

The VARK model subdivides learners into four primary learning styles categories. According to Fleming (2006), visual learners prefer to learn using materials such as charts, graphs, and other symbolic devices. They rely on sight when taking information in and when organizing information or ideas. They commonly use different colours and highlighters when processing information and are encouraged to use diagrams, drawing or recall pictures to reinforce information. Aural learners prefer to learn through spoken lessons, talking and discussion; they understand more when the learning material is explained to them, and thus excel more when traditional teaching methods are used. They also learn best by attending lectures, tutorials, and discussions (Fleming, 2006; Tennent, 2006). Read and write learners prefer to learn from printed or textual learning materials. They are characterized by their use of lists, headings, dictionaries, glossaries, definitions, handouts, textbooks and lecture notes when processing information (Allen et al., 2010).

The three basic principles of VARK include: Each person can learn but may do so differently despite the level of his or her ability. When a student's learning preferences is accommodated, his or her level of motivation increases. It is best to present new material within the context of a learner's preferred mode of perception. Fleming (2006) argues that

most teachers conduct their classrooms using the mode that fits the teacher best, but they need to switch modes during instruction to appeal to all modes present in their classrooms. In addition, students should learn the most difficult concepts in their preferred mode, practice concepts that come easily in other modes, and be trusted to explore activities that are multi-modal.

### 2.2.9. VAK Theory

One of the earliest learning style theories is the VAK, or the visual learner, the auditory learner, and the kinaesthetic learner. It is best known as VAKT, visual (V), auditory (A), kinaesthetic (K) and tactile (T) (Mackay, 2007). Miller (2001) described a VAK learning style as the perceptual, instructional preference model which classifies learners by sensory preferences. The Intel Corporation (2007, as cited in Moayyeri, 2015), reported that this theory has proven to be a popular and simple way to identify different learning styles.

According to this theory, all students learn in all three of these ways, but usually one way is predominant. Students who learn better visually learn by seeing concepts in print, by writing concepts down, or by reading about concepts. These students often recall information that is written, even though they may have only read it once. Many of these learners do well using graphs, charts, outlines, illustrations, written notes, printed study sheets, and so on (Donoghue & Collins, 2005, p.118). On the other hand, students whose predominant style of learning is through auditory channels will probably learn best through class discussion, teacher lectures, or conversations with a partner. These students work well while listening to tape-recorded lessons. For these students, it is a good idea to begin a lesson with a brief explanation of what is coming and review with a summary of what has been covered.

The last type of learner is the kinaesthetic learner. Student who learns this way learns by moving around and touching things. This is called the hands-on approach, and every elementary teacher should include many of these learning activities in their daily lessons.

Singing songs, dancing, playing music, acting out a skit, using highlighters while reading, transferring text to a keyboard, using colored markers, drawing pictures, and so forth, all help kinaesthetic learners master concepts ( Donoghue & Collins, 2005).

Dunegan (2008) claimed that the VAK was first developed in 1920, by psychologists and teaching specialists such as Fernald, Keller, Orton, Gillingham, Stillman and Montessori. Miller (2001) outlined that a VAK learning style is based on the student receiving vision; hearing and touch. He described a VAK learning style as the perceptual, instructional preference model which classifies learners by sensory preferences. The Intel Corporation (2007) stated that this VAK theory has proven to be a popular and simple way to identify different learning styles. Mackay (2007) suggested that the practical mode of VAK assessment, which includes asking learners about the way they receive information, is a strong reason for using it in the educational field. According to Byrnes (2010, p. 4) stated that "the VAK model can be utilized to assist in incorporating different learning techniques into classroom instruction and activities".

### 2.3. Learning Style Instruments

The learning style Inventory (LSI) is one of the foremost broadly distributed instruments to provide a valuable framework for the design and management of learning activities (Healry & Jenkins, 2000; Sadler-Smith, 2001, as cited in Platsidou & Metallidou, 2009). Although the LSI has been extensively used, it has also been challenged mainly for its construct validity (Yang, 1996) (a critique will be presented in the next paragraphs). Some leaning style instruments frequently used in the educational field are:

#### 2.3.1. Kolb Learning Style Inventory

The Kolb Learning Styles Inventory (KLSI) is one of the most widely used assessment instrument for examining learning styles in the educational field" (Soest & Kruzich, 1994, p. 65, as cited in Sonnheim & Lehman, 2010, p. 92). Kolb's theory of experiential learning is

based on peoples' different approaches of perceiving and processing information. In his model, learning is described as a four-stage interactive process that involves four distinct learning modes which represent different types of learning: "concrete experience (CE), reflective observation (RO), abstract conceptualization (AC), and active experimentation. The combination of the learning modes forms four learning styles: the accommodative (AE/CE), the divergent (CE/RO), the assimilative (RO/AC), and the convergent (AC/AE)" (Kolb, 2014, p.104).

Kolb says that, while almost every individual makes use of all learning modes to some extent, each person has a preferred learning style for grasping and transforming the information (Pritchard. 2013, p. 55). Although Kolb's work has been criticized for logical inconsistencies in the theory construction (Coffield et al., 2004; Garner, 2000; Holman, Pavlica, & Thorpe, 1997; Vince, 1998), it still remains a very prevalent learning style model (Demirbas & Demirkan, 2007; Kayes, 2005; Marriott, 2002).

One of the studies conducted to test the reliability of the KLSI was that of Platsidou and Metallidou's (2009). The purpose of study was to test the reliability and validity of the Kolb inventory using a sample of Greek students. Four groups of participants were involved in the study: (a) sixty four primary school teachers with more than ten year experience, (b) 108 undergraduate students in the Department of Primary Education, (c) 89 undergraduate students in the Department of Psychology and (d) 79 undergraduate students in various departments of the School of Polytechnics. They reported satisfactory internal consistency reliability for all four scales of the Kolb inventory, with scores of CE = .81, RO = .72, AC = .76 and AE = .76, while the construct validity was found to be problematic. In addition, Ling (2008) stated that the Kolb inventory has strong face validity and acceptable internal consistency, and as a result revised the inventory permanently.

### 2.3.2. Dunn and Dunn and Prices Learning Style Inventory

It is composed of 104 statements relating to each classification of elements influencing learning. The inventory is organized for responses on a "five- point Likert scale, ranging from Strongly Disagree (SD) to Strongly Agree (SA)" (Dunn & Price, 2007, p. 7). The inventory asked students to respond to items relating to the key factors of the construct: sociological (pairs, peers, adults, self, and group); physical (perceptual strengths, auditory, visual, tactile, kinaesthetic, mobility, intake and time of day); environmental (light, sound, temperature and design); emotional (structure, persistence, motivation and responsibility) and psychological (global-analytic, impulsive-reflective and time of day). For example, students respond to statements, like "I study best when it is quiet; I like to study by myself; and the things I remember best are the things I hear" (Dunn & Dunn, 1993, p. 43). Wintergerst, DeCapua and Itzen (2001, as cited in Wintergerst, et al., 2002) indicated that the Dunn and Dunn and Prices Inventory focuses on the instructional and environmental preferences of students.

Dunn and Dunn (1993) stressed two important factors that educators need to consider as they assess students' learning styles. First, it is crucial that they use a reliable and valid instrument to obtain accurate learning style preferences (Dunn & Dunn, 1993). The Learning Styles Inventory (LSI) is the one instrument with the highest psychometric reliability and validity ratings and the one used in most research on learning styles (Dunn & Dunn, 1993; Sims & Sims, 2006).

Hickcox (1995, as cited in Sims & Sims, p.31) stated that "the Dunn, Dunn and Price inventories were psychometrically rated overall as good reliability evidence and good validity evidence". Price and Dunn (1997) reported that the reliability results indicated that 95% of the test retest reliabilities for 21 factors out of 22 were equal to or greater than .60, with the only exception being the area of late morning which was .56.

### 2.3.3. Gregorc Style Delineator

According to Gregorc (1982) this style delineator is a self analysis inventory based on mediation ability. The Gregorc Style Delineator consists of 40 words arranged in ten sets of four. Respondents rank the four words from the least to most descriptive of themselves, scoring 1for the least descriptive to 4 for the most descriptive. The total score for each of the four subscales is the sum of the ranking of the ten words comprising the subscale, so the raw score for each ranges from 10 to 40. De Bello (1990) stated that the Gregorc style delineator format and design is comparable to the Kolb inventory, and it has been suggested that observation and interviews should be used with the instrument to identify students' learning style preferences.

Grecorc (1984) made the first attempt to test the reliability of the instrument. He reported the internal consistency in the form of standardized alpha coefficients ranged from .89 to .93, while test–retest reliability coefficients ranged from .85 to .88. This result was criticized by Sawall (1986), drawing attention to Gregorc's failure to control for differences in the test-retest intervals and the fact that the structure of the delineator's protocol was extremely easy for individuals completing the test.

A study as conducted by Joniak et al. (1988) to examine the internal consistency of the Gregorc Style Delineator. Data in this study was collected twice, with alpha coefficients for the four scales in the first time being .55 for CS, .23 for AS, .56 for AR and .57 for CR. The second time alpha coefficients were .66, .25, 60 and 61 respectively on all scales. Moreover, O'Brien (1991) designed a study to investigate the efficacy of the Gregorc style delineator and the underlying theoretical model to the extent that the actual structure of the instrument would permit. The reliability result of this study showed alpha coefficients of .64 for the CS scale, .51 for the AS scale, .61 for the AR scale and .63 for the CR scale. Reio and Wiswell (2006) examined the psychometric properties of the Gregorc Style Delineator; Cronbach's

alpha coefficients on all scales were acceptable at: .64 for the CS scale, .68 for CR scale, .58 for AR scale and .54 for AS scale.

### 2.3.4. Index of Learning Styles

The index of learninf styles was developed by Richard Felder and Soloman in 1991, and was based on the work of Felder and Silverman Model (Felder et al, 2005). According to the index assesses learning styles on four bi-polar dimensions; active-reflective, sensing-intuitive, visual-verbal and sequential- global (Henry, 2008). Nilson (2010, p. 234) described the Index of Learning Style Instrument. It consists of forty four items with two possible answers, where each dimension has eleven questions and thus the intensity of a dimension can vary from one to eleven. Atman, Inceoglu and Aslan (2009) indicate that "the advantage of this model is it represents the individuals learning styles as a tendency and there is a third option that somebody can be equal in both directions" (p, 901).

Graf et al. (2009) examined the reliability of the Index of Learning Style, the finding was lacking, they removed the weak or less reliable questions to improve Cronbach's alpha. When this was done Cronbach's alpha became .52 for the active- reflective dimension by removing one question, .68 for the sensing-intuitive dimension by removing one question, .69 for the visual-verbal dimension by removing three questions and the sequential – global become .59 by removing two questions. Bacon (2004) describes the Index Learning Style subscales as having poor reliability, attributing this to the difference in reliabilities among different schools.

Van Zwanenberg et al., (2000) conducted a study to examine learning styles for 284 students from the School of Engineering and the School of Business at Newcastle University. They found that the Index of Learning Styles had low internal reliability, with Cronbach's alpha being .41 for sequential- global, .51 for active – reflective, .56 for visual-verbal and .65 for sensing-intuitive.

Zywno (2003) conducted a study to examine the reliability and validity of Felder–Soloman's Index. More than statistical techniques were used to achieve the purpose of this study, as the measurement was administered twice within an eight month period and the correlation between the students who responded to the test and retest was moderate to strong, with Pearson's correlation being .50 for sequential scores, .51 for visual scores, .67 for sensing scores and .68 for active scores. Internal reliability testing was performed on the items measurement which was .59 for active – reflective, .69 for sensing-intuitive, .63 for visual-verbal and.53 for sequential- global. To examine validity, an Analysis of variance (ANOVA) was conducted to examine the differences between 388 students and 68 professors from Ryerson University on the Iindex of Learning Styles. Results showed significant differences between the two populations in the mean scores on three scales out of four.

Aljojo et al., (2009) examined the reliability and validity of the Felder–Soloman Index of learning styles in Arabic, using 170 female students from the Economics and Administration College at King Abdul-Aziz University. The results of the internal consistency reliability for the 170 students were .31 for active – reflective, .36 for sensing-intuitive, .62 for visual-verbal and .32 for sequential- global. In the retest, conducted after a five week gap, only 31 of 170 students responded to the Index Learning Styles the second time. The results of the retest reliability in four scales were .52 for active scores, .38 for sensing scores, .74 for visual scores and .53 for sequential scores.

## 2.4. Characteristics of VAK Learners

### 2.4.1. Characteristics of Visual Learners

Visual learners can best learn through the sense of seeing. They relate verbal details with written words or images. They feel easy to take notes during lectures. They try to recall information in their mind's "eye" (LeFever, 2011). They like colorful books with lot of pictures, graphs, flow charts, tables, maps etc. They can observe environmental changes

quickly and easily. They have nice taste for dressing. They are good at spelling. They often forget names but remember faces. They forget verbal description very soon. They are habitual to use highlighters. They memorize text and spellings by writing again and again. They show good results in written tests. They are proved to be good designers. They enjoy picnic and trips. They dream in colors. They are fond of natural sceneries. They like those teachers who draw flow charts and drawing on black board and also write key points on the writing boards. They can easily understand sign and body language. They try to visualize situations. They remember what they read rather than what they hear. The following are additional characteristics of visual learners

1/ Can easily recall information in the form of numbers, words, phases or sentences

2/ Can easily understand and recall information presented in pictures, charts or diagrams.

3/ Have strong visualization or visual memory skills and can look up (often up to the left) and "see" information.

4/Make "movies in their minds" of information they are reading.

5/ Have strong visual-spatial skills that involves sizes, shapes, textures, angles, and dimensions.

6/ Have a good eye for colors, design, visual balance, and visual appeal.

7/ Pay a close attention and learn to interpret body language (facial expressions, eyes, stance).

8/ Have a keen awareness of aesthetics, the beauty, of the physical environment, and visual media (Wong, 2014, p.7).

### 2.4.2. Characteristics of Auditory Learners

The auditory learners learn best by hearing information. Unlike the visual learner, the auditory learner prefers to go to his class and listens to the lecture before he reads the next chapter. Reading difficult next passages out loud is also a good idea for auditory learners. They prefer discussing the course material, mumbling information as they read and study,

asking and answering questions out loud. Auditory learners prefer to process and learn by hearing and discussing information (LeFever, 2011). They prefer to have information presented to them verbally instead of, or in addition to, in writing. They learn by listening to others explain, debate, summarize, or discuss information about topics they are studying. Auditory learners, however, are not passive. Auditory learners like to *talk a*nd *listen* as they learn. The following are additional characteristics of auditory learners:

1/ Often engage in discussions and enjoy the process of communication

2/ Learn by explaining information in their own words, expressing their understanding or opinions, and providing comments and feedback to other speakers.

3/ Can accurately remember details or specific information heard in conversations, lectures, movies, or music.

4/ Have strong language and vocabulary skills and appreciation of words, their meanings, and their etymology.

5/ Have strong oral and expressive communication skills and are articulate.

6/ Have "finely tuned ears" and may find learning a foreign language relatively easy.

7/ Have above average ability to hear tones, rhythms, and notes of music, and often excel in areas of music.

8/ Have keen auditory memories.

9/ Auditory learners often select learning strategies that code or process information through their auditory channel into memory (Wong, 2014, p.8).

### 2.4.3. Characteristics of Kinaesthetic Learners

Kinaesthetic learners are learners who prefer to process and learn information through large and small muscle movements and hands-on experiences. Large and small muscles hold memory, so involving movements in the learning process creates muscle memory. The following are additional characteristics of kinaesthetic learners:

1/Learn best by working with physical objects and engaging in hands-on learning that involves feeling, handling, using, manipulating, sorting, assembling, and experimenting with concrete objects.

2/ Can recall information by duplicating the movement or hand motions involved in the learning process.

4/ Learn well by using large muscle or full body movements, such as movements used when working at large charts, working at a chalkboard, or white board, role playing, dancing or performing.

5/ Work well with their hands in areas such as repair work, sculpting, and art.

6/ Are well coordinated, with strong sense of timing and body movements.

7/ Have a strong awareness of their need or interest to add movement to study and work situations.

8/ Are able to focus better when they can engage in movement, which may include wiggling, tapping hands or feet, or moving legs when sitting (Wang, 2014, p. 11).

**2.5. Teaching Tips for VAK Learners**

A classroom teacher can apply different techniques to make learning effective. According to Rossi-Le ( 1995), Yates ( 2007) , Devine (2015), Wegman (2014), Stout (2004), Collins (2005), Kurtz (2011), and Perez (2012), teachers can use the following teaching tips should be taken into consideration when dealing with VAK learners:

**2.5.1. Teaching Tips for Visual Learners**

1. Use visual directions.

2. Use charts, graphs, and diagrams during teaching.

3. Use flash cards to enhancing students' vocabulary.

4. Use activities of matching games to develop the abilities of synthesis and analysis of the visual learners.

5. Use abacuses for teaching mathematics.

6. Motivate learners to use dictionaries and symbols to memorize the meanings of the difficult words.

7. Use pictures, newspapers and magazines during teaching process.

8. Provide students' an opportunity of educational trips to observe things

9. Use videos overhead projectors, TV, computers, cameras etc.

10. Use writing boards to write down important points.

11. Use flow charts and flow diagrams to show the sequential processes.

12. Motivate learners to highlight important points from the text.

13. Use Computer Assisted Instruction.

14. Use demonstration method for large number of students.

15. Use real objects in the class room where ever possible.

16. Provide an orderly surrounding area. These learners tend to be more productive when surroundings are neat.

17. Include written drills, not just recitation of facts to be memorized.

18. include activities that allow the student to make a visual record of information- copy key ideas, take notes, record information on charts or graphs, make time lines, etc (Stout, 1991, p. 70).

The educationists and the psychologists have suggested a lot of visual techniques that can be very beneficial for visual learners. Such as pictures, charts, movies, bulletin boards, games, flash cards, demonstration, graph, blackboard, workbooks, slides shows, dramas, photographs, diagrams, magazines, newspapers, models, books etc.

### 2.5.2. Teaching Tips for Auditory Learners

1/ Tell the student what to do rather than have him read directions. Look for specific practice materials that will appeal to the student in order to build skill in following written directions without letting that weakness interfere with other learning.

2/ Let the student tell you answers, using discussion instead of always requiring written answers on workbook pages.

3/ Read aloud or use books on tape and videos to broaden his base of literature, following up with comprehension questions for discussion.

4/ Allow the student to read out loud when by himself. This often increases the speed of comprehending what is being read.

5/ Allow the student to talk out loud to himself about whatever he is trying to retain. Teach him this technique as a study skill.

6/ Explain steps clearly when teaching a task that requires organization. The students will need an outline to follow or a list of steps for reference. Remind him patiently as needed while he develops skills in this area.

7/ Provide a quiet place to work since sound becomes a distraction (Stout, 2013, p. 71).

### 2.5.3. Teaching Tips for Kinaesthetic Learners

1/ Use manipulatives through activities that allow the student to move and explore.

2/ Use a reading program that allows the student to learn by using all the senses: see-hear-do.

3. Working in a standing position

4. Frequent study breaks to briefly move around

5. The incorporation of movement into the act of studying e.g. reading while on exercise bike, molding a piece of clay while learning an new concept, tossing a ball in the air while memorizing.

6. Encourage students to stand up when giving explanations

7. Use rhythm (beats) to memorize or explain information

8 Arrange your classroom so that kinaesthetic learners can sit near the front of the classroom and take notes. This will help keep them focused.

9. Use gestures when giving explanations and encourage the students to do so as well

10. Allow kinaesthetic students to spend extra time to any labs offered.

11. Incorporate building models that demonstrate the main concept into the curriculum.

12. Use role playing with a study partner

13. Use hands-on experience when possible

14. Offer field trips and allow kinaesthetic students to listen to a lesson while waking or exercising

15/ Allow the student to read out loud or talk to himself (think out loud) when he works independently (Stout, 1991, pp. 71).

## 2.6. Study Tips Suggestions for VAK Learners

According to Smith (2005), Studyingstyle (2007), Bergen County Special service Technical School (2006), VAK learners can opt for diverse study tip suggestions. The following are some that should be taken in account:

### 2.6.1. Study Tip Suggestions for Visual Learners

Colouring- highlight- use pictures, images, scripts, handouts, graphs for diiferent concepts- visualize speeling of words to memorize- Make mind maps to look at spatial relationships- Rewrite or redraw things from memory- Use computers to organize material and to create graphs, tables, charts- Study in a quiet place away from verbal disturbances - Make study area visually appealing- Test yourself by visualizing main ideas or questions and write the details or answers- Look at professors and others when they talk to help you focus

and to pick up on body language- After reading, review notes or underlined material to reinforce learning- Write it out!

### 2.6.2. Study Tip Suggestions for Auditory Learners

Work out problems aloud- Read explanations, work out problems and questions aloud- Listen to lecture/audio tapes- discuss and debate in the classroom- Make speeches and presentations- Explain ideas to other people- Discuss your ideas verbally whenever possible, even if you're having a conversation with yourself- Read texts out loud or into recorder- Study in groups and talk things out.

### 2.6.3. Study Tip Suggestions for Kinaesthetic Learners

Move around to learn new things- draw to remember- Draw charts or diagrams of relationships- hands on- Use finger or bookmark as a guide while reading- Write out everything- Study with a friend or group-- Make rearranging items a physical activity (don't draw connecting arrows—put them on separate cards to physically rearrange- Act things out (use gestures when speaking, point to material being read or discussed)- Rewrite information to be remembered- Use the computer to edit and rewrite lecture notes- Take frequent study breaks- Trace letters and words to learn spelling and to remember facts- Work in a standing position- Use models to study.

## 2.7. Scope of Strategies for VAK Learners

According to Rai Foundation College (2006), Smith (2005), Bergen County Special service Technical School (2006), the following scope of statregies are for VAK learners:

### 2.7.1. Scope of Strategies for Visual Learners

There are diverse strategies for visual learner depicted by many researchers psychologist and educationalist. They should be applied according to some factors like learner's age, level, and culture. Some of these strategies (methods, techniques, activity) are:

-Diagrams - Maps - Bulletin Boards - Movies - Graphs -Magazine- Charts - Workbooks - Photographs - Model - Info wheels - OHP transparences - Posters - Display - Demonstration - News paper - TV show - Slide Show - Flash cards - Writings - Games games/puzzles- Books- Drama -Use of highlighter activity- Color coded materials - videos -flow charts - written instructions- Opportunities for not taking to review notes later - journaling -Blogging -written brainstorming- mind mapping technique.

### 2.7.2. Scope of Strategies for Auditory Learners

There were many strategies for auditory learner given by researchers, psychologist and educationalist. They give according to some factors like learner's culture, age, level etc. The list of these strategies (methods, techniques, activity) are :

Discussions- reading aloud- oral quizzes- background music-Debates-giving reports- storytelling- verbal instructions- Verbal games/puzzle- opportunities for verbal review of material-Paired work- tape recording technique- interviewing verbal -brainstorming -Lecture method - Musical performance- Oral report - Teach the class or a group - TV/Radio show

### 2.7.3. Scope of Strategies for Kinaesthetic Learners

There were many strategies for kinesthetic learner given by researchers, psychologist and educationalist. They give according to some factors like learner's culture, age, level, etc. The list of these strategies (methods, techniques, activity) are :

Role plays- group work activities- hands-on activities- experiential activities- Opportunities for note taking-to be in motion- hands-on games/ puzzles- Lab activities field trips- game -building something - Draw and show activity - Play Games - Field trips - Puzzles - Role-play - Drawing - Experimental work - Cut and Paste task Activity - Projects - Musical performance - Working and reading - Black board activity - Science labs - Needle work - Puppet shows - Coloring books - Artistic creations - Body games

## 2.8. Learning Styles and Academic Achievement

Individual learners are distinctive and to clarify these contrasts seven variables were recorded by Ellis (2005) namely beliefs, affective state, aptitude, learning style, age, motivation, and personality. Learners having distinctive learning styles styles would behave differently in the way they perceive, interact, and react to the learning environment (Junko 1998). Language learning styles and strategies are among the main variables that offer assistance to decide how –and how well –students learn a second or foreign language (Oxford, 2003). Cook (2000), in clarifying the students' committment to learning, points out "all successful teaching depends upon learning; there is no point in providing entertaining, lively, well-constructed language lessons if students do not learn. The proof of the teaching is in the learning" (p. 23).

Moreover, Oxford (2001, p.45) points out that "individual students' learning styles and strategies can work together with – or conflict with – a given instructional methodology". This was suggested by Ellis (2005) how proposes the concept of learner-instruction matching. In his point of view, the best model of teaching will be that which matches the individual learner's preferred approach to learning. Whether from the perspective of learner-instruction matching or of the relationship of learning style and learning strategy, it is necessary to study learning style (Ellis, 2005).

The issue of how to enhance students' academic achievements has always been the concern of both teachers and researchers so that students be as much successful as possible. Contrary to what was mentioned earlier in the theoretical background on page 1, many studies claim that to determine the strengths for the academic achievement, depends on identifying one's learning style. There have been a number of researches conducted to demonstrate the relationship between learning style and academic achievement, and which show that matching teaching strategies to learning styles (the meshing or matching hypothesis) can significantly

enhance academic achievement of students (Griggs & Dunn 1984; Smith & Renzulli 1984). Dunn, Beaudry and Klavas (1989) claim that through numorous studies, it has been indicated that both low and average achievers earn higher scores on academc success and attitude tests when they receive education according to their learning styles.

Abidin et al., (2011) suggested that the students in their learning process had different learning styles or a combination of distinctive learning styles, in this way, they are able to learn in more effective way. They claimed that learning styles make an effect on the students' overall academic achievement. Dunn et al. (1995) contended that students who were instructed by an approach consistent with their learning style did better than those whose learning styles were not ccordinated with the educating methodologies. A student's style of learning, if matched to teaching methedology, can result in improved attitudes toward learning and an increase in thinking skills, academic achievement, and creativity (Irvine & York, 1995).

Numorous scholars who are interested with the field of learning styles concur that empowering learners to reflect on how they learn best makes a difference by developing their meta-cognition: fostering meta-cognition is maybe the foremost critical advantage that can be claimed for applying learning style theory to education and learning which in turn create compelling effective learners who can handle challenges in a learning setting and exceed expectations in examinations. Learning style theory is hence an approach that is oriented towards meta-learning, comparable to setting objectives, choosing fitting methodologies and observing advance which are more compelling ways of progressing learning outcomes and accomplishement than those which essentially point to engage learners at the level of presenting information or understanding and utilize (Hattie, Biggs, & Purdie, 1996).

According to the previous researchers, identifying learning styles and catering instruction in congruence with these learning styles could lead to better academic

achievement, however, some significant facts needed to be tackled here. Chuah Chong-Cheng (1988) who talks about the significance of learning styles as being not only important, but too viatl individuals in educational settings, most students prefer to learn in specific ways with each style of learning contributing to the academic achievement success in holding what they have learnt. As such, researches carried out conclude that students hold 10% of what they read, 26% of what they listen to, 30% of what they see, 50% of what they see and listen to, 70% of what they say, and 90% of what they say as they do something (Chuah Chong-Cheng 1988). These realities uncover the fact that each learning style possesses its own qualities and shortcomings. A few students learn in numorous ways, whereas others might support one or two (Felder, 2005). Those students with numorous learning styles tend to hold more and get higher scores compared to those who depend exclusively on one style (Dunn, Beaudry & Klavas 1989).

Dunn and Dunn (1986) reporeted that the differences in learning styles have also been found between gifted and the underachievers; between the learning disabled and average achievers; among diverse sorts of special education students; and among secondary students in comprehensive schools and their counterparts in vocational education and industrial arts (Some special students favour Kinaesthetic instruction, such as experiential, dynamic and hands-on, where as numorous others lean towards auditory and visual learning styles (Dunn, 1991).

According to Felder (1995), students learn more when they recieve information in a assortement of approaches than when receive it only in a single approach. Much experiential inquiry demonstrates that learning styles can either obstruct or increase academic performance in a few angles inspite of the fact that not enough studies have been carried out about the relationship between instructional design of learning materials and learning styles (Riding & Cheema 1991).

To sum, we can, generally speaking, assume that a rich data have been obtained through studies on learning styles; however, the data have rarely been exploited by designers of instructional programmes thereby a greater understanding of learners' approaches to learning can be obtained (Singh, et al., 2011).

**2.9. Theoretical and Conceptual Framework**

The VAK Model is one of the most recently popular learning style models that have emphasized sensory modalities as a means of providing stimuli to the learner (Coffield, et al., 2004). The VAK comprises of three sub modes: Visual (V), Auditory (A) and Kinaesthetic (K). The present study is embedded on the VAK [Visual (V), Auditory (A) and Kinaesthetic (K)] theory which was originally developed by Neil Flemings (2001). Based on this theory, several learning style inventories have been developed (discussed earlier) which can be applied in research and classroom environment. According to thi model, some learners are attributed as auditory in the VAK model through the reception of this information by the ear. Another group of learners might have a tendency towards for visual learning (V), which have not been particularly well covered by the methods of teaching (Galasinski, 2000). Lastly, a group of learners within this model are the learners who prefer to experience their learning via multiple sense, including touch, hearing, smell, taste etc., which are described by the literature as kinaesthetic learners (K) and as such, they prefer concrete, multisensory experiences in their learning (Fleming, 1995). According to the VAK theory, the way learners receive information, has been divided into three modalities: visual—sights, pictures, diagrams, symbols; auditory— sounds, words; kinaesthetic—taste, touch, and smell.

An extensive body of studies has stated that most individuals learn most effectively with one of the three modalities and tend to miss or ignore information presented in either of the other two (Barbe & Milone, 1981); Barbe, et al., 1979; Dunn & Dunn, 1987); Waldheim, 1987). Doyran (2000) in her article explains briefly these modalities separately although there

are some learners who tend to use a combination of both visual and auditory senses and have been termed as tactile learners. Visual learners keep in mind what they see: pictures, graphs, diagrams, flow charts, time lines, movies, showings. Visual learners probably forget what it said to them they will probably forget it quickly, common occurrences in language teaching contexts. Auditory learners keep in mind much of what they listen to and more of what they hear and then say. They incline toward a lot of discussion, verbal clarification and learn effectively by explaining things to others (Doyran, 2000). Visual learners lean toward reading books, visualizing words, or looking at some teaching tools. They prefer to look at the written words on the blackboard than to only listen to the teacher. Therefore they like the teacher to write more than to talk more in classroom. The PowerPoint presentation is suitable to these learners because it presents words, and pictures or charts. This sort of learners will feel comfortable when teachersutilize the translation-grammar method in language teaching. Auditory learners also alluded to as verbal learners, incline toward learning by listening. For them, they may appreciate to have communication with others by talking. They may not favour reading books. So in formal instruction settings, they would rather listen more than see more. The teaching approaches that may suit them, could be the oral approach, the situational approach, the audio-lingual approach, and communicative approach. Kinaesthetic learners prefer to learn by feeling or touching something with their hands. Accordingly, kinaesthetic learners will feel comfortable when teacher use the total physical response approach (Doyran, 2000).

According to Sternberg (1997), learning will be more rewarding if it is tailored around the learners' learning style approaches. Accordingly, teachers ought to build up the learning style preference of his/her learners in order to reach a successful instruction. Doyran (2000) puts this within the setting of language English teaching, contending that the English class ought to take into consideration the visual, auditory and kinaesthetic learner by implementing

instructional methods that include these modalities in a typical class. As it were at that point, , can we accept that each learner has been reached at his/her learning point of need.

Based on the VAK theory, teachers ought to garantee ensure that learning activities are planned and carried out in ways that offer each learner the opoortunity to engage in manner that suits them best (Kolb, 1984). Since the students' needs in a typical classroom are much different, the English instructor will need to use diverse teaching methods which offer assistance for each of the individual learners interact with the content in a way that he/she gets it well (Doyran, 2000). For example, the instructor ought to utilize lecture and recorded discussion methods to meet the auditory learner needs; flip charts and PowerPoint presentations to meet the visual learner and writing/note taking to meet the kinaesthetic learner (By doing this, the learners will be met at their point of learning: they will discover their preferred learning styles and strategies, strengths and weaknesses in learning contexts and leverage on those opportunities for better academic achievement and ultimately acquire life-long learning attitude (Oxford, 2001).

**2.10. Studies on Learning Styles**

The aims of conducting a scientific research are to find out answers to research questions, or to find out solutions to a research a problem. Moreover, sometimes the research should be conducted because of gap in knowledge ( discussed in the next chapter). The latter is the aim of conducting the present study. So this study tried to find out whether teaching in congruence with learning styles has a positive or negative effect on students' oral proficiency achievement in our department. It is hoped that the results of this study will add knowledge to the literature in this area of research.

Before conducting the quasi-experimental research, it was extremely important to review some related researches that provide the practical foundation of the research problem in order to gather practical data about the methodologies, research methods and data analysis for the

present study. For that purpose, the following questions were asked and answers had to be provided:

1. Which co-rrelates were studied in the previous studies?
2. Which subject was studied in the previous studies?
3. What was the range of size of sample in the studies?
4. What research methods were used in related researches?
5. Which tools were used in the previous researches?
6. Which type of research design was selected?
7. Which statistical techniques were used for data analysis?
8. What were the findings of these researches?

To provide answers to the previous questions, a few studies were opted for. After the collection of the sample of the related researches, the abstract of each research was stated and then each abstract was analysed in the light of the above questions.

Verma and Sharma (1987) studied academic achievement in relation to learning styles of adolescents. The objectives of the study were: (1) To compare academic achievement of a adolescent students possessing independent and dependent learning styles in respect of Hindi, English, Maths, General Science, Social Studies and total area of study. (2) To ascertain the effects of competitive and collaborative learning styles on academic achievement of adolescent students in Hindi, English, Maths, General Science, Social Studies and total area of study. (3) To analyze the effects of avoidant and participate learning styles on academic achievement of adolescent students in Hindi English, Maths, General Science Social Studies and total area of study.

The sample selected for the study comprised 120 adolescent students of both the sexes studying in secondary class (IX) in two Higher Secondary Schools of Bharatpur city. The sample was selected following stratified random sampling technique. In each learning style

group, twenty students of average mental ability were included. The tools used for measuring general intelligence and learning styles were: (1) The Group Test General Mental Ability (Hindi version): Jalota (1972) (2) Student Learning Styles Questionnaire: Gresha Anthony and Sheryl Riechmann (1975). Normative survey method of research was followed. To test the significance of difference between the two groups 't' values were computed using the formula given by Cohen and Holiday. The Findings of the study were: (1) The group of dependent learning style's students is significantly better than the group of independent learning style's students so far achievement in Social Studies is concerned. (2) There is no significant difference between mean scores of achievement in Hindi, English, Maths, General Science, Social Studies and total area of study in respect of competitive and collaborative learning style group. (3) Participant learning style group appears to be superior to avoidant learning style group with regard to achievement in various school subjects such as Hindi, English, Maths, General Science, Social Studies and in total area of study.

Verma and Tiku (1990) studied the effects of socio-economic status and general intelligence on learning styles of high school students. The objectives of the study were: (1) To study the effect of socio-economic status on independent, dependent, participant, avoidance, collaborative and competitive learning style of high school students. (2) To ascertain the effect of intelligence on independent, dependent, participant, avoidance, collaborative and competitive learning style of high school students. (3) To analyze the interaction effect of socioeconomic status and intelligence on the learning styles of high school students.

A representative sample of 300 students (both male and female of Class X) was selected from seven institutions of Shimla City. First, institutions were selected by a random sampling method. Then one section from each institution was selected randomly. Thus, random cluster sampling technique was employed in the selection of the initial sample. The tools used to

collect the relevant data were: (1) Socio-economic Status Scale Questionnaire (SESSQ), (2) The Group Test of General Mental Ability, (3) Student Learning Style Questionnaire. Survey method of research was followed. A two-way analysis of variance technique was employed to analyze the obtained data.

The Findings of the study were: (1) the results indicate that avoidance learning style is not influenced by change in the socio economic status of the subjects. But variation in intelligence definitely affects the avoidance learning style. The calculated means of the learning style for high and low intelligence group tell us that low intelligent students prefer avoidance learning style significantly more than high intelligent students. The competitive learning style of high school students is not affected at all by their socio-economic status, intelligence and both in joint form. (2) The study pertaining to the main effect of general intelligence on learning styles revealed no significant difference between high and low intelligence students on independent, dependent, participant, collaborative and competitive learning styles. Only in case of avoidance learning style did significant difference emerge due to variation in intelligence level. The interaction effect of socio-economic status and intelligence was not significant on any of the learning style of high school students.

Verma (1992) conducted a study with learning style related to anxiety, achievement-motivation of region and find out the correlation psychological factors. Objectives of the study: (1) to study the learning style as related to anxiety and achievement motivation and the correlations among them. (2) To study the correlation between students age, sex on the one hand learning style anxiety and achievement-motivation, on the other hand and (3) to study the correlations among learning style, anxiety and achievement motivation.

Method used in this study: using the purposive sampling method, 2000 students were considered for the sample. This includes boys and girls, covering the rural and urban locales of Agra city. The tools used in the present study included, Learning Style Inventory by Rita

Dunn and Kenneth Dunn, adopted by Vahistha, achievement-motivation Test by Prayang Mehta, General Anxiety Scale for children (GASC), Hindi Version adopted by Nijhawan, Socio-economic Status Scale for by Kuppuswamy, General Information questionnaire (GIQ) by Vashistha and Jagdish Verma. Findings of this investigation: (1) Sex did not make a difference in the Learning Styles of students, but it had a direct bearing upon achievement-motivation and anxiety. (2) Age levels had a little impact on learning styles, achievement-motivation and anxiety. (3) There were rural-urban differences in learning style of students; urban students had better learning styles than the rural students. (4) Parent's education had affected the achievement-motivation of high school students, but it did not affect learning style and anxiety.

Sharivastava (2002) exmined the effects of self-concept on the learning styles preferences may have any inter affect. The aim of the study was to investigate hether self concept may have any inter affect on learning styles preferences. The study as conducted on a sample of 329 adolescent boys (207 urban and 122 rural) of age group 14-15 years studying in class $10^{th}$ in Tehi-Garhwal district and was selected through stratified random sampling technique. Normative research method was adopted to collect data. The subjects' self concept was treated as independent variable and the learning style preferences were treated as dependent variable. The pupils' age, sex, class-level and locality were treated as controlled variables. Learning Style Inventory developed by Dr. S. C. Aggarwal (1983) were used for data collection. Mean, SD, and averages were used for data analysis. The findings indicated that the self concept level of the urban boys increased. Self concept of the rural boys showed their increasing preferences towards flexible and environment free learning styles.

Vyas (2002) studied learning style, mental ability, academic performance and other Ecological correlates of under graduate Adolescent girls of Rajasthan. The objectives of the study were: (1) To compare the academic performance of the students in respect of different

learning styles (2) To study the interactive effect of mental ability and learning styles on academic performance of girls students (3) To study the interactive effect of ecological correlates and learning style on academic performance of girls. A sample of 500 girls from class 12th of 16 government Sr. secondary schools of Baran, Bundi, Thalawar and Kota district in Rajasthan was taken. Under ecological category the investigation has obtained the area (Urban/Rural) and the level of parent's education. The tools used Learning Style Inventory by K.K. Rai and K.S.Narual, Mental ability test by S. Jatlota and Academic performance marks obtained by the students in board examination. The statistical techniques used were mean, standard deviation, t-test and F-test for data analysis. The findings of the study were: (1) The environment, emotional, sociological dimension of learning style does not effect significantly the academic performance of girls. (2) The environment dimension of learning style performance does not affect the academic performance where as mental ability influence the academic performance.

Farks (2003) measure the Effect of Traditional verses Learning-Styles Instructional method on middle school students. The research questions of the study were: (1) Will there be significantly higher student achievement test gains when Holocaust is taught using the MIP as opposed to when it is taught traditionally? (2) Will there be significantly higher student attitude test score toward instructional method when the Holocaust is taught with MIP as opposed to when it is taught traditionally? (3) Will there be significantly higher student empathy toward people test scores among students taught the Holocaust with the MIP as opposed to those taught traditionally? (4) Will there be significantly higher student transfer task scores among students taught the Holocaust through the MIP as opposed to those taught traditionally? The participants in this study consisted of 105 seventh grade students in an urban K-8 school in New York City average 12 years old. The instruments that the teachers administered during this investigation were (a) LSI (Dunn et al. 2000) (b) Semantic

Differential Scale (c) Balanced Emotional Empathy Scale (d) Moral judgment Inventory (e) post test of content that measured achievement. The experimental design two group post test design used for this study. Data were analyzed by mean, Sd and t-test statistical technique.

The findings of the study were: (1) Learning Styles based approaches to the Holocaust a curriculum of emotionally charged issues result in achievement, attitude, empathy and transfer level significantly greater than those realize with traditional approaches (2)The effectiveness of learning style method for increasing achievement attitudes toward learning and successfully initiate the exploration of the empathy toward people approach and transfer of knowledge using learning style methodology (3) The advantages of learning style instructional resources had a practically and statistically significant influence on seventh-grade student's achievement, attitudes, empathy and transfer of knowledge .

Lombay (2003) examined the effectiveness of using of technology in English as a Second Language Course to Accommodate Visual, Kinaesthetic, and Auditory Learners to impact Students' Self-Efficacy about Learning the Language. The major objectives of the study were: (1) Augment students' judgments of their perceived abilities to perform in ESL courses as measured by the Self-Efficacy Questionnaire (SEQ), which was developed by Mikulecky, Lloyd, and Shenghui (1996). (2) Augment students' aspirations in learning ESL as measured by the SEQ. (3) Augment students' persistence in ESL as measured by the SEQ. (4) Augment students' positive perceptions of activities related to learning English. The treatment group had approximately 35 to 40 undergraduate 1st-year college students. The control group had approximately the same amount of students, and they were English 101 students as well. Both groups received the similar English. This study was carried out as a pretest-posttest control group design.

The data was collected by SEQ; the SEQ (Self-Efficacy Questionnaire) developed by Mikulecky et al. (1996). The PEPS instrument was Productive Environmental Preferences

Survey reported by Price (1996). The Spanish version of PEPS was used. Learning Style Inventory of Dunn & Dunn was also used to identify the learning style. One of them was drawn from students attending an Intensive English Program (IEP) at Indiana University, and the other was from literacy learners at two Adult Basic Education (ABE) programs in Indiana were used for experimental work. T-test, ANOVA and MANOVA statistical techniques were used for data analysis.

The results of the study were: (1) First, the SEQ total by group was examined to see if . if there was a significant difference from pretest to posttest on SEQ total scores. It also examined if there was a significant difference among the experimental and control groups overall (SEQ Self-Efficacy Questionnaire It also examined if there was a significant difference between the experimental and control groups at SEQ posttest total that did not exist at SEQ pretest total. (2) Second, results were used to examine if there were significant differences between the learning style groups on the SEQ total pretests and posttests. It also examined if there was a significant difference between SEQ total pretest and SEQ total posttest. Finally, it also examined if there were larger differences between the learning style groups at one point in time when compared to another. The results indicated that students in the experimental group had significantly higher self-efficacy than the control group.

Gakhar (2006) studied academic achievement as determined by their preferred learning, thinking styles and study skills. The objectives of the study were: (1) To know the significant difference in the academic achievement of physiotherapy students due to different learning styles namely understanding movement of action v/s verbal explanation; open ended content v/s structural content preference; linking for concrete learning v/s liking to learn in abstract way; divergent learning style v/s convergent learning style and artistic aesthetic v/s temporal interests. (2) To know the significant difference in the academic achievement of physiotherapy students due to different thinking styles namely logical v/s fractional, divergent

v/s convergent, creative v/s intellectual, optimistic v/s pessimistic view of problem solving style, imaginary v/s analytical. (3) To know the significant difference in the academic achievement of physiotherapy students due to low and high study skills namely Goal orientation, activity structure, scholarly skills, lecture mastery, text-book mastery, examination mastery, examination mastery, self-mastery and over all study efficiency.

Study was conducted on a sample of 136 final year students taken from Punjab, Haryana and Delhi. These type of tools were: (1) Group Test of General Mental Ability (Tandon, 1971) (2) Socio-Economic Status Scale (Kulshrestha, 1982) (3) Style of learning and thinking (Venkataraman, 1990) (4) The Cornell Learning and study skills inventory (By Walter Pauk and Russell Cassel, 1971) (5) Academic Achievement was measured by taking aggregate marks of BPT I, II, III years from their college record. The study was survey type in nature.

The Findings of the study were: (1) there was no significant difference in the academic achievement of students having action and verbal explanation learning style, divergent and convergent learning style, content preference for open ended lessons and structured lessons learning styles. (2) There was no significant difference in the academic achievement of students having preference for logical and fractional thinking styles, divergent and convergent thinking styles, creative and intellectuality thinking styles, optimistic and pessimistic thinking styles, imaginary and analytical thinking styles. (3) There was significant difference in the academic achievement of students having high and low goal orientation study skills, scholarly study skills and overall study skills. (4) There was no significant difference in the academic achievement of students having high and low activity structure study skills, lecture mastery study skills, text-book mastery study skills, examination mastery study skills, self-mastery study skills.

Visser et al, (2006) studied teaching styles versus learning styles in the accounting sciences in the United Kingdom and South Africa: a comparative analysis.The objectives of the study

were: (1) Compare the learning styles of Accounting students at all four year levels at two universities: in two different countries (South Africa and the UK) (2) to compare the teaching styles of lecturers in the Accounting sciences at two university campuses (X and Y) in two countries (South Africa and the UK) (3) to compare the matching of learning styles with teaching styles in the Accounting Sciences at two universities (X and Y) in two countries (South Africa and the UK). The sample of the study was the learning styles of 735 undergraduate Accounting students and the teaching styles of 46 lecturers from one United Kingdom and one South African university were empirically surveyed, using the Felder-Solomon Index of Learning Styles questionnaire to consider the students' learning styles, and an adaptation of the questionnaire to analyze the lecturers'teaching styles. The research was survey type in nature. The data was analyzed by simple statistical techniques mean, median and mode.

The results of study were: (1) With regard to the active/reflective dimension, the Accounting students' learning style preferences reflect that the majority of students at the South African university and those at the UK university's learning style was balanced and that the remainders' preferences were skewed towards an active learning style. With regard to the sensing/intuitive dimension, the majority of learners preferred a sensing learning style. A balance between a sensing and intuitive learning style was their second choice. The intuitive learning style was ranked last on both campuses. With regard to the visual/verbal dimension, it would appear that as many students preferred a balance between visual and verbal learning as preferred a visual approach, and only a few preferred a verbal learning style. With regard to the last group of learning styles, namely a sequential/global learning style, the majority of students preferred a balance between the two learning styles, with a significant number preferring sequential learning and a minority preferring a global learning style. In respect of the 'B' categories (reflective, intuitive, verbal and global), it was noted that these were in the minority for all learning styles. (2) In the comparison of the responses of the students of Universities X and Y, none of the effect sizes reached a p-value of 0.3, which indicates that the effect is less than medium; thus there is no

significant difference between the learning style preferences of the respective years' Accounting students at Universities X and Y (3) In the comparison between the responses of the lecturers in the Accounting Sciences at Universities X and Y, little difference was noted (p-values were smaller than 0.3) between the teaching styles of the lecturers at the two universities (4) At the South African university, there were few differences in the match between teaching and learning styles. However, for the sensing/intuitive dimension, lecturers preferred a balanced style, whilst the majority of students preferred a sensing style. Also, while very few students preferred an intuitive style, 16.7% of the lecturers opted for this style. The majority of lecturers preferred a visual approach, but the students were split between a preference for a balance between a verbal and a visual approach and a preference for a visual approach. With regard to the results other than the majority viewpoints, there was a slightly higher preference among lecturers for an active learning style and among students for a more sensing style than in the active/reflective dimension. Likewise, regarding the sequential/global dimension, students preferred a sequential style, while lecturers preferred global learning.

Rasimah (2008, as cited in Shazia, 2014) conducted a study about students learning styles and academic achievement. The objectives of this study are to ascertain the dominant learning styles of the students and to discover the relationship between learning style and academic achievement. The tool was: the Grasha-Riechmann Student Learning Style Scales (GRSLSS) instrument was administered to determine student learning preferences in six learning style categories. Method: the subjects of this study were first year students at the (International Education Center (INTEC), University Technology MARA, Shah Alam. These sponsored students were undergoing their preparatory programmes at INTEC before pursuing their degree at reputable universities in, Australia, New Zealand, the United Kingdom and the United States, among others. Cluster analysis was used to identify their dominant learning styles, while discriminant analysis was used to analyze the relationship between learning styles and the various demographic and educational variables. Findings: (1) Academic

performance based on learning style was found to be significant. (2) Academic performance (grade) with the level of individual learning style (Low, moderate or High) does not reveal any significant relationship except for independent learning style.

Kara ( 2009) as cited in Shazia, 2014 invesigated the hypothesis that a mismatch between learning styles of the students and teaching styles of the teachers would results in frustration, failure, and demotivation. The sample of the study consisted of 100 second year students studying at ELT Department and 12 teachers. The Personal Learning Styles Inventory was given to the teachers and a questionnaire was given to the students. Both teachers and students were interviewed to find out whether they were concerned when there is a mismatch. The results revealed that second year students at ELT Department in Anadolu University favored visual and auditory styles. The teachers also preferred visual and auditory styles. The results also showed that learning styles and teaching styles match at the ELT Department.

Al-Tamimi and Shuib (2009, as cited in Shazia, 2014) conducted a study to identify the type of information English Majors Students in University Sains Malaysia preferentially perceive, through which sensory channel exterlan information is most effectively perceived, and how they prefer to process information, and how they progress toward understanding. The tool used in the study were the Index of Learning Styles (ILS) questionnaire developed by Felder and Soloman (2004) was adopted and reported to be valid, reliable and suitable in identifying learners' learning styles. The findings of the study stated that USM Majors have different learning styles that sould be taken into consideration by USM staff memebers in preparing their courses, matrials, curriculum and teaching methods.

Kazu (2009) examined the impact of learning styles on learning and teaching processes. This empirical study had two objectives: to study the impacts of the learning styles on teaching and learning methods and to assess the major models in a diversity of learning contexts to better understand their qualities and deficiencies. Therefore, study was designed to

examine the applied researches that can demonstrate the effects of learning styles on learning and teaching processes. The results of the investigation would help in raising individuals' awareness in regard to the their. Education should be given by taking these differences into consideration in the educational and instructional processes. Individual brings some latent potencies produced by the genetic heritage; these latent potencies may be modified or develop by social acculturation in time. It was concluded that the best way of learning to the individuals is by determining learning styles beforehand by considering the differences such as personality, perception, ability and intelligence.

Damavandi (2011) examined the effect of learning styles on the academic achievement of secondary school students in Iran. The Kolb Learning Style Inventory (1999) was used in eight public schools in Tehran. The mean of test scores in five subjects, namely English, science, mathematics, history and geography, was calculated for each student and used to measure the students' academic achievement. A sample of 285 Grade 10 students were randomly selected. The results of the analyses of variance (ANCOVA) showed that there was a statistically significant difference in the academic achievement of participants that correspond to the four learning styles [$F(3, 285) = 9.52$, $p < .05$]; in particular, the mean scores for the converging and assimilating groups are significantly higher than for the diverging and accommodating groups.

Wilson (2011) examined to what extent learning styles influence the teaching and learning processes as well as the students' academic achievement. This study investigated the the degree of match or mismatch between learning style preferences of students and instructional strategies of teachers) and the academic achievement of fourth grade students as shown by Palmetto Assessment of State Standards scores in four academic content areas, namely English language arts, mathematics, science, and social studies. The sample of the study was approximately 200 students from three schools in different northwestern South

Carolina districts. A correlational research design was used to analyze the obtained data and produced Pearson r values for each content area. The results showed non significant correlation between variables.

Abidi and Rezaee (2012, as cited in Shazia, 2014) studied learning styles and overall academic achievement in a specific educational system. In order to examin this correlation, a total of 317 students were selected as a sample of this survey study. The Learning Styles Survey (LSS) instrument used in the study was the Learning Styles Survey (LSS) which is based on Reid's (1987) Perceptual Learning-Style Preference Questionnaire (PLSPQ). The statistical procedures employed in this study were one-way ANOVA, and multiple regression analysis. Findings: (1) The analyses of the data indicated a significant relationship between overall academic achievement and learning styles. (2) It was also found that the high, moderate and low achievers have a similar preference pattern of learning in all learning styles.

Gokalp (2013) studied the effect of students' learning styles to their academic success. The objectives of this study were to evaluate the learning styles of education faculty students and to determine the effect of their success and relationship between their learning styles and academic success. The population of this study is comprised of the students of Education Faculty in 19 May University and the sample includes 140: 68 art, 72 pre-school teacher department students. Depending on the results obtained from pre-test, it was aimed to improve students' knowledge and skills in studying. There was a significant difference between the scores of pre- and post-tests. The significant relationship between the scores of post-test and the student success revealed that they learned how to study effectively. The validity and re-liability of the test were determined by considering the Cronbach alpha coefficients for each and all of the items. The study has found statistically significant differences between the results of the first and final applications of the subtests on learning styles and academic success; those subtests covered the items as learning, planned study, effective reading,

listening, writing, note taking, using the library, getting prepared for and taking exams, class participation and motivation.

Garner- O'Neale, (2013) conducted a study to investigate the following variables: learning styles, study habits and academic achievement of Chemistry students at the University of the West Indies (the UWI), Cave Hill Campus. The Paragon Learning Style Inventory was used to measure the four learning style dimensions extrovert/introvert, sensate/intuitive, feeling/thinking and judging/perceiving. The Study Habits Inventory was used to measure the study habits of the students. The sample of the study consisted of 59 students. The Cronbach coefficient alpha was used to test the reliability of the instruments used. The data collected was analyzed using the independent t-test, ANOVA and linear regression at a confidence level of 0.05. It was found that tha sample had the introvert, sensate, thinking and judging learning styles were most dominant. In addition, there was no statistical difference in the study habits of the students based on level or the learning styles based on level, and study habits or academic achievement based on study habits and learning styles. The contribution of the learning styles and study habits as predictors of a chemistry student's academic achievement in group theory was not significant. On the other hand, extrovert/introvert learning style was the highest contributor.

Chermahini (2013) investigated the relationship between learning styles and the academic performance of students who attend an English class to learn English as a second language in Iran. A randomly selected group of 488 high school students (248 male and 240 female) participated in this study. The Kolb's Learning Styles Inventory was used to identify the participans' four basic learning types: Accommodating, Diverging, Assimilating, and Converging. The achievement test was used to evaluate the academic performance in the English language. The survey results indicated significant relationships between the different learning styles and the performance in an English test, and the performance resulted

differently in four groups with different preferred learning styles. The results also indicated gender differences in the performance in English test for convergent and divergent and did not accommodate and assimilate preferred learning styles. These results indicated that learning styles can be used as a good predictor of any second language academic achievement, and therefore they should be taken into consideration to develop students' performances. Moreover, the results showed that diversities in learning styles play a significant role in this domain.

Çakıroğlu (2014) studied the relationships among learning styles, study habits, and learning performances in an online programming language course. Objectives of the study were to explore the relationship between students' learning styles and study habits in accordance with their learning styles in an online distance learning environment. Sub-problems were related to the connection between Kolb's learning styles, study habits of distance learners, and their learning performances. This would provide an insight into the satisfactory features of a synchronous setting for various learning styles and study habits and the requirements of the setting for quality instruction.

The sample comprising sixty-two sophomore students from a Turkish faculty of education, in a computer teacher training program who enrolled in an online introductory programming course participated in the study. At the beginning of the study, LSI-T was used for categorizing learners' learning styles. Kolb's Learning Style Inventory (LSI) was used to measure the students' learning styles. Another inventory developed by the researcher was used to determine learners' study habits. An achievement test was used to put forward their learning performances. ANOVA was conducted to determine whether there were significant differences among the average scores of four groups (assimilators, convergers, accommodators, divergers). Significant relationships between learning styles, study habits, and learning performances were revealed. The results presented some ideas about distance

learners' learning styles and study habits for instructors who wish to incorporate synchronous courses and support learners.

Kaur and Kaur (2014) conducted a study aiming to examine the effect of learning style and intelligence on achievement in Biology. The sample included 320 Class IX students from Amritsar city. To measure students' performance, an Achievement test in Biology was used. The Kolb Learning Style Inventory and General Group Test of Intelligence were used to collect the requireddata. Experimental group recieved the web based instruction accommodating the students with different types of learning styles and levels of intelligence. Control group was taught by conventional mode of instruction. Interaction effect of learning style and intelligence was studied and the F value calculated by using two way ANOVA test came out to be 3.16 which is significant at 0.05 level of confidence. T-values for the difference in mean gain score on the variable of achievement in Biology with the different combination pairs (DI/CO/AC/AS-HI/LI) were also found. T-values for few combination pairs came out to be significant and for few came to be insignificant, thus partially accepting the hypothesis.

Nouri (2014) conducted a study on learning styles, thinking styles, and English language academic self-efficacy among the students of Islamic Azad University of Behbahan taking into account the gender. The study was a survey method. The population of the study included all the students of the Islamic Azad University of Behbahan (7941). The sample (367 students) was selected through stratified sampling technique. the Kolb's learning styles questionnaire, Sternberg's thinking styles questionnaire and the researcher-made questionnaire on the English lesson academic self-efficacy of students were used to collect data. Different different statistical techniques were used to analyze data. They included the mean, standard deviation, t-test, and chi square in order to examine the statistical difference between the variables of gender and field of study. The results showed that the engineering students had

more academic self-efficacy than humanities students. The rate of academic self-efficacy among male students was greater than that among female students. Male students had more assimilate learning style but female students had more divergent learning style. Humanities students had more divergent accommodate learning styles, but engineering students had more convergent and assimilate learning styles. The results also showed that the prevailing thinking style among male students was the judicial thinking style, but the prevailing thinking style among female students was the executive thinking style.

Shazia (2014) studied the problem for the present investigation has been undertaken as under "Self-Concept, Learning Styles, Study Habits and Academic Achievement of adolescents in Kashmir". Objectives of the study were: 1. To assess Self-Concept and Learning Styles of adolescents. 2. To assess Study Habits and Academic Achievement of adolescents. 3. To compare male and female adolescents on Self-Concept and Learning Styles. 4. To compare rural and urban adolescents on Self-Concept and Learning Styles. 5. To compare rural male and rural female adolescents on Self-Concept and Learning Styles. 6. To compare urban male and urban female adolescents on Self-Concept and Learning Styles. 7. To compare rural male and urban male adolescents on Self-Concept and Learning Styles. 8. To compare rural female and urban female adolescents on Self-Concept and Learning Styles. 9. To compare male and female adolescents on Study Habits and Academic Achievement. 10. To compare rural and urban adolescents on Study Habits and Academic Achievement. 11. To compare rural male and rural female adolescents on Study Habits and Academic Achievement. 12. To compare urban male and urban female adolescents on Study Habits and Academic Achievement. 13. To compare rural male and urban male adolescents on Study Habits and Academic Achievement. 14. To compare rural female and urban female adolescents on Study Habits and Academic Achievement.

The sample of the study consisted of 500 adolescents rural 250 (125 male and 125 female) and 250 urban (125 male and 125 female) comprised the sample for the present investigation. The sample has been taken randomly from Higher Secondary Schools of two Districts i.e. District Srinagar and Baramulla of Kashmir. The tools for this investigation are given as under: Sagar and Sharma' Self-Concept was used to measure Self-Concept. It consists of ideal-self and real-self. Learning Styles for the present study refer the differences in preference of the right and left hemispheres for information processing on D. Venkataraman Style of Learning and thinking Inventory. Study habits for the present study refer to the scores gained by sample subjects on Palsane and Sharma's Study Habit Inventory. Academic achievement for the present investigation consisted of the aggregate marks secured by the sample subjects in the previous two classes i.e. 10th and 11th classes.

The data have been analyzed by applying mean, S.D. and t-test in order to find the mean differences of the various groups**.** The major findings were:

1. Male and female adolescents have been found significantly different on Ideal-Self dimension. 2. Rural and Urban adolescents have been found significantly different on Ideal-Self dimension. 3. Rural male and rural female adolescents have not shown any significant difference on Ideal-Self dimension. 4. Urban male and urban female adolescents have been found significantly different on Ideal-Self dimension. 5. Rural male and urban male adolescents have been found significantly different on Ideal-Self dimension. 6. Rural female and urban female adolescents have shown insignificant difference on Ideal-Self dimension. 7. Male and female adolescents have shown insignificant difference on Real-Self dimension of Self-Concept Inventory. 8. Rural and Urban adolescents have been found significantly different on Real-Self dimension. 9. Rural male and rural female adolescents have shown insignificant difference on Real-Self dimension. 10. Urban male and urban female adolescents have been found significantly

different on Real-Self dimension. The mean difference favors the urban female adolescents, which clearly indicates that urban female adolescents have high real self-concept as compared to urban male adolescents. 11. Urban male and urban female adolescents have been found significantly different on Study Habits. The mean difference favors the urban female adolescents, which clearly indicates that urban female adolescents have high budgeting time, physical conditions, reading ability, note taking, learning motivation, memory, taking examination and health as compared to urban male adolescents.

Shuib and Azizan (2015) investigated whether there are diversities in learning style preferences between male and female students who were taught ESL courses in the Universiti Sains Malaysia (USM). The Felder-Silverman Learning Style Model (FSLSM) was used to collect data on the particiapants' learning style preference which proved to be valid and suitable. Results demonstrated that, there is a solid representation of visual learners from both male and female participantss. however, the participants, were well-balanced in the items of sensing/intuitive, active/reflective, and sequential/global. Concerning the gender difference, it was found that there was no significant difference between male and female ESL students in their preferred learning style.

**2.10. Brief Review of Related Researches**

Analyzing the previous reviews of related researches is a kind of a research. Accordingly, the objectives of the review, the selected sample of the researches, analyzing the collected researeches and find out conclusions were opted for. In the present study, a sample of 24 related researches was selected. The abstracts of these studies were analyzed with respect to correlates, size of sample, subjects studied, method of research, tools used, statistical techniques and procedures selected for data analysis and results with reference to

the learning styles and academic achievement. The following review of the previous studies is given in the following paragraphs with respect to the above elements.

In the present study, there were two main variables under consideration: Learning style of the students and achievement. The learning style was a criterion for sampling the students, while the achievement was the dependent variable measured through scores. Considering these two variables, all 24 studies of the sample were analyzed to find out the correlates to these two variables studied. As it was mentioned in the previous chapter, there was a gap in knowledge concerning learning styles and oral proficiency. On this basis, the researcher sought to investigate the correlates related to learning styles and academic achievement in general. After analysis it was found that thinking skills, study habit skill, mental ability, self-efficacy, academic performance, memorization style, learning style, intelligence, stream , activity based teaching and instructional design, self concept were studied as the co-relates of the achievement. The learning style variable was studied with variables like sex, age, achievement-motivation, anxiety, area, creativity, discipline, scientific attitude, achievements, adjustment, extroversion – introversion, culture and teaching style.

Since achievement represents the dependent variable for this study, it can be measured with reference to different subjects taught at different levels. The sample of these abstracts was analysed with reference to their subjects. The analysis revealed that achievement was examined with respect to subjects like Language, Mathematics, General Science, Social-studies, English, Hindi, Turkish, Arabic, Biology, Science, Computer, etc. The size of sample ranged between nine as the minimum and 2000 as the maximum. It was noticed that larger samples like (2000, 500, 488, 735, 317) were used in survey type of research. However, smaller samples like (9, 35, 62, and 200) were used in experimental researches. Moreover, the research methods like survey type, experimental type research, factorial experimental design,

correlational studies, and randomized subjects only post test design were selected. The tools for Learning Styles used in the reviewed researches were:

-The Kolb Learning Style Inventory (1999).

-Learning Style Inventory by Rita Dunn and Kenneth Dunn.

-The Grasha-Riechmann Student Learning Style Scales (GRSLSS).

-Learning Style Inventory developed by Dr. S.C.Aggarwal (1983).

-Felder-Solomon Index of Learning Styles questionnaire.

-Learning Style Inventory by K.K. Rai and K.S.Narual.

-The Learning Style Inventory by Dunn, and Rundle (1996.1997, 1998, 1999, and 2000).

-Learning Style Inventory of Dunn & Dunn.

-Style of learning and thinking (Venkataraman, 1990).

-The Visual Auditory Reading/Kinaesthetic Inventory (VARK).

-The Personal Learning Styles Inventory.

-Joy Reid's Perceptual Learning-Style Preference Questionnaire (1987).

-The Steinbach LS survey.

-The Learning Styles Survey (LSS).

-The Kolb learning style inventory (2005).

-The Paragon Learning Style Inventory.

-D. Venkataraman Style of Learning and thinking Inventory.

-Felder-Silverman Learning Style Model (FSLSM).

Different tools were used to measure achievement in the previous mentioned subjects. The majority of the tests were developed by the reseachers. Concerning the statistical techniques for data Analysis, it was found the ANOVA, MANOVA, the T-test, correlation, Chi-square, Mean, SD, median and mode, multiple regression analysis, the one-was analysis

of variance and two-way analysis of variance, a two-sample t test, were used. The main results of these studies were:

1. Learning styles is not influenced by the socio-economic status of subjects
2. Intelligence affects learning styles.
3. The interaction effect of socio-economic status and intelligence was not significant on any of the learning style of high school students.
4. Sex did not make a difference in the learning styles of students, but it had a direct bearing upon achievement-motivation and anxiety.
5. It has been clarified that the type of the learning style was not significantly effective on students' achievement in different learning environments.
6. Self concept of the rural boys showed their increasing preferences towards flexible and environment free learning styles.
7. Mental ability influences the academic performance.
8. The effectiveness of learning style method for increasing achievement attitudes toward learning and successfully initiates the exploration of the empathy toward people approach and transfer of knowledge using learning style methodology
9. The advantages of learning style instructional resources had a practically and statistically significant influence on student's achievement, attitudes, empathy and transfer of knowledge.
10. Two learning styles showed a significant drop: Collaborative and Competitive.
11. There was no significant difference in the academic achievement of students having action and verbal explanation learning style, divergent and convergent learning style, content preference for open ended lessons and structured lessons learning styles.
12. There was no significant difference in the academic achievement of students having preference for logical and fractional thinking styles, divergent and convergent thinking

styles, creative and intellectuality thinking styles, optimistic and pessimistic thinking styles, imaginary and analytical thinking styles.

13. There was significant difference in the academic achievement of students having high and low goal orientation study skills, scholarly study skills and overall study skills.
14. There was no significant difference in the academic achievement of students having high and low activity structure study skills, lecture mastery study skills, text-book mastery study skills, examination mastery study skills, self-mastery study skills.
15. Learning style and interactive lessons do make a significant impact on learning outcomes compared to traditional reviews
16. Academic performance based on learning style was found to be significant.
17. Academic performance (grade) with the level of individual learning style (Low, moderate or High) does not reveal any significant relationship except for independent learning style.
18. There was a significant relationship between overall academic achievement and learning styles.
19. The results of the analyses of variance show that there is a statistically significant difference in the academic achievement of students that correspond to the four learning styles; in particular, the mean scores for the converging and assimilating groups are significantly higher than for the diverging and accommodating groups.
20. There was no statistical differences were found among Auditory, Visual and Kinaesthetic learning modalities. Moreoever, kinaesthetic preference was higher among males in academic progammess than for females and within the vocational settings females ha higher kinaesthetic preference than the males.
21. The dominant learning style was Assimilator and that learning style and gender influenced academic achievement.

22. There was statistically significant differences between the results of the subtests on learning styles and academic success; those subtests covered the items as learning, planned study, effective reading, listening, writing, note taking, using the library, getting prepared for and taking exams, class participation and motivation.
23. Kinaesthetic learning style was found to be more prevalent than visual and auditory learning styles among secondary school students. There exist high correlation between kinaesthetic learning style and overall academic achievement.
24. The main effects of the three variables - visual, auditory and kinaesthetic are significant on academic achievement.
25. A significant relationships was found between the different learning styles and the performance in an English test, and the performance resulted differently in four groups with different preferred learning styles.
26. Gender differences in the achievement of English test for convergent and divergent and did not accommodate and assimilate preferred learning styles.
27. Significant relationships between learning styles, study habits, and learning performances were revealed. Gender does not help differentiate students' learning preferences.
28. Mismatch was found between student leaning style and teaching style. The mismatch results in an ineffective learning process in the classroom.
29. Sex did not make a difference in the learning styles of students, but it had a direct bearing upon achievement motivation.
30. The high SES students facilitate accommodative learning style. Most of the students with low SES preferred convergent learning style.

**2.11. Brief Review of the Present Study**

In the present study, learning style was used as a variable to classify the students. Self Efficay, Study Habit, and Self Concept were considered as covariates. Oral Expression

Achievement was taken as dependent variable and Instructional Strategies were taken as independent variable. Thus, the present study aimed to study The Effectiveness of Learning Style Based Instructional Programme on OEA of first year EFL Students.

After reviewing the 24 abstracts, some important points were related to the present study are given below:

The previous researches were conducted in different subjects like biology, mathematics, science, social studies, etc, while the present study was conducted on OE of English language. In past experimental researches, the size of sample was between 9 (minimum) to 2000 (maximum) students. The sample of the present study consisted of 20 Visual students, 18 Auditory students, 18 Kinaesthetic learners and 38 students were in global group so, total 94 students included girls and boys. The following chapter represents all details of the study.

Past researches had pre and post test design factorial design, Ex-post facto design, correlation; causal-comparative study etc, while in the present study, pretest-posttest control group design was used. Most of tools used in the past researches were ready –made, only few of them were developed on learning style by the researcher. In the present study, Learning Style Inventory used to classify the sample was ready-made inventory developed by Victoria Chislett and Alan Chapman (2005). The OEAT was developed and standardized by the researcher. CASE, SH, and ASC were taken as covariates. For measuring these covariates, three tools were used. For measuring CASE, the CASES by Owen and Froman was used. For measuring SH, the SHI by C. Gilbert Wrenn was used, and for measuring ASC, the ASCS by Reynolds was used. For measuring OEA, the OEAT was developed and used by the researcher.

In the previous studies, different teaching programmes were developed and used by researchers. In present research Auditory, Visual and Kinaesthetic instructional programme made by researcher which correlated to teaching strategies were developed. In the present,

VIP, AIP and KIP were developed. Finally, in the preivous researches statistical techniques like mean, SD, t-test, ANOVA, MANOVA, regression, correlation and Chi-square were used, whereas in the present study the Independent Sample T-test and ANCOVA were used.

**Conclusion**

Learning styles are approaches to learning and studying. Identifying these learning personalities is only half the battle. The challenge occurs when the instructor attempts to identify alternative teaching strategies to meet these individual learning styles and needs (Grasha & Yangarber-Hicks, 2000). Therefore, identifying a model that is easy to follow and provides the student and the instructor with a clear understanding of his or her learning personality is an integral part of the learning environment.

In this chapter**,** many learning style models have been outlined. From the previous discussion it became apparent that the visual, auditory and kinaesthetic learning styles are the main fundamental types of learning style that were found in root of all learning style models. In the present study, the students' leaning style (VAK) was used as the criterion to classify the students in order to receive the instructional experience. Henceforth, three instructional programmes were developed according to the learning style of the students. According to the previous literature, many instructional strategies can be adopted to meet the learning styles of the students. In the present study, visual instructional strategies, auditory instructional strategies and kinaesthetic instructional strategies were used to develop the VIP (for visual students), AIP (for auditory students), and KIP (for kinaesthetic students) respectively.

This chapter presents the practical foundation of the research problem. Through examining the abstracts of the previous researches, the researcher was able to decide what research method to employ for collecting data to address the research questions and hypotheses of this study. Through the analysis of the previous abstracts, it was possible to

build up decisions upon which covariates, research methods, statistical techniques, type of experimental design, and statistical techniques can be used in this study.

## Chapter Three: Oral Language Proficiency

# Chapter Three

## Oral Language Proficiency

### Introduction

Speaking a foreign language is often judged to be the most vital of the language skills (Bygate, 1987). In fact, most EFL learners devote much of their time to developing oral proficiency. However, a review of the literature in the area of FL oral skill development claims that a clearly defined set of best teacher practices does not exist and while researchers and educators tend to agree about some aspects of oral skill development (e.g., the requirement of L2 input), opinions regarding, for example, optimal teaching and assessment strategies differ (Garbati & Madi, 2015).

The purpose of this chapter is to highlight several issues that are currently guiding research and practice in the area of FL oral skill development; implications for classroom practice are addressed as well. It begins with an explanation of oral proficiency. This is followed by a thematic description of research on effective teaching strategies, evaluating criteria of oral proficiency, learners' speaking difficulties and finally a brief discussion of learning styles and oral proficiency.

### 3.1. Theoretical and Conceptual Framework

Some teachers and researchers claim that many learners are not able to reach the expected level of proficiency and therefore, they are left behind (Genesee 1987; Harley et al., 1990; Harley & Swain, 1984; Swain, 1988). Consequently, many researches have been carried out with the goal of helping students improve their ability to communicate. Zhang (2003) conducted a study to investigate the the language learning strategies used by students in the intensive English programme. He examined the relationship between the students' use of learning strategies and their English proficiency. The findings of the study showed that there was a strong relationship between strategy use and English proficiency; the use of some

specific strategies was positively correlated to improvement of sub-language skills such as oral communication. Moreover, according to Cohen (1998), good language learners appeared to use a larger number and range of strategies than poor language learners, the implications of understanding strategy use have seemed increasingly important. When we focus on these researchers, we find that those researchers have left apart one important element at the time of learning a foreign or second language, Learning Styles (Matal et al., 2009). As staed by Gold (2002), students with greater learning styles flexibility are also greater achievers.

Other researchers claim as well that learning strategies do not work in isolation but they have a positive influence if students use them according to their learning styles. As Rebecca L. Oxford stated, that learning styles and strategies help determine a particular learner's ability and willingness to work within the framework of various instructional methodologies. She states that every foreign language student uses more than one learning strategy, but they do not have an idea about what kind of learning styles they are; so they continue worrying about their oral proficiency (Eherman & Oxford, 1988). The problem is that if students do not know their learning styles and use learning styles at random, those strategies will not work out and their oral proficiency will not improve (Tent, 2001). In this respect, this chapter is devoted to examine the relationship between oral proficiency, learning styles and learning strategies.

### 3.2. What is Oral Proficiency?

In this study, the measured dependant variable was the students' oral expression achievement (OEA) so another key feature in this study is Oral Proficiency (OP). Fisk (1969, as cited in Garbati & Madi, 2015) questioned whether it is the "ability to express one's thoughts, limited only by vocabulary and knowledge of [language] structure" or "merely the ability to imitate accurately the spoken sounds of the second language and to respond with an appropriate dialogue line if one is asked a familiar question" (p. 65). According to Omaggio

(1986) “oral proficiency is the ability to communicate verbally in a functional and accurate way in the target language. Oral language is defined as speaking and listening skills”. Bachman (1990), proposed two main components to oral communicative competence: organizational and pragmatic. Organizational competence includes grammatical (e.g., vocabulary, morphology, syntax) and textual competence (e.g., discourse genres). Pragmatic competence is composed of illocutionary competence (e.g., requests, promises, offers), and sociolinguistic competence (e.g., sensitivity to language register, dialect). We take into account all these aspects – and consider context as suggested by Hymes’ (1972) conceptualization of communicative. Teachers’ conceptualization of L2 oral language development may be influenced by the theories presented above through their use of frameworks, curriculum documents and/or textbooks, even if they do not consult such theories directly (Garbati & Madi, 2015).

### 3.3. Teaching Strategies

Varied research contexts, has resulted in a large number of suggestions for “best” teaching strategies to assist learners in their L2 oral skill development. The researcher here did not intend to develop an exhaustive section, but to explain some of the practices that have been shown to be successful and that continue to gain interest in both research and practice. The researcher has limited discussion to the following strategies: scaffolding, explicit teaching, task planning, fluency activities, questioning, role-play and corrective feedback.

#### 3.3.1. Scaffolding

Scaffolding instruction is common way to increase students’ L2 oral skill development. The research revealed that the teachers use a range of strategies to scaffold learning. Scaffolding instruction as a teaching strategy originates from Lev Vygotsky’s sociocultural theory and his concept of the zone of proximal development (ZPD) (Jaramillo, 1996, p. 176). “The zone of proximal development is the distance between what learners can do by

themselves and the next learning that they can be helped to achieve with competent assistance". Scaffolding is a specialized type of assistance or help; it is important to understand that scaffolding is not just any type of help. It is cerefully constructed support provided by teachers to facilitate student's learning in tasks that will extend and challenge them" (Hertzberg 2012, as cited in Munns, et al, 2013, p.159). Gibbons (2007) refers to scaffolding as "the means whereby a student is able to carry out a task that, alone, he or she would be unable to complete" (p. 703). She argues that scaffolding is a temporary support that teachers use to help learners and as students show that they are able to produce the target language on their own, the scaffolded instruction is removed. This teaching strategy seems to be benefecial for L2 learners because according to Gibbons (2007), it involves helping learners to do something as ell as helping them to know how to do.

A study was conducted by Ewald (2005) to investigate interaction during a formalized, but collaborative, assessment task involving 20 intermediate students of Spanish. Data was collected from students' recorded small-group quiz interactions, their graded written quizzes (which involved both comprehension and production tasks), and questionnaires that elicited information about their perspectives on the use of small-group quizzes. Findings revealed several instances of scaffolding (collaborative interaction) and private speech (self-directed utterances). Ewald's results showed that there was evidence of a high level of interaction among students, which often helped them to make discoveries and reach conclusions about the target language (e.g., grammar topics, test-taking strategies)

Another study conducted by Donato (1994) to explore the ways in which L2 learners co-construct language learning experiences in a classroom setting. Students were observed as they completed a familiar task. In this study, the three learner participants collectively constructed a scaffold for one another's performance (Garbati & Mady, 2015). During their interaction, it was observed that the students provided guided scaffolded support. In fact, 32

cases of scaffolded help were noted in the one-hour task planning session that was observed in this study and 24 of these were observed during the task performance activity. It was concluded that collaborative tasks can result in scaffolded support among peers and benefit all learners in a group, not simply the individual who originally sought support. As seen in the above studies, providing opportunities for students to work together to complete joint production activities can offer occasions where students produce higher quality speech than they would have preparing on their own (Garbati & Mady, 2015). Teachers can also provide linguistic scaffolding by modifying their language for example, and cultural scaffolding by encouraging use of students' prior knowledge of language (Gibbons, 2002).

### 3.3.2. Explicit Teaching

Goldenberg's (2008, as cited in Garbati & Mady, 2015) summary of the key findings of research from the National Literacy Panel and the Center for Research on Education, Diversity, and Excellence (both in the United States) revealed that explicit teaching of the components of an L2 (e.g., syntax, grammar, vocabulary, pronunciation, and use) is necessary and learners must be provided with a multitude of opportunities for meaningful engagement with the L2.

Several studies have explored the effect of explicit instruction on L2 production. Koike and Pearson (2005) studied the effectiveness of teaching pragmatic information through explicit and implicit instruction for English-speaking learners. Data was collected from pre-, post- and delayed posttests with comparison groups. Results revealed that the students who received explicit instruction and feedback during exercises performed significantly better than those who did not. Another study by Rahimpoura and Salimi (2015) was conducted to investigate whether explicit instruction will lead to language learners' achievement in learning English as a foreign language. On the basis of the data analyzed, it was concluded that formal instruction of the language would result in improvement in L2 learner accuracy and provide a

favourable condition for L2 acquisition. The performance of control group clearly reveals that implicit instruction has no role in triggering SL development in EFL context. The finding of this study is also in line with the findings of many researchers (Pica, 1985; Ruhi, 2001; Ellis, and et al., 1989). The greater accuracy can also be interpreted in terms of Rahimpour's view (2001) that greater complexity of tasks in terms of cognitive demand (more consciousness) will facilitate greater attention to form and planning of production which will consequently lead to greater accuracy and fluency.

Gibbons (2007) reviewed research in L2 acquisition and systemic functional linguistics and, in particular, explored how classroom discourse mediates academic language learning in the ESL context. She summarizes that language learning does not occur with mere exposure to the L2 in a mainstream classroom. Instead, if subject teaching is planned, specific contexts to develop academic language will be provided (Gibbons, 2007). Researchers conclude that classroom discourse needs to include both general discourse and discipline-specific discourse. Lyster (2004) found that form-oriented instructional strategies were more effective than those focused solely on meaning. Practical application of the above findings, then, requires explicit teaching for the purpose of communication within a specific context (Garbati & Mady, 2015). For example, when teaching students how to agree and disagree or express protest or ignorance, explicit teaching may come in the form of a chart (see Table 3.1), which provides language for different contexts (Garbati & Mady, 2015).

**Table 3.1.**

**Sample Chart that could be used in Teaching Students how to State their Opinion**

| Express Agreement | Express Disagreement | Protest | Express Ignorance |
|---|---|---|---|
| Of course!<br>You're right | I don't agree<br>I don't think so | That is wrong<br>I am against | I am not familiar with…<br>I don't know about… |
| Oh yeah…!<br>Right on! | You what? | No way.<br>You have got to be kidding | Huh? |

### 3.3.3. Questioning

According to Zwiers (2007), questioning has been shown to be another common strategy used in L2 classrooms to develop students' oral proficiency. It may even be the most common strategy to engage with L2 students (Zwiers, 2007). Kao, Carkin, and Hsu (2011) examined teachers' questioning techniques in a three-week intensive drama-oriented L2 course where data were collected in the form of audio and video recorded classroom observations. As well, students' oral proficiency was measured using pre- and post- language standard proficiency tests. It was found that teachers used questions (e.g., confirming and clarifying questions) to gather new information from students, to contribute to the content of the drama scenes, or to remodel students' inaudible or grammatically incorrect utterances. Analysis of the oral tests showed that students had produced significantly more words and communication units; further, the mean length of communication unit was significantly longer in the post-test. The researchers concluded that through appropriate questioning techniques, low-level L2 learners can carry out natural interaction in an L2 classroom.

Collins, Stead, and Woolfrey (2004) use questioning as one way of encouraging interaction in intensive French classes. A daily routine in the intensive French class, for example, may include the teacher modeling questions and answers about the date, weather, seasons, etc., at the initial stage, and then the students take the lead role, asking questions and interacting with other students in the class. The authors write that this type of interactive routine provides students with a language repertoire that they can begin to use automatically which gives them a feeling that they can converse in French. Further, eventually and gradually, students can produce the learned expressions spontaneously. When teachers implement a questioning approach, Soto-Hinman (2011) warns that it is important that questions elicit language which requires elaboration rather than simply one-word responses. If open-ended questions are used, then students have multiple ways to enter into, and extend, a

conversation. When students are asked a question, they should be encouraged to elaborate on them. When students are not aware of how to elaborate, teachers should guide students as to why and how to elaborate (Soto-Hinman, 2011).

All teachers should know the levels of language proficiency for their English language learners. Knowing theses levels will help to plan instruction (White, 2017, p. 10). The table below summarizes the Bloom's Taxonomy and Differentiation. Bloom's Taxononomy has been used in classrooms for more than 40 years as a hierarchy of questions that progress from less to more complex. The progression allows teachers to identify the levels at which students are thinking. It also provides a framework for introducing a variety of questions to all students. Most emphasis is placed on ensuring lessons, curriculum, and materials cover all of these levels (White, 2017). A 1992 report found that in the language programs studied, teachers had a tendency to ask low-level questions during instructional time (Ramirez, 1992). While students at the first level of language acquisition will benefit from these questions because of their lower level, these students also need to be challenged to think more deeply. Knowing the various levels of language acquisition and asking appropriate questions for students at each level will engage them and increase oral language development.

The original Bloom's Taxonomy identifies three domains of knowledge: cognitive, affective, and psychomotor. The taxonomy begins at the lowest level and then progresses towards evaluation. The lowest three levels are: analysis, synthesis, and evaluation. In 2002, a new updated Bloom's Taxonomy was created to reflect 21$^{st}$ century skills. The orders of the taxonomy were charged from nouns (such as Knowledge) to verbs (such as remembering), and the order of the two highest levels of thinking were switched (White, 2017). The following table represents a comparison of the original Blooms' Taxonomy to the new Bloom's Taxonomy: (cited in White, 2017, p. 10).

**Table 3.2**

**A Comparison of the Original Bloom's Taxonomy to the New Bloom's Taxonomy**

| Original Blooms 'Taxonomy | New Bloom's Taxonomy |
|---|---|
| knowledge | Remembering |
| Comprehension | Understanding |
| Application | Applying |
| Analysis | Analyzing |
| Synthesis | Evaluating |
| Evaluation | Creating |

With the ne Blooms' Taxonomy, instead of just identifying the three domains of cognitive, affective, and psychomotor knowledge, there was two main dimensions; the knowledge dimension (knowledge) and the cognitive process dimension (how knowledge is demonstrated). The new Bloom's Taxonomy breaks the knowledge domain into four types: factual, conceptual, procedural, and meta-cognitive (Anderson & Krathwol, 2001, as cited in White, 2017, p. 10).

### 3.3.4. Task Planning

Planning for a task is another strategy that can be used to develop L2 oral language. According to Foster and Skehan (1996); Kobayashi, (2003) as cited in (Garbati & Mady, 2015), the benefits of planned speech come at the actual task planning stage. In a pre-task planning, students are given a limited amount of time (e.g., 10 minutes) prior to completing a task (e.g., a decision-making task, a narrative task) (Garbati & Mady, 2015). In a study conducted by Ortega (1999) to investigate whether or not planning opportunities resulted in an increased level of focus on form for students (n= 64). The results of the study found that students' self-reports indicated that planning can strongly benefit their lexical retrieval process and lexical choices.

Moreover, according to Ellis (2009) task planning can have a beneficial impact on the fluency, complexity and accuracy of L2 performance. He added that rehearsal, for example, gives learners an opportunity to perform the task before the main performance. Rehearsal can be beneficial for oral development because it is thought that if a person performs a task once, this could provide him/her with some planning for performing the task a second time.

Strategic planning allows learners to prepare the task while they will need to predetermine the content and how to express the content. Strategic planning can have a positive effect on oral fluency and can lead to the production of more complex language (Garbati & Mady, 2015). Providing students for opportunities to plan together and rehearse are strategies that are easily applied to the L2 class and teachers may also consider having students record their rehearsal so that they can listen, evaluate and improve before their public sharing (Foster & Skehan, 1996).

### 3.3.5. Fluency Activities

Ellis (2009) laims that fluency can be defined as "the capacity to use language in real time, to emphasize meanings, possibly drawing on more lexicalized systems" (p. 475). As with scaffolding instruction and other methods of promotion of L2 oral development, the first step in planning appropriate instruction to suit learners' needs should be started with assessing learners' oral fluency. For example, a checklist could be used to rate learners' pause length, frequency, and speech rate for various oral tasks (e.g., monologues, dialogues, structured and unstructured tasks) (Garbati & Mady, 2015). In their review of oral fluency activities and literature, Rossiter, Derwing, Manimtim, and Thomson (2010 as cited in Garbati & Mady, 2015) summarize three types of oral fluency activities: (a) conscious-raising tasks, (b) rehearsal or repetition tasks, and (c) imposition of time constraints. Consciousness-raising activities raise learners' awareness of fluency features (Nunan , 2004). For example, instructors can record students' speech acts and then have students analyze their performance,

making note of identified criteria which impacts fluency (e.g., their use of filler words such as "um"). Boers, Eyckmans, Kappel, Stengers, & Demecheleer's (2006) conducted a small-scale study of L2 learners' use of formulaic sentences and the extent to which they can help learners' development of oral proficiency. Participants were divided into two groups: (a) a control group who were exposed to audio, video, and textual language material and language was analyzed in a traditional way (emphasis on grammar and vocabulary); and (b) the experimental group who were exposed to the same material but were made aware of formulaic sequences. Pre- and post-interviews were conducted to judge students' oral proficiency before and after instruction. It was found that the experimental group was perceived as more proficient than the control group and, in fact, produced a greater number of formulaic sequences (e.g., standardized phrases such as idiomatic expressions). The researchers concluded that the use of formulaic sequences can help language learners come across as proficient L2 speakers in an interview and an instruction method that raises awareness of these sequences can benefit the way students' proficiency is evaluated by others. Rehearsal or repetition activities can improve L2 fluency as learners gain familiarity with the language through repetitive tasks (Garbati & Mady, 2015. Giving a poster presentation, for example, allows students to rehearse and repeat oral language as the speaker shares information about a topic (outlined on the poster) with people (peers, teachers) who "visit" the speaker at the board. Students can engage in oral interaction through a question and answer exchange.

### 3.3.6. Role-play

Role-play can be a very successful tool at the teacher's hands. As its main goal is to boost students' interaction in the classroom, teachers ought to not disregard its applying such a speaking activity to reflect learners' presented knowledge of a language in practice (Kuśnierek, 2015). According to (Scrivener 2005, p. 155), "in role-play, learners are usually

given some information about a role (e.g. a person or a job title). These are often printed on role cards". Learners take a small arrangement time afterwards they meet up with other classmates to act out short scenes utilizing their information or any ideas of their own from the role cards. A very simple role card ought to be nothing more than name the role e.g. mother, criminologist or subsequently they may offer direction as to what to do instead than the role itself, e.g. purchase a train ticket to Brighton (Scrivener 2005). Role-play gives learners an opportunity to act in life-like situations so that they can learn, for example, conversational linguistic and behavioural structures for particular situations (New Brunswick Department of Education, 1996).

Many researchers have stated the importance of role-plays for the development of L2 oral proficiency. For instance, Guilfoyle and Mistry (2012 as cited in Garbati & Mady, 2015) investigated the effectiveness of role-play in supporting oral skill development of beginner learners of an L2. Data were collected via teacher questionnaires and interviews as well as observations of four learners over a 1-month period. Findings from this study showed that students demonstrated an improved use of the L2 and a wide range of language learning strategies as well as a decreased use of their home language when engaged in role-play activities.

In his paper Krebt (2017) examines the effect of role-playing as a classroom teaching method on Iraqi EFL students' speaking skill at the university level. The students are 40 language students in University of Baghdad, College of Education Ibn-Rushd that were randomly selected. The sample was divided into two groups, experimental and control groups. A questionnaire of thirty questions was used as a pre-test and was applied to both groups as a and the students were required to answer it orally. The experimental group was taught speaking skill through the role play strategy while the control group was taught in traditional method. After 20 lessons of the teaching, the post-test of speaking was conducted in which the

students in both groups were asked to answer. The results showed that there is a significant improvement in speaking skill of experimental group. The two groups were significantly different to the sake of using role play as a teaching strategy.

Dicks and LeBlanc (2005) offer a practical means for L2 teachers to easily use role-play in their classes. They suggest that teachers brainstorm a context and accompanying themes and topics with their students, the students would then identify activities that take place in the chosen context, choose characters and create scenarios. This process is especially feasible due to the opportunity to use it several times throughout a course.

### 3.3.7. Corrective Feedback

The quality and sort of evaluation and feedback given to L2 learners plays an imperative part role in learners' oral language development (Garbati & Mady, 2015). Corrective feedback can be explained as reactions to learner oral expressions that contain errors and mistakes. Diverse sorts of feedback apparently have a diverse effect on the acquisition process. Lyster and Ranta (1997), recognize six sorts of feedback in their classroom observation study: Explicit feedback (teacher gives the correct form and clearly demonstrates that what the student said was inaccurate). 2. Recasts (the teacher's reformulation of student's oral expression, short the error). 3. Clarification demands (a request for the students to clarify question the utterance because it has been misconstructed) 4. Metalinguistic feedback (includes comments and questions related to the well-formedness of the student's expression, without unequivocally giving the proper and right form). 5. Elicitation (instructors attempts to evoke the proper form by demanding the completion of a sentence, or inquiring questions and reformulations). 6. Redundancy (the teacher's redundancy, in seperation, of the incorrectexpression).

According to Lyster and Ranta (1997), Types (2) and (6) give feedback implicitly, it is up to the learner to notice that an error was made; the other types are explicit in indicating that

an error occurred. “The interpretation of the distinction is related to the setting of the feedback, e.g., an implicit recast may be argued to be explicit in formal classroom settings” (Lochtman, 2002, p.176).

Gibbons (2003, p. 258, 267) examined how two teachers, through their interaction with students of English as an L2, mediated students’ English skills and their subject matter in a content-based classroom. The data sources included audio recordings and transcriptions of 14 hours of classroom discourse, printed classroom work (i.e., posters, children’s work, and charts), field notes, and interviews with teachers and students. She concludes that teachers can successfully mediate language in several ways: (a) recasting (where a L2 speaker’s utterances are reformulated at the level of morphology or syntax or where a teacher rewords any piece of a student’s meaning in a more appropriate way); (b) signaling to students how they can self-reformulate (where a teacher signals a need for clarification, teacher may offer a recoded version of the student’s expression once he/she has had sufficient opportunity to self-correct); and (c) modeling alternative ways of recontextualizing personal knowledge.

In practical terms, when interacting with L2 students on a one-on-one or small group basis, teachers can rephrase a student’s incorrect oral response and prompt him/her to offer an improved version (Havranek, 2002). The use of audio or video recordings of students’ oral (formal) presentations may guide teachers’ use of feedback strategies. Listening to recordings or watching videos alongside students can provide opportunities for teachers to explicitly correct L2 learners as well as raise their awareness of their own oral skill development. In implementing corrective feedback, it is important for teachers to use strategies that suit the needs and goals of their learners (Spada, 2001).

### 3.4. Learners' Strategies for Oral Communication

Rubin (1987, p. 19) defined the term learner strategies as follows: “ learner strategies include any set of operations, steps, plans, routines used by the learner to facilitate the

obtaining, storage, retrieval and use of information…. , that is, what learners do to learn and to regulate their learning". Rubin (1987, p. 22) classified learning strategies as follow: " 1) strategies which contribute directly to learning cognitive strategies basically, and 2) strategies which contribute indirectly to learning i.e communication strategies".

Oral communicative competence is the ability to speak appropriately and confidently. However, one of the most common difficulties that many learners encounter is to enteract in the FL classroom. Many researches suggest that the best option to overcome this problem of communication is to use what is called communicative strategies. Ellis and Barkhuizen (2005, p. 170-71) define communicative strategies as "Speakers-oriented; that is they are used by learners to compensate for lack of L2 knowledge or their inability to access the L2 knowledge they have".

Moreover, Hughes (2002) also defines this term as the ability of the learners to manipulate a conversation and negotiate interaction in an effective way. Bygate (1987) classifies two main types of communicative strategies; to help learners to avoid the breakdown of the oral communication and expression; first achievement strategies including guessing, paraphrasing and cooperative strategies; and second reduction strategies. These strategies are briefly discussed in the following paragraphs.

### 3.4.1. Achievement Strategies

According to Ellis (2003, p. 74), "achievement strategies are when the learner decides to keep the original communiacative goal and attempts to compensate for insufficient means for achieving it". The learner here can use substituting words to transmit his/ her message successfully. These substituting words may be: guessing word, intuition, feeling or any expression that s/he remembers on the spot, or explains her/ his missing words by comparing them to something else. For example: "L: I came down from twenty degrees --- er I don't know how you say it was twenty degrees hot you know. NS: m m. NS: and I came up/er in

Scotland to twenty degrees freezing so I got very sick just before Christmas" (Haastrup and Philipson 1983, p. 149. cited in Bygate 1987, p.43).

#### 3.4.1.1. Guessing Strategies

This strategy is a very widespread used strategy in oral expression and production (Yu, 2007). According to Ellis (2003), guessing strategies are used to replace some words and concepts when the speaker does not know or he is not sure if they are right with other ones s/he thinks that her/his listeners will get. Bialystok (1983, p. l05, as cited in Bygate, 1987, p. 44) gave this example that the speaker can foreignize her/his mother tongue word and pronounce it as if it belongs to the target language like a Frenchman who is speaking English and who uses the word 'manoeuvre' as it is an English word to convey her/his speech to an English listener.

A speaker might also borrow a word from her/his mother tongue without changing it hoping that the interlocutor will understand it, for example an English speaker saying: 'il y a deux candles sur la cheminée'. Another type of guessing strategies can be used to coin a word, whereby a speaker invents a new target language word on the basis of her/his knowledge of the source language, such as using 'air ball' for 'bolloon' (Torone, 1983, p. 62. cited in Bygate 1987, p. 42).

#### 3.4.1.2. Paraphrasing Strategies

One of the communicative strategies that the speaker can use is to paraphrase i.e looking for an alternative word or expression in the target language. The speaker here can use synonyms or explain a concept or a word by making some sort of phrases to express her/his meaning, this is also called circumlocution. For example, a mixing of beige and brown: light brown, ‘it sucks air’ is substituted for ‘vacuum cleaner’ (Ellis, 2003, p. 74).

### 3.4.1.3. Co-operative Strategies

An example of co-operative strategy is when the speaker signals to the interlocuter for help. In this type of strategies, the speaker gets help from her/his interlocutor i.e. this latter co-operates with him to say a word. The speaker may ask for a word through using it in her/his mother tongue or through indicating something that s/he does not know its name in the target language or he may make, also, sentences out of words or phrases to make the listener provides her/him with the word s/he needs (Lewis, 2011).

### 3.4.2. Reduction Strategies

Sometimes, the speaker cannot compensate through achievement startegies. In this case, he may appeal to reduction strategies in order to solve the encountred difficulties in his oral expression or production (Lewis, 2011). The speaker can deal with such difficulty by using avoidance strategy, e.g. changing one's message to avoid using certain language or to make it more manageable. . They may want to avoid some particular sound sequence, for example, 'th' in English or repeated 'r' in French. Some learners like to omit the conditional in English, and others wish to avoid words whose gender is not clear or unceatain for them (Lewis, 2011). Whan applying this sort of strategies, the learners may drop out part of their intended meaning.

Students could encounter a few troubles in expressing opinions as well when they lack vocabulary, so, they try to replace some of the message content by searching for something else to speak about or by simply keeping silent. Also, the speaker may reduce her/his message intelligently without avoiding saying it. For example, "a woman may say that she ate a pleasant meal instead of attempting to say that she liked the meal and failed to mention its name" (Lewis, 2011, p. 296).

Accordingly, Lewis (2001) states that communicators who tend to use reduction strategies in order to reduce ther anxiety about commiting errors, and esteem accuracy over

fluency or who are hesitant to take risks with the language. However, an over-reliance on these strategies, particularly avoidance strategies could lead to a learner's interlanguage becoming fossilised. On the other hand, achievement strategies tend to be favoured by learners who value fluency over accuracy and who are prepared to take risks with the language. Hence, there is a solid contention for equipping learners with achievement strategies in order to prepare to be become better communicators (Lewis, 2011). Learners' use of achievement strategies might enable them filling the gaps in the interlanguage. By empowering our students to use communication strategies we are encouraging them to take more risks with the language, and ended up by becoming more independent, autonomous and confident to deal with the language and the unpredictable nature of speech (Mariani, 2010). Finally, we can say that strategies for oral communication are widely used by learners in order to overcome their difficulties and to cover the impediments that may face them in the FL speaking, and it depends on the situation and the learner's character that which method can be used for each problem (Lewis, 2001).

### 3.5. Assessment of Oral Proficiency

According to (Griffiths, 2003, p. 186), "communicative competence view of proficiency as a multidimensional phenomenon implies that it is valid to test for discrete language abilities (such as listening or grammar) when assessing proficiency". Since, however, individual learners are not homogenous in their proficiency results relating to discrete components of language may or may not relate to other zones of competence (Farhady, 1982). In this manner, it is, unreasonable to accept that a high score for grammar, for example, will indicate that a student can fundamentally engage in fluent discussion (Griffiths, 2003). Consequently, the assessment of oral proficiency would be complicated because of this lack of consistency across different areas of language competence. Griffiths (2003) argues that how, for instance, should we assess the relative proficiency levels of Student A (who manages

to speak extremely fluently but who "bombs out" in grammar tests), of Student B (who has a wide knowledge of English vocabulary but who is unable to "get it together" when speaking) or of Student C (who can write at near native speaker level but finds it difficult to express ideas orally in English)?

To assess language proficiency, a variety of tests has been developed; like for example the Test of English as a Foreign Language (TOEFL) and the International English Language Testing System (IELTS). However, and surprisingly, neither of these tests is universally accepted as a reliable or valid measure of proficiency (Griffiths, 2003). If we take the TOEFL for instance, its construct validity is regarded as as suspect because of its multichoice nature; "real" language is not multi-choice, and, therefore, it is difficult to be sure that multi-choice questions are really measuring what they are supposed to be measuring (Griffiths, 2003).

Moreover, according to Davies (1990), IELTS is often criticised because of the subjective nature of the marking of some of its components (the writing and speaking sections are graded by trained examiners). This makes it questionable to ensure reliability, since, however carefully they are prepared, checked and monitored, as Hughes (1989, p. 36) comments: "when a degree of judgement is called for on the part of the scorer…..perfect consistency is not to be expected".

Both of these tests, furthermore, (Bachman & Palmer, 1996 as cited in He & Young, 1998, p. 1) argue that reliability, construct validity, authenticity, and interactiveness are the four necessary components of a "useful language test" Reliability is a big problem within assessment; claim Bachman and Palmer (1996). Interviewers can disagree on a learner's results, which endangers the reliability of a test. Disagreement can be circumvented by using rating scales, Bachman and Palmer argue (as cited in Young & He, 1998, p. 2).

Researchers like Spolsky (1989) and Brown (1994) state that it is necessary to have some means of assessing where individual students are on a general scale of proficiency so

that they can be placed into appropriate classes in order to be able to devise a workable curriculum for language classes. Consequently, a placement test is commonly used to determine students' initial levels. Brown (1994, p. 259) state that such a test is needed in order to be able to provide "an indication of the point at which the student will find a level or class to be neither too easy nor too difficult but to be appropriately challenging". According to Allen (1995), The Oxford Placement Test is frequently used by language schools for this purpose. However, Hughes (1989) claimed that there is not complete agreement about the validity of using grammar to test for proficiency, he points out, "it has to be accepted that grammatical ability sets limits to what can be achieved by way of skills performance". The 1995 version of the Oxford Placement Test, at that point, tests for syntactic competence, listening ability (in terms of phoneme segregation), and includes some level of reading skill. These three components of language skill, however, in spite of the fact that critical, clearly do not envelop all zones of language proficiency (Hughes, 1989).

Measuring language abilities is not an easy task, as Hughes (1989, p.2) puts it: "Language abilities are not easy to measure; we cannot expect a level of accuracy comparable to those of measurements in the physical sciences". Oral proficiency can be measured through tests. He and Young (1998, p. 2) states that to test oral proficiency accurately, a researcher needs to have a clear idea of what oral proficiency entails. Edmonds and Leclercq (2014), think that validity, reliability, and practicality are important in assessments. However, this is not enough for others. Bachman and Palmer (1996) add two other necessary components to tests; authenticity and interactiveness. All of these criteria are important in assessments.

There are still other problems concerning testing. Many scholars are concerned with how assessments reflect real life conversation. Weir (1990) argues that it is nearly impossible to recreate "real-life communication" in test environments, which makes it difficult to make reliable and valid demands of a learner in such a setting (p. 16). Bachman (2002) argues in the

same vein that assessments do not test what is taught in class. While learners deal with real lifetasks in class, tests are not geared towards testing those exact tasks. Lantoff and Frawley (1988, as cited in Ross, 1992, p. 174) also argue that learning criteria used to define assessments "are not anchored to any set of features evolving from natural communication, moreover, assessments not only assess proficiency, but how well a learner can get through a test". Additionally, Weir (1990) argues that researchers and teachers need to be wary of making all-conclusive statements about "similar communication tasks" based on specific tests (p. 17). Even 'similar' tasks can be different in the way learners deal with them, so allconclusive statements cannot be easily made, according to Weir. Similarly, "learner performance during assessments may vary depending on the task, time, interlocutors, and environment. Examiners consequently cannot make generalising conclusions about learners and their performance" (Davis, 2009, p. 368).

In this study, the participants' Oral Expression Achievement (OEA) represented the measured dependant variable through scores on the basis of assessment criteria. Oral expression or oral production can be defined as "the ability to express one self intelligibly, reasonably, accurately without too much hesitation otherwise communication may break down because the listener loses interest or get impatient (Hughes, 2002 as cited in Byrne, 1986, p.120). Testing OE can be facilitated using a rubric of assessment. "Testing , both formally and informally takes place at the beginning and at the end of most language course, as well as at various times during the course itself […] it aims to test progress during the course, or achievement at the end of it" (Thornbury, 1998, p.124). Harris (1977, p. 81) observes, "is a complex skill requiring the simultaneous use of different abilities which often develop at different rates…. Five components are generally recognized in analyses of the speech process." Harris (1977) lists them as follows: pronunciation, grammar, vocabulary, fluency of speech and comprehension.

### 3.5.1. Pronunciation

Pronunciation refers to the ability to produce comprehensible speech to satisfy the speaking test necessities; its key pointers will be the sum of strain caused to the audience, the amount of speech which is unintelligible and notice ability of L1 influence (Hughes & Reads, 2016). According to Harris (1977, p. 81) “pronunciation is the most difficult to assess, the central reason is the lack of general agreement on what good pronunciation of second language means: is comprehensibility to be the sole basis of judgment, or must we demand a high degree of phonetics and allophonic accuracy and can we be certain that two or more speakers will find the utterance of a foreign speaker equally comprehensible".

Kelly (2000, p. 11) states that “A consideration of learners' pronunciation errors and how these can inhibit successful communication is a useful basis on which to assess why it is important to deal with pronunciation in classroom”. Moreover, Kelly (2000) states two major problems for this fact; teachers tend to make grammar as well as lexis and vocabulary their first concern, and those teachers who are uncertain about how to how to teach it as they contend all the time that this question is due to the need of knowledge of the theory of pronunciation. In spite of the fact that pronunciation presents one among the troubles learners may experience, that’s with evaluating speaking, it is considered as a clear factor to look at in oral tests as well as in ordinary communication in classroom utilizing the target language. As a result, in a speaking communicative test of speaking, students are frequently required to pronounce the language intelligibly even L1 language tranfer remains or though residual accent is satisfactory (Hedge, 2000). They have to: - Produce individual sounds correctly. - Link words appropriately. - Use stress and pitch to convey the intended meaning - First language accents are acceptable provided and communication isn't impeded " the aim of pronunciation improvement is not to achieve a perfect imitation of a native accent, but simply

to get the learner to pronounce accurately enough to be easily and comfortably comprehensible to other (competent) speakers" (Hughues, 2002 as cited in Ur, 1996, p. 68).

Knight (1992, p. 295-296) mentions "pronouncing individual sounds ( phonemic distinction), applying word and sentence stress and rhythm, intonation and last but not least, aspects of connected speech, including llinking, elision and assimilation". The issues that may face students' pronunciation assessment is that the accuracy of the previous mentioned criteria is frequently compared against the native speaker standard. Hughes (2003) argues that this approach has been heavily critised. With English becoming a means of international language for communication, there arises a question which of the English pronunciation standards to apply. In this manner, the choice of which pronunciation standard to teach and compare students' performances against during the assessment lies in the competence of the eexaminer (Knight, 1992).

### 3.5.2. Fluency of Speech

According to Filmore (1979, as cited in Redford, 2015, p.449), "Fluency of speech refers to the learners' ability to talk with normal level of continuity (speed), rate and effort to link both ideas and language together to form coherent connected speech". Accordingly, its two key indicators are -Speech rate and Speech continuity. Hughues (2002) states that, when assessing learners' fluency, they are not obliged to produce speech fastly following the same rhythm as native speakers one, but only to follow a ordinary speed with clear progression and consistent sequencing of sentences.

Pye and Greenall (1996, p. 99), claim that testing fluency (another criterion that may be taken into consideration when assessing students' speaking skills) is to assess coherent spoken interaction with good speed, rhythm and few intrusive hesitations". Fluency is often mentioned in contrast to accuracy. Scrivener (2011, p. 224-225) says that, "metaphorically based on the setting one finds him/herself in accuracy has been described in relation to

grammar, vocabulary and pronunciation as free from error". When focused on eveluating fluency, the ultimate concern is for the speech to be fluent, i.e. to flow naturally without stressing too much on totally and definetely accurate.

Mehnert (1998) identifies the following features as measures of fluency: unfilled pauses, repairs, repeats, and speech rate. The amount of unfilled pauses was measured by counting the number of pauses of one second or more that happened in the speech. In order to make comparisons, examples of unfilled pauses and repair/repeat were counted per 60 seconds of speech because the actual speaking time of individual learners varied (as a function of the amount of pause time and filled pauses) (Mehnert, 1998).

### 3.5.3. Grammar

Grammar is often described as a set of rules by which a language is created, or a set of 'rules for forming words and combining them into sentences" (Swan, 2005, p. xix; Hornby, 1989, p. 542). Bachman and Palmer's (1996, as cited in Coombe et al., 2012) conceptualization of language ability includes both grammatical knowledge and textual knowledge. Both grammatical are subsumed under organizational knowledge (how language and strucrues are produced to form gramaticcaly correct utterances and sentenses). Bachman and Palmer's work also built on the notion of communicative competence (Hymes, 1974; Canale & Sain, 1980 cited in Combe et al., 2012), which refers to a language user's ability to use his/her grammatical knowledge to communicate through spoken utternaces. In this way, grammar is not only a set of abstracts rules, but is fundamental to the creation of meaning. Thus, for Parpura (2004, cited in Coombe et al., 2012), grammatical knowledge embodies two closely related components: grammatical form as the substentiel and grammatical meaning.

For testing purposes, "an important distinction needs to be made between knowledge and ability because a person's grammatical knowledge is presented by the structures that he/ she has accumulated over a period of time and are stored in the person's long-term memory;

grammatical ability, on the other hand, refers to an individual's capacity to utilize meantal representations of language knowledge built up through practice or experience in order to convey meaning" (Purpura, 2004, p. 86, as cited in Coombe et al., 2012, p. 248).

Knight's (1992, cited in Chambers & Gregory, 2006, p.103) theory is that "it has to do with tha way non-native speaker's of English learn Enhlish rather than the fact that it is more difficult and important to acquire than "discourse and sociolinguistic skills". In other words, there is a deceiving concept that a few non-native speakers of English have recieved – they tend to focus on mastering grammar and assume that being able to master grammatical strucures correctly indicates mastering the language itself. Knowing how to form words and combile them into sentences is, of course, significantly imperative; however, there is much more that froms communication than basically following a set of rules (Coombe, 2012).

### 3.5.4. Vocabulary

Lewis (1993, p.89) states that "lexis is the core or heart of language" (cited in Alfaki 2015 p.1). Vocabulary simply means our knowledge of the words and their meaning. Thornbury (2002) argues that knowing a word involves knowing both the form and its meaning (p.629). Additionally, Thornbury (2002, p.13) claims that "without vocabulary nothing can be conveyed". Thus, it is a central part in any language and an essential element in developing speaking fluency because without it students can neither express themselves nor understand the others. Vocabulary in speaking is the expressive terminology that includes the words we must know to communicate effectively (Neuman & Dwyer, 2009). Therefore, vocabulary plays a vital role as a leading element in learning English as a foreign language and a fundamental unit that enables learners to be fluent speakers.

According to Clark (1995), the two concepts: vocabulary production and comprehension and vocabulary comprehension production are usually two separate sets of words in the mind of a speaker, native as well as second language. He added that teachers

should encourage the learners to have a large production vocabulary and an even larger recognition vocabulary. For this reason, teachers should evaluate thier students on the following points: level of vocabulary they are able to produce, their use of the specific vocabulary the teacher has instructed them, the appropriate use of vocabulary within a diverse contexts in which they are speaking, listening for the level of vocabulary students are able to produce without prompting and then deciding how well they are performing in this area (Clark, 1995). The degree to which the student accurately uses vocabulary, reflecting sufficient variety and appropriateness for the level and appropriateness to the context and interlocutor. Students should be able to incorporate vocabulary from previous courses. Features to keep in mind: rich vs. sparse, word choice, specific terminology, target-like phrasing (Clark, 1995).

According to Harmer (2001), accomplishing accuracy in terms of vocabulary alludes to the suitable determination of words during speaking. Students frequently face difficulties when they attempt to express what they need to say, they lack the appropriate vocabulary, and they frequently use words in inappropriate way like in the case of synonyms which do not carry the same meaning in all settings. Students at that point, have to be able to use words and expressions precisely. According to the knowledge of the word classes also permits learners to perform well formed expressions (Harmer, 2001)

### 3.5.5. Listening Comprehension

Listening comprehension refers to the ability to extract meaning from spoken discourse (Snowling & Hulme, 2005). It refers to the ability to understand spoken language, including structured language, such as narrative or expository text read aloud, as ell unstructured natural language. Listening comprehension is critical to school success because most classroom instruction is delivered orally (Harmer, 2001). Measures of listening comprehension require "to demonstrate understanding of spoken language at one or more levels including single

words, phrases, sentences, and connected discourse. Three types of listening comprehension tasks in assessment: (1) single-word vocabulary measures, (2) sentence comprehension measures, (3) text-level listening comprehension measures" (Rathvon, 2004, p. 105).

One of the most popular assessing scales that teachers can utilize to evaluate their students' command of oral language on the basis of what they observe on a persistent basis in a variety of contexts is the Student Oral Language Observation Matrix (SOLOM) (O'Malley & Pierce, 1997). Through this scale, the teacher matches a student's language oral performance in a five main domains: listening comprehension, vocabulary, fluency, grammar, and pronunciation to descriptions on a five-point scale for each (See Figure 3.1). Since it depicts a level of proficiency ranging from non-proficient to fluent, the SOLOM can be used to track yearly advance. This, in turn, can be used in program evaluation, and as some of the criteria for exit from alternative instructional programs (O'Malley & Pierce, 1997).

| SOLOM Teacher Observation<br>Student Oral Language Observation Matrix | | | | | |
|---|---|---|---|---|---|
| Student's Name: | | | | Grade: | Date: |
| Language Observed: | | | Administered By (signature): | | |
| | **1** | **2** | **3** | **4** | **5** |
| **A. Comprehension** | Cannot be said to understand even simple conversation. | Has great difficulty following what is said. Can comprehend only social conversation spoken slowly and with frequent repetitions. | Understands most of what is said at slower-than-normal speed with repetitions. | Understands nearly everything at normal speech. Although occasional repetition may be necessary. | Understands everyday conversation and normal classroom discussions. |
| **B. Fluency** | Speech so halting and fragmentary as to make conversation virtually impossible. | Usually hesitant: often forced into silence by language limitations. | Speech in everyday conversation and classroom discussion frequently disrupted by the student's search for the correct manner of expression | Speech in everyday conversation and classroom discussions generally fluent, with occasional lapses while the student searches for the correct manner of expression. | Speech in everyday conversation and classroom discussions fluent and effortless; approximating that of a native speaker. |
| **C. Vocabulary** | Vocabulary limitations so extreme as to make conversation virtually impossible. | Misuse of words and very limited: comprehension quite difficult. | Student frequently uses wrong words: conversation somewhat limited because of inadequate vocabulary. | Student occasionally uses inappropriate terms and/or must rephrase ideas because of lexical inadequacies. | Use of vocabulary and idioms approximate that of a native speaker. |
| **D. Pronunciation** | Pronunciation problems so severe as to make speech virtually unintelligible. | Very hard to understand because of pronunciation problems. Must frequently repeat in order to make him/herself understood. | Pronunciation problems necessitate concentration on the part of the listener and occasionally lead to misunderstanding. | Always intelligible, although the listener is conscious of a definite accent and occasional inappropriate intonation patterns. | Pronunciation and intonation approximate that of a native speaker. |
| **E. Grammar** | Errors in grammar and word order so severe as to make speech virtually unintelligible. | Grammar and word order errors make comprehension difficult. Must often rephrase and/or restrict him/herself to basic patterns. | Makes frequent errors of grammar and word order that occasionally obscure meaning. | Occasionally makes grammatical and/or word order errors that do not obscure meaning. | Grammar and word order approximate that of a native speaker. |

**Figure 3.1: Student Oral Language Observation Matrix (SOLOM)**

### 3.6. Learners' Speaking Difficulties in Teaching Speaking

According to Yang (1993), teachers must understand the constraints and difficulties when that student may encounter when it comes to speaking performances and oral production and how to bring the gap between an examination of speaking and the actual classroom teaching. So, many students have obstacles in achieving a real and good oral performance and can be attributed to the following factors. Ur (2000) states four main problems in getting students speak in the FL classroom.

#### 3.6.1. Inhibition

Inhibition is the "condition which someone or students are losing face, worry about making mistakes and afraid of the attention that their speech attraction" (Ur, 1996, p. 121). He explains that speaking requires some degree of real time exposure to an audience. In this point learners are often inhibited about trying to say things in a foreign language whether in classroom or outside the classroom. In fact students are worried to make mistake and this makes them become speechless. Others, Kagan et al., (1988), pointed out that inhibition refers to a temperamental tendency to display wariness, fearfulness, or restraint in response to unfamiliar people, objects, and situations. These describe that inhibition affect to students' language learning specifically in performing their language comprehension.

According to Kurtus (2001), inhibit to speak come together with fear of mistakes that will become the primary reason that students are afraid of looking unwise in front of other people, and then they are disturbed about how other will see them. Inhibition makes students cannot do something. Ur (1996) said that students who are inhibited in their speaking activity generally are afraid of making mistakes, losing face, and fearful in saying or doing something. It really disturbs their personality.

Littlewood (1999) argues that it is too easy for a FL classroom to create inhibition and anxiety. Such variables allude to the feeling of shyness and fear of commiting errors and these

are due to the sick improvement of communicative skills and the feeling of linguistic inferiority and inadequacy. Students fear to make mistakes particularly in case they will speak in front of critical audience. Ur (2000) states that learners are frequently inhibited about attempting to say things in a foreign language in the classroom because they are stressed about, making mistakes, frightful of negative feedback and criticism or loosing face, or basically shy of the attention that their speech attracts. This perspective is supported also by Bowman et al., (1989) who contend that in teaching speaking you are inquiring your learners to express themselves in front of the whole class, consequently this leads most of them to experience the anxiety and stress when completing speaking activities. To conclude, stress and anxiety are two components that also can create obstacles for the students to speaking confidently in front of their classmates (Ur, 2000).

### 3.6.2. Nothing to Say

The common expressions L2 learners use when they are imposed to participate in a given topic is 'I have nothing to talk about', 'I don't know', 'no comment' or they keep silent. such expressions are due to the lack of motivation in expressing themselves or the chosen topic they should discuss or talk about (Ur, 1996). Rivers (1968, p. 192) says that: "The teacher may have chosen a topic which is uncongenial to him [the learner] or about which he knows very little, and as a result he has nothing to express, whether in the native language or the foreign language."

Moreover, the poor practice of the L2 can contribute to create this problem. Lonka et al, (2012) support that many students find it difficult to answer when teachers ask them to say anything in the target language. The learners may have only a few ideas to express and speak about; they may not recognize how to appropriately use some vocabulary or they are not certain of the grammatical accuracy. Also, students could not carry out the discussion on themes that are not interesting to them.

### 3.6.3. Low Uneven Participation

Rivers (1968) claims that a few personality variables may influence participation in a FL classrooms and instructors at that point ought to recognize them. He added that there are a few students who tend to be dominant and take nearly the whole students' speaking time. On the other hand, other students favor to talk only if they are sure that what they will say is appropriate and accurate, and some others keep quiet, show no motivation or interest in all along the course.

Harmer (2001) proposes spilling weak participators in groups and allowing them to work together. In such cases they will not hide behind the strong participators, and the instructor can accomplish a high level of interest, motivation, and participation in FL classes. Another element that can create issues of participation is the classroom arrangement that will not offer assistance to the students to perform a few speaking activities. Bowman et al., (1989, p. 40) support the idea by saying that "traditional classroom seating arrangements often work against you in your interactive teaching." Low participation is due to the ignorance of teacher's motivation too. This implies that if the instructor does not motivate her/his learners, this would have a negative influence on the talkative learners as well and consequently they will show no interest. So, increasing and directing student motivation is one of the teacher's responsibilities.

### 3.6.4. Mother Tongue Use

According to Baker and Westrup (2003, p. 12) "barriers to learning can occur if students knowingly or unknowingly transfer the cultural rules from their mother tongue to a foreign language." Therefore, the learners will not be able to use the FL correctly if they keep on being influenced by the use of their mother tongue. Lack of the vocabulary of the target language frequently leads learners to borrow words from their native language (Baker & Westrup, 2003).

### 3.7. Learning Styles, Learning Strategies and Oral Proficiency

As it is stated in the previous section, many difficulties are encountered by learners when it comes to speaking FL fluently and appropriately. In other words, they do not reach oral proficiency. According to (Genesee 1987; Harley et al., 1990; Harley & Swain, 1984; Swain, 1985) some learners are not able to reach the expected level of proficiency and therefore, they are left behind. Many researches have been carried out for helping students improve their ability to communicate. Zhang (2003) for example, conducted investigation on the language learning strategies used by students in the intensive English program. The study examined the relationship between the students' use of learning strategies and their English proficiency. The results of Zhang's study revealed a strong relationship between between strategy use and English proficiency; the use of some specific strategies was positively correlated to improvement of sub-language skills such as oral communication. Consequently, implications of understanding the students' learning strategies and their use have seemed to be increasingly important (Cohen, 1998).

Moreover, previous studies like (Mcnamara, 2010; Woolley, 2010; Flavell, 1992; Gough & Tunmer, 1986, have been carried out taken into consideration the learning strategy and oral proficiency, but just few of them considered the usage of learning styles in oral development. For example, Mingyuan (2003) reports on the findings of an investigation on language learning strategies used by students in the intensive English program. The study examined the relationship between the students' use of learning strategies and their English proficiency. It was found that there was a strong relationship between learning strategy use and English oral proficiency.

The previous studies and others have dealt with the learning strategies and English oral proficiency. However, according to (Gold, 2002), one element was left apart in learning a FL; learning styles. He claimed that students with greater learning styles flexibility are also

greater achievers, as they are able to process the information in whatever way it is presented. Consequently, many researchers agree that learning strategies do not work in isolation but they have a positive influence if students use them according to their learning styles (Gold 2002).

Rebecca L. Oxford clearly stated that learning styles and strategies help determine a particular learner's ability and willingness to work within the framework of various instructional methodologies. She added that, every foreign language student uses more than one learning strategy, but the problem is that they do not have a clear idea about what kind of learning styles they are; so they continue worrying about their oral proficiency. Interiano (2013) pointed out to a very important problem concerning oral languae proficiency imporovement by stating that if students do not know their learning styles and use their learning styles at random, those strategies will not work out and consequently their oral proficiency will not improve.

Oral proficiency development can be influenced by many factors and one of them is the use of different learning strategies based on learning styles. Some researchers agreed that those learning styles complement each other for a student will not have a single learning style, but a mixture of them; although, students can have a strong tendency of being one dominant type of learning style.

In our EFL classrooms, one cannot deny the fact that we are working with different type of students, with different skills, levels and backgrounds, so the question that teachers should start wondering about is which of these factors may determine students' success and development in L2? Previous researches have been carried out taking into consideration the learners' learning strategy use (Mcnamara, 2010; Woolley, 2010; Flavell, 1992; and, Gough & Tunmer, 1986). However, few of them have considered the usage of learning styles and strategies in oral development (Mingyuan, 2003 ; Lunt, 2000). Henceforth, those studies have

not shown a clear indication about the influence of learning styles use in oral language proficiency development.

**Conclusion**

Throughout this chapter, the theoretical aspects that concern oral language proficiency were examined. Besides, it was found that oral performance is so complex to realize and the speaking skill is extremely difficult to practice where foreign language learners encounter many constraints. Consequently, EFL teachers have to try to overcome these difficulties adopting a variety of teaching strategies, tasks and techniques that feat the learners' interest. This chapter ended up with a section that dealt with the relashioship between learning stretegies, learning styles and oral proficiency. It was found that previous studies have taken into consideration the relationship between learning strategies and oral proficiency, but those studies have not shown a clear correlation between these two variables. Hence, this research is an attempt to fill in this gap in knowledge and literature. To carry on this study, the researcher needed to collect data on the research methodology (research methods, data collection tools, the covariates, the data analysis procedures etc). All this and more are discussed in the next chapter that represents the practical aspect of the study.

## Chapter Four: Research Methodology

# Chapter Four

# Research Methodology

## Introduction

Good teaching helps the student to develop desirable learning habits to achieve the desired aims. How quickly and well a student learns depends not only on his or her intelligence and prior education, but also on the student's learning style preference ( Mishra, 2007 ). Kolb (1984) says that it has been widely documented and recognized that student success in the classroom depends not only on intellectual abilities, skill and talents of the student but also on student's learning style. Learning style is important variable in processing cognitive information. Such claim goes in line with the meshing hypothesis principles.

According to the previous review of literature, "visual learners gain knowledge best by seeing or reading what you are trying to teach; auditory learners, by listening; and tactile or psychomotor learners, by doing" (Mishra, 2007, p.150). According to Sarasin (1999, p. 6-7), "teaching cannot be successful without knowledge of learning styles and a commitment to matching them with teaching styles and strategies".

Such references paved the way for conducting the current study. In this chapter, the research design of the present study is described. It includes the description of population, sampling, setting, tools used, quasi- experimental design, the phases of the study, and methods of data collection, data collected and methods of data analysis.

## 4.1. Population

A population is the entire aggregation of cases in which a researcher is interested (Polit & Beck, 2004, p. 289). It refers to all possible cases of what we are interested in studying. Population refers to the group under the study with some specific characteristics, which is of the interest of the researcher and certainly related to the research (Ary et al., 2018).

The present study was cerried out to examine the effectiveness of LSBIP on students' OEA. The population of the present study was the Visual, Auditory and Kinaesthetic students of the first year students of English at Mohamed Lamine Debaghine Setif 2 University, Algeria during the academic year 2015-2016. The study was limited to first year students because it is better for them to be aware of their learning styles from the very beginning of their learning experience so as to get the chance to benefit from that in their following years.

**4.2. Sampling**

Sampling is the process of selecting a portion of the population to represent the entire population. A sample, then, is "a subset of population elements, an element is the most basic unit about which information is collected" (Polit, et al, 2001, p. 291). The representative proportion of the population is called a sample. It is a group which representing all the characteristics of the population. "A sample is a small subset of the population that has been chosen to be studied" (Lunsford & Lunsford, 1995, p. 105).

For the present study, the researcher selected the sample by using non-probability technique (convenience sampling). Non-probability sampling is sometimes called non-random sampling. It is a sampling technique where the samples are gathered in a process that does not give all the individuals in the population equal chances (equal probability) of being selected (Fink, 1995).

The choice to use probability or non-probability sampling depends on the goal of the research. This category of sampling is useful for researchers "to achieve particular objectives of the research at hand" (Henry, 1990). Non-probability sampling has advantages and disadvantages and its use is determined by the researcher's goals in relation to data collection and validity (Raymond, 2001).

The advantage of non-probability sampling is that it is a convenient way for researchers to assemble a sample with little or no cost and/or for those research studies that do not require

representativeness of the population (Babbie, 1990). Non-probability sampling is a good method to use when conducting a pilot study, when attempting to question groups who may have sensitivities to the questions being asked and may not want answer those questions honestly, and for those situations when ethical concerns may keep the researcher from speaking to every member of a specific group (Fink, 1995). In non-probability sampling, subjective judgments play a specific role (Henry, 1990). Researchers must be careful not to generalize results based on non-probability sampling to the general population.

To examine the effectiveness of the LSBIP on OEA of first year students of English, three experimental groups and one control group were required. In the English department at Mohamed Lamine Debaghine Setif 2 University, there were 460 first year students divided into twelve (12) groups. The number of students in each group is between 38 and 39.

First of all, the researcher administered the VAK Learning Style Inventory on all 460 students of the 12 groups to figure out the preferred learning style of the students in each group. The description and justification of the use of this learning style inventory is discussed in greater detail in the section that deals with research tools. Then, the percentage of different types of students in each group was calculated. The percentage of different students in each group is given in Table 4.1 to 4.12

**Table 4.1**
**Percentage of each Type of Students in Class A1**

| Type of Students | No. of Students | Percentage(%) of Students | Maximum Students in group-A1 |
|---|---|---|---|
| Visual | 19 | 50.00 | Visual Students (50.00%) |
| Auditory | 12 | 31.57 | |
| Kinaesthetic | 07 | 18.42 | |
| Total | 38 | 100% | |

**Table 4.2**
**Percentage of each Type of Students in Class A2**

| Type of Students | No. of Students | Percentage (%) of Students | Maximum Students in group-A2 |
|---|---|---|---|
| Visual | 20 | 51.28 | Visual Students (51.28%) |
| Auditory | 10 | 25.64 | |
| Kinaesthetic | 08 | 21.05 | |
| Total | 38 | 100% | |

**Table 4.3**
**Percentage of each Type of Students in Class A3**

| Type of Students | No. of Students | Percentage (%) of Students | Maximum Students in group-A3 |
|---|---|---|---|
| Visual | 12 | 31.57 | Kinaesthetic Students (47.36%) |
| Auditory | 08 | 21.05 | |
| Kinaesthetic | 18 | 47.36 | |
| Total | 38 | 100% | |

**Table 4.4**
**Percentage of each Type of Students in Class A4**

| Type of Students | No. of Students | Percentage (%) of Students | Maximum Students in group-A4 |
|---|---|---|---|
| Visual | 14 | 35.89 | Auditory Students (43.58%) |
| Auditory | 17 | 43.58 | |
| Kinaesthetic | 08 | 20.51 | |
| Total | 39 | 100% | |

**Table 4.5**
**Percentage of each Type of Students in Class A5**

| Type of Students | No. of Students | Percentage (%) of Students | Maximum Students in group-A5 |
|---|---|---|---|
| Visual | 12 | 30.76 | Auditory Students ( 41.02%) |
| Auditory | 16 | 41.02 | |
| Kinaesthetic | 11 | 28.20 | |
| Total | 39 | 100% | |

**Table 4.6**
**Percentage of each Type of Students in Class A6**

| Type of Students | No. of Students | Percentage(%) of Students | Maximum Learners in group-A6 |
|---|---|---|---|
| Visual | 14 | 36.84 | Visual Students (%) |
| Auditory | 13 | 34.21 | |
| Kinaesthetic | 11 | 28.94 | |
| Total | 38 | 100% | |

**Table 4.7**
**Percentage of each Type of Students in Class B1**

| Type of Students | No. of Students | Percentage (%) of Students | Maximum Students in group- B1 |
|---|---|---|---|
| Visual | 20 | 51.28 | Visual Students (51.28%) |
| Auditory | 12 | 30.76 | |
| Kinaesthetic | 06 | 15.38 | |
| Total | 39 | 100% | |

**Table 4.8**
**Percentage of each Type of Students in Class B2**

| Type of Students | No. of Students | Percentage (%) of Students | Maximum Students in group- B2 |
|---|---|---|---|
| Visual | 16 | 42.10 | Visual Students (42.10%) |
| Auditory | 13 | 34.22 | |
| Kinaesthetic | 09 | 23.68 | |
| Total | 38 | 100% | |

**Table 4.9**
**Percentage of each Type of Students in Class B3**

| Type of Students | No. of Students | Percentage (%) of Students | Maximum Students in group- B3 |
|---|---|---|---|
| Visual | 12 | 31.57 | Kinaesthetic Students (42.10%) |
| Auditory | 10 | 26.31 | |
| Kinaesthetic | 16 | 42.10 | |
| Total | 38 | 100% | |

**Table 4.10**
**Percentage of each Type of Students in Class B4**

| Type of Students | No. of Students | Percentage (%) of Students | Maximum Students in group-B4 |
|---|---|---|---|
| Visual | 12 | 30.76 | Auditory Students (46.15%) |
| Auditory | 18 | 46.15 | |
| Kinaesthetic | 09 | 23.07 | |
| Total | 39 | 100% | |

**Table 4.11**
**Percentage of each Type of Students in Class B5**

| Type of Students | No. of Students | Percentage(%) of Students | Maximum Students in group-B5 |
|---|---|---|---|
| Visual | 20 | 52.63 | Visual Students (52.63%) |
| Auditory | 13 | 34.22 | |
| Kinaesthetic | 05 | 13.15 | |
| Total | 38 | 100% | |

**Table 4.12**
**Percentage of each Type of Students in Class B6**

| Type of Students | No. of Students | Percentage (%) of Students | Maximum Learners in group-B6 |
|---|---|---|---|
| Visual | 13 | 34.21 | Auditory Students (44.73%) |
| Auditory | 17 | 44.73 | |
| Kinaesthetic | 08 | 21.05 | |
| Total | 38 | 100% | |

The Summary of the above Tables 4.1 to 4.12 is given in Table 4.13

**Table 4.13**
**Summary of Learning Style of Students in each Class**

| Class | Visual Students (%) | Auditory Students (%) | Kinaesthetic Students (%) | Total (%) | Max. Score | Class Learning Style |
|---|---|---|---|---|---|---|
| **A-1** | 50.00 | 31.57 | 18.42 | 100 | 50.00 | Visual |
| **A-2** | 51.28 | 25.64 | 21.05 | 100 | 51.28 | Visual |

| | | | | | | |
|---|---|---|---|---|---|---|
| **A-3** | 31.57 | 21.05 | 47.36 | 100 | 47.36 | Kinaesthetic |
| **A-4** | 35.89 | 43.58 | 20.51 | 100 | 43.58 | Auditory |
| **A-5** | 30.76 | 40.02 | 28.20 | 100 | 40.02 | Auditory |
| **A-6** | 36.84 | 34.21 | 28.94 | 100 | 36.84 | Visual |
| **B-1** | 51.28 | 30.76 | 15.38 | 100 | 51.28 | Visual |
| **B-2** | 42.10 | 34.22 | 23.68 | 100 | 42.10 | Visual |
| **B-3** | 31.57 | 26.31 | 42.10 | 100 | 42.10 | Kinaesthetic |
| **B-4** | 30.76 | 46.15 | 23.07 | 100 | 46.15 | Auditory |
| **B-5** | 52.63 | 34.22 | 13.15 | 100 | 52.63 | Visual |
| **B-6** | 34.21 | 44.73 | 21.05 | 100 | 44.73 | Auditory |
| **Max. Score** | 52.63 | 46.15 | 47.36 | - | - | |

From The observation of Table 4.13, it is obvious that A-1 had maximum Visual students (50.00%), A-2 had maximum Visual students (51.28%), A-3 had maximum Kinaesthetic learners (47.36%), A-4 had maximum Auditory students (43.58%), A-5 had maximum Auditory students (40.02%), A-6 had maximum Visual students (36.84%) and B-1 had maximum Visual students (51.28%), B-2 had maximum Visual students (42.10) and B-3 had maximum kinaesthetic students (42.10), B4 had maximum Auditory students (46.15), B5 had maximum Visual students (52.63) and B-6 had maximum Auditory students (44.73).

Based on the above percentages, the researcher selected class B-5 as a visual students group for experimental group-1, class B-4 as Auditory students group for experimental group-2, and A-3 as a kinaesthetic students group for experimental group-3. To select the group that would represent the control group for this experimental study, the researcher noticed that A-6 possesses approximately equal ratios: Visual (36.84), Auditory (34.21) and kinaesthetic students (28.94) as compare to the remaining classes. So, researcher selected

class A-6 as a General Students group for the present study. Thus, finally the selected sample for the present study is given in Table 4.14

**Table 4.14**
**Sample Selected for the Present Study**

| Sample selected for the present study Class | Total no of Students | Type of Students | Subjects selected in Sample | Learning Style of the selected students | Group |
|---|---|---|---|---|---|
| **B5** | 38 | Visual | 20 | Visual Learning Style | Experimental Group-1 |
| **B4** | 39 | Auditory | 18 | Auditory Learning Style | Experimental Group-2 |
| **A3** | 38 | Kinaesthetic | 18 | Kinaesthetic Learning Style | Experimental Group-3 |
| **A6** | 38 | VAK | V-15<br>A-12<br>K-11 | All three types VAK learning style | Global Group |

Table 4.14 reveals that in the class B-5 there were total 38 students, but only 20 students were having visual learning style. So, out of 38 only 20 students were considered for experimental group-1

In the Class B-4, there were total 39 students, but only 18 students were having auditory learning style. So out of 39 only 18 students were considered for experimental group-2

In the Class A-3, there were total 38 students, but only 18 students were having kinaesthetic learning style. Therefore, out of 38, only 18 students were considered for experimental group-3.

In the Class A6 there were total 38 students, out of 38, 15 students were having visual learning style, 12 students were having auditory learning style and 11 students were having kinaesthetic learning style. So, this class was considered as a control group of this experimental research.

### 4.3. Research Method

The experimental method is the only method of research that "can truly test hypotheses concerning cause and effect relationships. It represents the most valid approach to the solution of educational problems, both practical and theoretical, and to the advancement of education as a science (Gay, 1992, p. 298). In order to solve a research problem, research method is of crucial importance in the scientific research process. At this stage of process, the researcher has to decide about the most appropriate and suitable research method that could be used in solving the stated research problem. Tthis study was conducted to examine and observe the effects of independent variable on dependent variable within certain controlled situation. Hence, experimental research method is preferred in this context. However, in the present study, the the quasi-experimental research method was opted for simply because there were no random assignments of the groups (the experimental and the control groups). This is the main difference between the true experimental research design and the quasi-experimental research design. Moreover, for many administrative obstacles, t was not to opt for a random assignment of the sample selected. These obstacles and others have been clearly discussed in the section that deals with the limitations of the study (chapter seven).

The present study aimed to examine the effectiveness of three different LSBIPs on students' OEA. Therefore, different treatments were provided to different three groups. The quasi-experimental research was conducted for a given period of time.

### 4.4. Quasi-experimental Design of the Present Study

Since the aim of the present study was to investigate the effectiveness of three different learning styles based on the teacher's instructional strategies with reference to teaching of oral expression module, three different treatments were given to three different groups. After studying related literature related to the study and discussion with teachers of research methodology module at English department of Mohammed Lamine Debaghine Sétif 2

University, the quasi-experimental pretest/posttest control group design was selected for this study. This design was chosen in order to compare oral expression achievement between groups, and because it was not feasible to randomly assign students from one course section to another within the sample.

The pretest/posttest control group design was also used in order to minimize internal validity threats that could potentially happened. This design is widely used in educational research, and generally controls for most threats to internal validity (Campbell & Stanley, 1963). The internal threats that are related to this study are discussed in the section that deals with the characteristics of the experimental research.

### 4.4.1. Advantages of Quasi-experimental Design

The use of a quasi-experimental design offers many advantages for the researcher, including the following

- Quasi-experimental studies are more feasible to conduct in an applied setting.
- True experiment may not be feasible or ethical; it may be impossible to deliver an intervention to some people in a group and not others.
- Quasi-experimental studies introduce a level of control that reduces the effect of extraneous variables.
- Accessible subjects can be used for the study, so that larger samples may be obtained (Houser, 2012, p. 408).

### 4.4.2. Limitations of Quasi-experimental Design

Although quasi-experimental designs offer many advantages, some of the disadvantages associated with the use of this method include the following:

- It is inappropriate to draw firm conclusions about cause and effect without random assignment.

- Groups may not be equivalent in characteristics and so extraneous variables are introduced.
- Rival explanations for the outcome exist and may weaken confidence in the results (Houser, 2012, p. 409).

This study was conducted to determine the effectiveness of three learning styles based instruction on students' oral expression achievement. The design for this study was Quasi-experimental in nature, since the classroom groups are already in place and had to be intact. In order to have a strong quasi-experimental design, internal threats to validity were controlled by use of pretesting. To be confident that there was no significant difference among the subjects of the Experimental Groups and the Control group regarding the variables under investigation, both groups were pre-tested at the beginning of the experiment.

Quasi-experimental design differs from true experimrntal designs in two ways. First, participants are not randomly selected from a specified population. Second, participants are not randomly assigned to experimental and control groups. Participants are intact groups. Nevertheless, quasi-experimental desings provide a relatively high degree of experimental control in natural settings, and they crearly present a step up from preexperimental desings, because they enable researchers to compare the performance of the experimental group with that of a control group. There are four common quasi-experimental designs. In this study, the none-quivalent pretest posttest control –group design was used in order to achieve the objectives of this study.

### 4.4.3. Non-equivalent Control Group Design

The non equivalent control-group design begins with the identification of naturally assembled experimental and control groups. Again, the natural occurring experimental and control groups should be as similar as possible. Measurement of the dependent variable is taken prior to the introduction of the independent variable. The independent variable is then

introduced, followed by the post intervention measurement of the dependent variable. Figure 4.1 depicts the form of the nonequivalent control-group design (Ronald, et al., 2013, p.153).

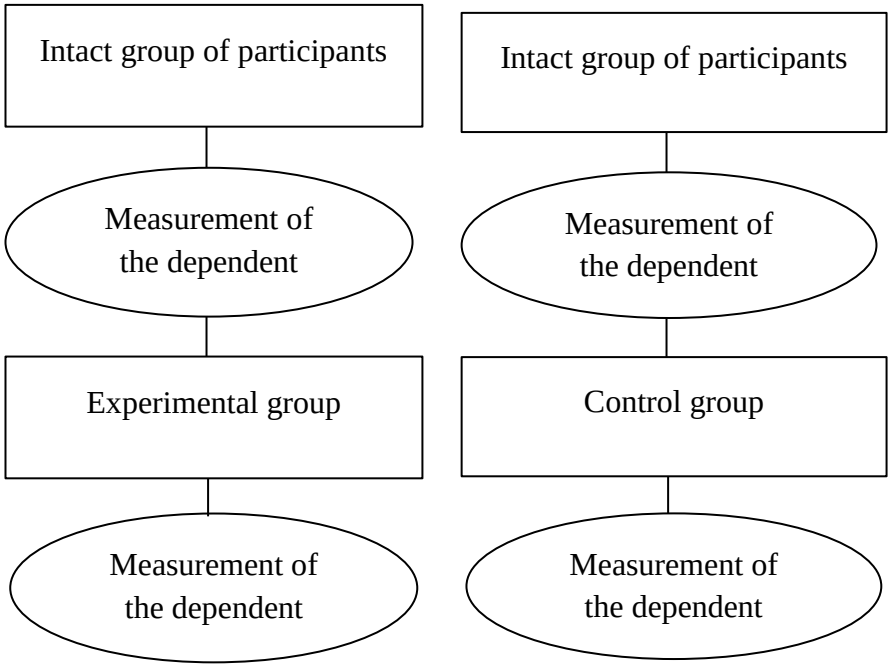


**Figure 4.1: Non-equivalent Control Group Design**

The four groups (three experimental and one control) can be diagrammed in Table 4.15

**Table 4.15**
**Presentation of Quasi-experimental Design**

| Detailed Presentation of Experimental Design Group | Pre-test | Independent variable (treatment) | Post-test |
|---|---|---|---|
| Experimental Group-$EG_1$ | $T_1EG_1$ | $X_1$ | $T_2EG_1$ |
| Experimental Group-$EG_2$ | $T_1EG_2$ | $X_2$ | $T_2EG_2$ |
| Experimental Group-$EG_3$ | $T_1EG_3$ | $X_3$ | $T_2EG_3$ |
| Control Group- CG4 | $T_1CG_4$ | --- | $T_2CG_4$ |

Where,

$EG_1$ = Visual Students Experimental Group

$EG_2$ = Auditory Students Experimental Group

$EG_3$ = Kinaesthetic Students Experimental Group

$CG_4$ = Students Control Group

$X_1$ = Visual Instructional Programme

$X_2$ = Auditory Instructional Programme

$X_3$ = Kinaesthetic Instructional Programme

$T_1EG_1$ Pre-test given for Visual Students Group

$T_1EG_2$ Pre-test given for Auditory Students Group

$T_1EG_3$ Pre-test given for Kinaesthetic Students Group

$T_1CG_4$ Pre-test given for Students Control Group

$T_2EG_1$ = Post-test given for Visual Students Group

$T_2EG_2$ = Post-test given for Auditory Students Group

$T_2EG_3$ = Post-test given for Kinaesthetic Students Group

$T_2CG_4$ = Post-test given for Global Students (Control) Group

Table 4.15 demonstrates that there are four groups in this design. There are three experimental groups ($EG_1$, $EG_2$, and EG3) and one is Global (Control) students group (CG4). For this quasi-experimental design, the pre-test was used; it means that the dependent variable (OEA) is measured before the treatment. The treatment applies only on experimental groups not on global group. Before giving the treatment, both the experimental and the control group were subjected to the pre-test.

After giving a treatment and in order to measure the effectiveness of this treatment, the posttest is delivered to all the groups. The difference between pre-test and post-test data of

the groups is the measure of the effectiveness of the treatment. The diagrammatic presentation of the quasi-experimental design is given in the Table 4.16

**Table 4.16**
**Diagrammatic Presentation of the Experimental Design Present Study**

| Oral Expression Units | Group | Pre-test (OEAT1) | Independent variable ( treatment) | Post-test (OEAT2) |
|---|---|---|---|---|
| 1. Discuss<br>2. Instructions, Explanations and Advice<br>3. Complaints, Apologies and Excuses<br>4. Good news, Bad news | Experimental group-1($EG_1$) (visual learners) | $T_1EG_1$ | $X_1$ (VIP) | $T_2$-$EG_1$ |
| | Experimental group-2 ($EG_2$) (auditory learners) | $T_1EG_2$ | $X_2$ (AIP) | $T_2$-$EG_2$ |
| | Experimental group-3 ($EG_3$) (kinaesthetic learners) | $T_1EG_3$ | $X_3$ (KIP) | $T_2$-$EG_3$ |
| | General group ( $CG_4$) | $T_1CG_4$ | - | $T_2$-$CG_4$ |

Where,

X1- =Instructional Programme based on Visual Learning Style (VIP)

$X_2$- =Instructional Programme based on Auditory Learning Style (AIP)

$X_3$- =Instructional Programme based on Kinaesthetic Learning Style (KIP)

$T_1EG_1$ Pre-test given for Visual Students Group

$T_1EG_2$ Pre-test given for Auditory Students Group

$T_1EG_3$ Pre-test given for Kinaesthetic Students Group

$T_1CG_4$ Pre-test given for Control Group Students

$T_2$-$E_1$ =Post-test of Experimental group-1

$T_2$-$E_2$ = Post-test of Experimental group-2

$T_2$-$E_3$ = Post-test of Experimental group-3

$T_2CG_4$ = Post-test of Control group

OEAT = Oral Expression Achievement Test

Table 4.16 demonstrates that in, the present study, there were three experimental groups; the first one was visual students group, second one was auditory students group, and the third one was kinaesthetic students group. The present study also consisted of one control group.

## 4.5. Characteristics of Quasi Experimental Research

According to Koul and Song (2009, p. 132), in experimental research, "the researcher has some degree of control over the variables involved and the conditions under which the variables are observed". The researcher deliberately manipulates some aspect of the experiment in which he is interested. There are four essential characteristics of experimental research: control, manipulation, observation, and replication (Pathak, 2008; Berg & Latin, 2004). In the following paragraphs, each characteristic is discussed in accordance with the present study.

### 4.5.1. Control of Extraneous Variables

Control is the first essential ingredient of experimental method. It refers to "the extent to which different factors in an experiment are accounted for" (Arora & Mahankale, 2012, p. 64). Control of extraneous variables allows the researcher to say that the results are due to manipulation of the variables and not to chance interference. Without control, it is impossible to evaluate unambiguously the effects of an independent variable. The main purpose of control in an experiment is to arrange a situation in which the effect of variables can be measured (Chandra & Sharma, 2004).

Control is used to indicate an experimenter's 'procedures' for eliminating the differential effects of all extraneous to the purpose of the study (Gravetter & Forzano, 2015). An extraneous variable is one that is not related to the purpose of the study but may affect the dependent variable (Leedy, 1997).

In the present study, the researcher has tried to control the variables except the independent variable, which causes the effect on the dependent variable (experimental research). The effects of the covariates CASE, SH, and ASC were controlled statistically. Variable such age was controlled as much as possible since all first year EFL students have approximately the same age. The variable gender could not be controlled because all groups (intact groups) consisted male and females and this was mentioned in the limitation of the study.

### 4.5.2. Manipulation

Manipulation of an independent variable is a deliberate operation performed by the experimenter. It involves setting up different treatment conditions. "The different treatment conditions administered to the subjects in the experiment are the levels of the independent variable" **(**Ary et al., 2013, p.289). In contrast to the descriptive research in which the researcher simply observes conditions as they occur naturally, the researcher in the experimental research actually sets the stage for the occurrence of the factors whose performance is to be studied under conditions where all other factors are controlled or eliminated (Koul & Song, 2009). In social research, "the manipulation of a variable takes a characteristic form in which the experimenter imposes a predetermined set of varied conditions on the subjects" **(**Arora & Makanhale, 2012, p.66)

This set of varied conditions is referred to as the 'independent variable, the experimental variable, or the treatment variable. Then, different conditions are designed to represent two or more values of the independent variable; these may be differences in degree or differences in kind. That is, the independent variable may give two or more values and the difference in the values may be of quantitative or qualitative in nature (Arora & Mahankale, 2012).

In the present study, the LSBIP was assumed as an independent variable, which has four levels. The levels are presented in the Figure-4.2

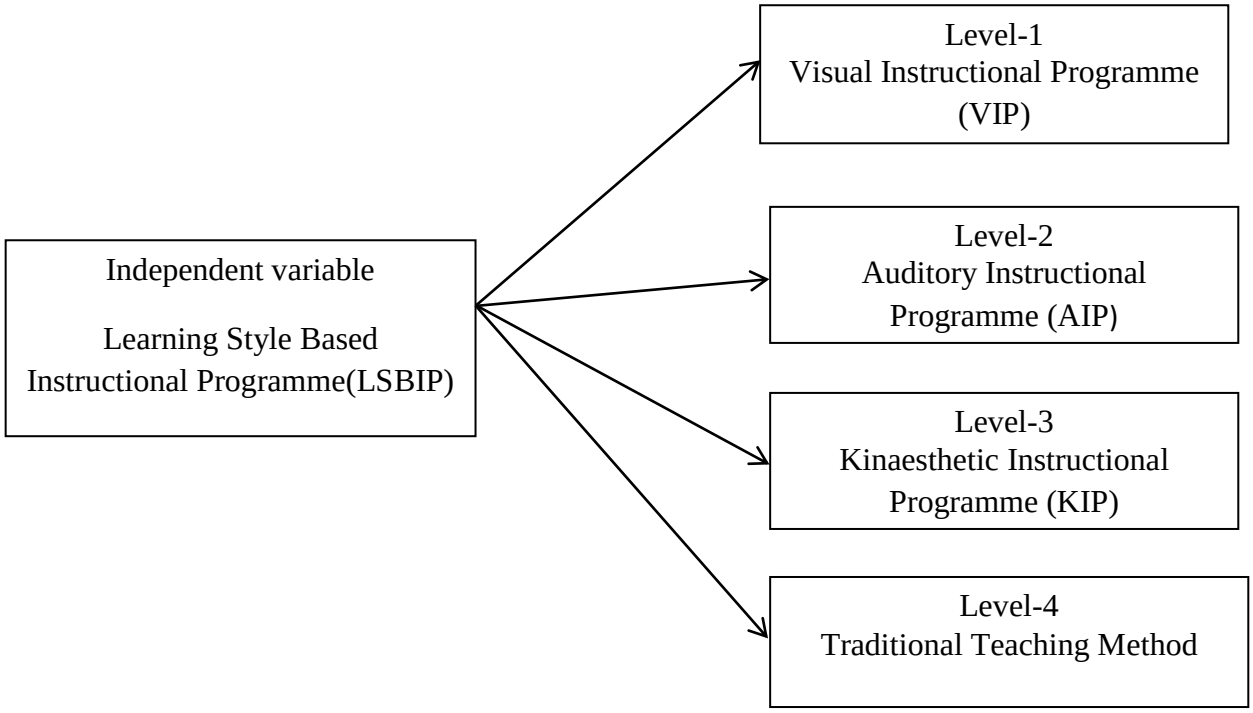


**Figure 4.2: Levels of Learning Style Based Instructional Programme as an Independent Variable**

### 4.5.3. Observation

In experimentation, we are interested in the effect of the manipulation of the independent variable on a dependent variable. Observations are made with respect to some characteristics of the behavior of the subjects employed in the research. Dependent variable is scores on test or observations with respect to some characteristics of the behavior of the subjects used in the experiment ( Burns & Grove , 2010). These observations, "which are quantitative in nature, may constitute the dependent variable, which is scores or observations, rather than change in attitude" (Arora & Mahankale, 2012, p. 66).

In the present study, the measured dependent variable was the students' OEA. After teaching the four units in the LSBIP, an OE post-test was given to all the participants of the study sample (both the experimental groups ad the control group). The obtained scores of the post-test were regarded as the measured dependent variable of the study.

### 4.5.4. Replication

Replication signifies, conducting a number of sub experiments within the framework of an overall experimental design (Anastas, 2012). This is essential as no matter how objectively and carefully a researcher attempt to control the extraneous variable through the rounds of randomization or other methods, still some discrepancies invariably remain an influence the result of the experiment. Such discrepancies may be taken care of through the replication of the study (Polit & Beck, 2009).

Replication involves repeating or reproducing a research study to investigate whether similar findings will be obtained in different settings and with different samples. Replication is needed not only to establish the credibility of research findings but also to extend generalizability (Fitzpatrick & Wallace, 2006). In the present study, the results need to be replicated by future research; therefore, a replication of the study was suggested in the section that deals with further research in chapter seven.

## 4.6. Validity and Reliability of the Quasi-Experimental Research

According to Ary et al., (2013, p. 293), "researchers must ask if the inferences drawn about the relationship between the variables of a study are valid or not". Campbell and Stanley (1963) made a very significant contribution to an understanding of the validity of the experimental research designs. They defined two general categories of validity of research designs: internal validity and external validity. In the current study, the researcher minded about of the validity of quasi- experimental design, which is considered in the following paragraphs.

### 4.6.1. Internal Validity

Although the non-equivalent control group design does not provide the same level of experimental control as the pretest-posttest control-group design, it enables researchers to address many of the threats to internal validity adequately. The effectiveness of the non-equivalent control-group design in addressing the threats to internal validity increases with the similarity of the pretest scores of the experimental and control groups. The following paragraphs, has shown that the non-equivalent control group design controls for ten of the threats to internal validity (i.e., history, test effect , instrumentation, regression, selection bias, experimental mortality, experimenter effect, the Hawthorne effect, diffusion, John Henry effect ) that result in changes in the performance of the experimental groups.

Campbell and Stanley (1963) stated that internal validity is the basic requirement if one is to draw correct conclusions from an experiment. Internal validity refers to the inferences about whether the changes observed in a dependent variable are, in fact, caused by the independent variable(s) in a particular research study rather than by some extraneous factors. Internal validity is concerned with such questions as: Did the experimental treatment cause the observed change in the dependent variable or was some spurious factor working? And are the findings accurate? The experimenter cannot answer these questions of internal validity positively unless the design provides adequate control of extraneous variables. If the design provides control of variables, alternative explanations of the observed outcome can be eliminated and interpret it as showing an intrinsic relationship between variables ( Ary et al., 2013).

#### 4.6.1.1. Threats to Internal Validity

Campbell and Stanley (1963) identified eight extraneous variables that frequently represent threats to the internal validity of a research design. These variables are called ‘threats’ because unless they are controlled, they may very well produce an effect that could

be mistaken for the effect of the experimental treatment. If uncontrolled, these extraneous variables raise doubts about the accuracy of the experiment because they permit an alternative explanation of the experimental findings.

Extraneous variables are a fatal threat to internal validity. In the present study, the researcher tried to control the extraneous variables which affect significantly the internal validity of the experimental design (Burns & Grove, 2005). The presence of control group, experimental groups and pre-test help in controlling internal validity threats ( Ruane, 2007). The discussion which follows outlines threats to internal validity and different ways to minimize them.

#### 4.6.1.1.1. History

Specific vents or conditions, other than the experimental treatment, may occur between the beginning of the treatment and the posttest measurement, and may produce changes in the dependent variable. Such events are referred to as the history effect. In this case, history does not refer to past events but to dexterous events occurring at the same time that the experimental treatment is being applied and that could produce the observed outcome even without any treatment (Ary et al., 2013). These may be major political, economic, or cultural events or some rather than major disruptive factors that occur during the product of the experiment. The longer the period of time between the pre- and post-measurements on the subjects, the greater the history threat becomes (Feuer et al., 2002).

In the present study, the participants have not been randomly assigned to the groups; quasi-experimental research has more threats to internal validity than do true experiments. To reduce this threat in quasi-experimental design, the researcher deliberately selects treatment group (experimental group) and other groups (control group) so that they are comparable or similar in as many respects as possible with respect to confounding or extraneous factors. The idea is to construct groups so that the only difference between the groups is in how much or

whether they experience the programme being implemented. So the current events created the equal effects to all groups of the experiments.

#### 4.6.1.1.2. Test Effect

Taking a test once may affect the subjects' performance when the test is taken again, regardless of any treatment. This is called the testing effect. In designs using a pretest, subjects may do better on the posttest because they have learned subject matter from a pretest, have become familiar with the format of the test and the testing environment, have developed a strategy for doing well on the test, or are less anxious about the test the second time (Anastas, 2012). When an achievement test is used in the research, pretesting is a problem if the same form is used for both the pre-and post-test.

However, in the present study, the OEAT was opted for which served as a pretest and posttest before the treatment and after respectively with equivalent forms. In this case, the testing effect threat can affect the results of the study. To avoid such a problem, the estimated interval between the pretest and posttest was large (15 weeks). Moreover, the researcher tried to change the order of the tasks. So, the threat of test effect could not affect the results of the present research.

#### 4.6.1.1.3. Instrumentation

Instrumentation measures changes in respondent performance that cannot be credited to the treatment or intervention. It occurs when the measuring device is faulty ( Ary et al., 2013). "Problems of consistency in measuring the dependent variable are most likely to occur when the measuring instrument is a human observer" ( Jackson , 2014, p. 183). For example, observers get bored and record data less accurately after two hours then they did at the beginning of the observation. Respondents experience fatigue when completing long surveys, so questions at the end are less accurate than questions near the beginnings (Anastas, 2012).

If the measures taken during the study are not taken consistently, then any change in the dependent variable may be due to these measurement changes and not to the independent variable. In this study, the researcher has had a control group of equivalent subjects which would help to identify this confound. Moreover, only one pre test/post-test which is the OEAT was administered and measured the same way simultaneously at the begining and at the end of the experiment. The form of this test was retained alike and consistent. So this variable could be controlled.

#### 4.6.1.1.4. Regression

According to (Jacoby, 1997), statistical regression or regression toward the mean refers to the tendency for extreme scores on any measurement. Regression may be defined as some respondents performing well on pretests and poorly on posttest, or vice versa, merely by chance. This widespread performance for some respondents may have no explanation other than chance. In the present study, the researcher selected the intact groups for the experiment of the study and tried to control this variable.

#### 4.6.1.1.5. Selection Bias

Selection is a threat when there are important differences between the experimental and control groups even before the experiment begins (McMillan, 1996). Selection bias is most likely to occur when the researcher cannot assign subjects randomly but must use intact groups (quasi-experiment). An intact group is a preexisting group such as a class or a group set up independently of the planned experiment (Ary et al., 2013).

A selection bias is a nonrandom factor that influences the selection of subjects into the experimental or the control group. As a result, the groups may have different characteristics that affect the dependent variable. If they are not equivalent before the study, we cannot know whether any difference observed later is due to the treatment or to the pre-treatment difference (Jackson , 2014).

In the present study, a quasi-experimental design was used. Groups were selected by purposive sampling technique thus the groups were equalized indirectly. Moreover if the groups were different in personal variables e.g., College Academic Student Self Efficacy, Students Study Habit, Student Self-concept, in this case, using proper statistical technique which is the analysis of covariance (ANCOVA) was opted for in order to statistically control the effect of these variables (covariates). Moreover the Placement Test was used before the as well as the pretest scores were obtained to ensure that the groups (EG1, EG2, EG3, and CG4) have the same level before the treatment.

#### 4.6.1.1.6. Experimental Mortality (Attrition)

Experimental mortality (attrition) refers to the loss of participants during the course of an experiment. The experimental mortality threat occurs when there is differential loss of participants from the comparison groups. This differential loss may result in differences on the out-come measure even in the absence of treatment. If several of the lowest scorers on a pre-test gradually drop out of the experimental group, the remaining subjects will have a higher mean performance on the final measure because the lowest-scoring subjects are underrepresented when the posttest is administered (Reynolds & West, 1988).

Attrition is not usually a serious threat unless the study goes on for a long time or unless the treatment is so demanding that it results in low-performing participants dropping out (Jackson , 2014). A researcher should monitor attrition and try to make sure that it is due to chance factors and not to characteristics of the participants and/ or the experiment. In the present study, the ratio of drop outs of subjects was zero. So, this variable was controlled automatically (Reynolds & West, 1988).

#### 4.6.1.1.7. Experimenter Effect

Experimenter effect refers to unintentional effects that the researcher has on the study. Personal characteristics of the researcher, such as gender, race, age, and position, can

affect the performance of subjects. Sometimes the actual implementation of the experiment inadvertently gives the experimental group an unplanned advantage over the control group. The preferences and expectancies on the part of the experimenter may be unconsciously transmitted to subjects in a way that affects their behavior (Bosman & Van Winden, 2002).

This bias effect does not result from any deliberate action on the part of the experimenter to alter data or to get the experiment to result a certain way. Instead, the effect comes from subtle, non-verbal cues of which the experimenter may not be aware but that can be detected by the participants, thus influencing their behavior (Bosman & Van Winden, 2002).

The best way to reduce experimenter effect is to standardize all procedures or to let other trained individuals (rather than the investigator) work directly with the participants in the study. However, in the present study; for many administrative reasons, the researcher have had to work directly with the experimental groups and tried to conduct the experiment without creating this type of experimenter's bias.

#### 4.6.1.1.8. The Hawthorne Effect (Subject Effect)

The Hawthorne effect is perhaps the most challenging threat to internal validity for researchers to control. Participants' attitudes developed in response to the research situation called subject effects can be a threat to internal validity. Participants may try to impress the experimenter or respond as they think they are supposed to respond. Having been chosen for an experiment and treated in a special way influence participants' behaviour (Sanderson, 2009). In the present study, the researcher has tried her best to overcome this threat by creating the proper environment to remove this type of effect. Still it may have an effect on the experiment.

#### 4.6.1.1.9. Diffusion

When subjects in a study are in close proximity to one another, a potential threat to internal validity is diffusion of treatment-observed changes in the behaviors of subjects may be due to information received from other subjects (Jackson, 2012, p. 233). To control this confound, the researcher has stressed to the participants the importance of not discussing the experiment with anyone until it has ended. However, testing the participants in this study was not withing a short time span, so that participants might have time to communicate with one another. So, this threat might have an effect on this study.

#### 4.6.1.1.10. John Henry Effect

John Henry was a "worker who outperformed a machine under an experimental setting because he was aware that his performance was compared with that of a machine" (Holosko & Thyer, 2011, p. 61). In research methodology, when the subjects of the controlled group realize that they are in competition with experimental group, they perform even better than their capacity level. This creates the effect on the result of an experiment. In the present study, the researcher took care and asked the teacher of the control group to not give any information about experimental group.

### 4.6.2. External Validity

According to Turner and Coburn (2012), external validity refers to the extent or the degree of generalization of the results of experiment across the people, settings and time. With respect to test units being the individuals, external validity refers to the extent to which the results such as the effect of independent variable can be generalized.

External validity indicates the design to be powerful enough to generalize the results of experiment. External validity refers to clarify the representativeness of sample, the extent of application of results of experiment and the variety of instruction, treatment and reactive effects. The following are the threats to external validity of experiment.

#### 4.6.2.1. Threats to Internal Validity

According to Taylor (2013), threats to external validity compromise our confidence in stating whether the study's results are applicable to other groups. Generally speaking, external validity refers to the extent to which the results of a given study can be generalized. All of the following are a potential source of confounds:

##### 4.6.2.1.1. Testing Interaction

The interactive testing effect is the change in subjects due to the interaction of pre-test with treatment apart of the treatment effect during the process of measurement ( Jaccard & Turrisi , 2003). It means that the prior measurement affects the response to the post-test. The use of pre-test at the beginning of a study may sensitize individuals by making them aware of concealed purpose of the researcher and may serve as stimulus to change. In this study, pre-test was given before the experiment, so to minimize this threat; an interval of fifteen weeks between the pre-test and the post-test was left , so the participants may forget the main part of the test.

##### 4.6.2.1.2. Interactive Effects of Selection and Treatment

Randomization should be followed because it is likely to avoid many threats to both internal and external validity. In many cases, researchers fail to apply randomization especially during sampling rather; they select the intact groups or the carefully selected groups. The sample thus fails to be the representative of the population and has the threat of external validity of experiment (Jha, 2014).

Due to the lack of randomization, the generalization of sample results on population is questionable. The interactive effect of selection and treatment is the effect of some selection factor of intact groups that interacts with the treatment, which could not have been the case if randomization was applied to select the subjects as sample for the experiment. So, this threat could have an effect on this study.

#### 4.6.2.1.3. Multi-treatment Interference Effect

It refers to carry over effect between the treatments posed by the multiple treatments at a regular interval of time one after the other that is likely to affect the results of the experiment which could not have been the case if the multiple treatment was not applied (Gast & Ledford, 2014). This threat makes it difficult to generalize the results to a single treatment. Multi treatment interference effect infers and clarifies multi-treatment interaction effect.

When we use ($X_1$, $X_2$, $X_3$....) serially or one by one (series) on that same subjects, the first treatment $X_1$ effects $X_2$ and $X_3$ so on. In the present study only one treatment was applied to the experimental group, the sample was consisted of four different groups for the implementation of four different treatments. So, multiple treatment inference factors were not there.

#### 4.6.2.1.4. Demand Characteristics

Subjects are often provided with cues to the anticipated results of a study. When asked a series of questions about depression, for instance, subjects may become wise to the hypothesis that certain treatments work better in treating mental illness (Jha, 2014). When subjects become wise to anticipated results (often called a placebo effect), they can begin to exhibit performance that they believe is expected of them (Jha, 2014). In this study, it was fundamental to make sure that participants were not aware of anticipated outcomes. Accordingly, it is hoped that this procedure could reduce the possibility of this threat.

### 4.7. Learning Style Based Instructional Programme

Previously in chapter 2, many learning style models have been discussed. The main three-fundamental types of learning style were found in all learning style models, which are visual learning style, auditory leaning style and kinaesthetic learning style. Hence, in the present study, leaning style (VAK) was used as the criterion to classify the students to provide them

with an appropriate classroom instructional experience. According to that, and according to the prefered learning style of students, three types of instructional programmes were developed.

Many instructional strategies were found in the literature and some of them were selected to develop the appropriate instructional programmes. Five visual instructional strategies, five auditory instructional strategies and five kinaesthetic instructional strategies were used according to the teaching points, content, the level of students and the objectives stated in each unit.

The researcher selected and used four oral expression units taken from the the BBC learning English Programme under the topic of 'How to'. The four units selected were: *Discuss, *Instructions, explanations and advice, *Complaints, apologies and excuses, and *Good news, bad news, to be taught for first year students of English. Then, a Visual Instructional Programme (VIP), Auditory Instructional Programme (AIP) and Kinaesthetic Instructional Programme (KIP) were developed. By these programmes, a treatment was given to the three experimental groups.

The researcher used instructional strategies in Visual Instructional Programme like Demonstration Method, Drama Technique, Highlighter Activity, Video Technique, and Mind Mapping. Then, the researcher used instructional strategies in Auditory Instructional Programme like; Lecture Method, Group Discussion Method, Tape Recording Technique, Brainstorming Activity, and Verbal Games. Finally, the researcher used instructional strategies in Kinaesthetic Instructional Programme like Games Activity, Cut and Paste Task Activity, Role Play, Group Work Activity and Puzzles. The details of the development of these programmes are given in chapter five.

The structure of whole LSBIP is given in Table 4.17

**Table 4.17**
**Learning Style Based Instructional Programme**

| The unit | Topic | Strategies used for each group | | |
|---|---|---|---|---|
| | | Strategies used for Visual Students Group (VIP) | Strategies used for Auditory Students Group (AIP) | Strategies used for Kinaesthetic Students Group (KIP) |
| 1. Discuss | - make suggestions | -Highlighter activity- drama technique-video technique- demonstration method- mind map activity | -Lecture method- group discussion method- tape recording-technique- | Role play-group work activity |
| | - disagree with people | -demonstration- highlighter activity- drama technique | Lecture method- discussion method- tape recording technique- verbal game- brainstorming activity | Role play-cut and paste activity- group work activity |
| | - express uncertainty | drama-mind mapping- highlighter activity- demonstration | Lecture method- discussion method- tape recording technique- verbal ame brainstorming activity | Group work activity- cut and paste activity- puzzle |
| | - take offence | demonstration-Drama technique-highlighter activity | Lecture method- discussion method- tape recording technique brainstorming activity | Cut and paste activity- body game activity- group work activity |
| 2. Instructions, explanations and advice | -asking for and giving directions | Demonstration- video technique -mind mapping- | Lecture method- discussion method- tape recording | Role play-game- group work activity- puzzle |

| | | | | |
|---|---|---|---|---|
| | | highlighter activity | technique brainstorming activity | |
| | -showing understanding | Demonstration-drama-highlighter activity-video technique | Lecture method-discussion method-tape recording technique- verbal game- brainstorming activity | Role play-game-group work activity |
| | -making recommendations | Demonstration- video technique -drama-highlighter activity-mind map | Lecture method-discussion method-tape recording technique | Role play-cut and paste activity-group work activity |
| | -Describing a process | Demonstration-highlighter activity-video technique -mind map | Lecture method-discussion method-tape recording technique- verbal game- brainstorming activity | Group work activity-puzzle |
| 3. Complaints, apologies and excuses | - Making a complaint | Demonstration-drama technique- highlighrt activity | Lecture method-discussion method-tape recording technique brainstorming activity | Role play-cut and paste activity-group work activity |
| | - Saying sorry | Demonstration-highlighter activity-drama technique- video technique | Lecture method-discussion method-tape recording technique brainstorming activity | Group work activity-Role play |
| | - Accepting an | Demonstration-drama | Lecture method-discussion method- | Role play-group work activity- |

| | | | | |
|---|---|---|---|---|
| | apology | technique- highlighter activity | tape recording technique brainstorming activity | puzzle-game |
| 4. Good news, bad news | -Congratulating someone on good news | video technique-drama-dmonstration-highlighter activity-mind map | Lecture method-discussion method-tape recording technique- verbal game- brainstorming activity | Role play- group work activity-body game |
| | -Responding to someone's bad news | Demonstration method-highlighter activity- | Lecture method-discussion method-tape recording technique- verbal game- brainstorming activity | Role play- group work activity- puzzle (game) |
| | -Giving good news | Demonstration method-drama-highlighter activity | Lecture method-discussion method-tape recording technique- verbal game- brainstorming activity | Group work activity-role play- body game activity |
| | -Giving bad news | Demonstration method-drama technique-highlighter activity | Lecture method-discussion method-tape recording technique- verbal game- brainstorming activity | Group work activity-role play activity-body game activity |

### 4.8. Research Tools

In the present study, the researcher used seven research tools to collect the needed data from the sample, which were:

- Placement Test.

- College Academic Self Efficacy Scale (CASES)
- Study Habit Inventory (SHI)
- Academic Self Conept Scale (ASCS)
- Learning Style Inventory (VAK)
- Pre/Post Oral Expression Achievement Test (OEAT)
- User's Satisfaction Scale.

### 4.8.1. Placement Test

Placement tests have the purpose of assigning students a specific level of language ability within the curriculum they wish to be incorporated to (Hughes, 2003; Harmer, 2007; Brown, 1994). It is common for book editorials to include placement tests as part of their textbook pack. However, "tests should be created according to institution's specific needs (Hughes, 2003). In other words, testing is a feature of language teaching that may best work if it is set to fulfill a specific context and the test taker needs" (Brown, 1994, p.123). According to the Educational Testing Service (2007), placement tests have many advantages such as increased student academic achivement with their incorporation to their corresponding proficiency level, reduced student and faculty frustration and increased student retention. Specific test principles should be cared for to assure test success such as validity, reliability and practicality (Brown, 1994).

In this study, the Placement Test was adopted from "Challenges Tests" of Patricia Mugglestone, Pearson edition (2006), and used in order to help the researcher place students at the right level of. The test is twofold: An exam booklet (Appendix H) that contains one hundred multiple choice questions that cover a variety and wide range of language aspects as to grammatical and lexical structures alongside with an answer sheet (Appendix I) in which the participants report their answers.

In the current study, the Placement Test aimed at pointing the participants' level of proficiency in English so that to design an adaquate intervention for them and most importantly to ascertain that the groups are homogeneous. (Homogeneous groups, by definition, are consisted of participants who share similar characteristics or attitudes though not all of the similarities may be present) (Brown, 1994).

Moreover, the rationale behind conducting a placement test was to ascertain that the content of the selected lessons and topics is overlapping with the students' level which ranges between intermediate, upper-intermediate and pre-intermediate levels. Actually, an overwhelming proportion equals to (85.2%) stands for those students who achieved an intermediate level. Accordingly, the lessons and acitivities that were tailored comply with the students at an intermediate level. The results of the Placement test were as follow: Beginner (0%), Pre-intermediate (8.3%), Intermediate (85.2%), Upper –intermediate (6.5%), and Advanced (0%).

The administration was in a formal settlement at the Department of English Language and Literature and without prior pilot testing since it is reckoned as an international recognized test. As a matter of fact, the students of the experimental groups and control group were invited to take the test. Prior to the administration of the test, the purpose, duration and response techniques along with the grading criteria were explained to the respondents. Also, they were warned that they might not answer all the questions. The researcher submitted both the exam booklets and the answer sheets to the respondents and asked them to answer the questions sheet by circling the appropriate option. Between forty and forty-five minutes, which represent the legal and full time of the test, were allocated to them so that they answer appropriately and objectively and to ensure a more accurate picture of their knowledge. The results of this diagnostic test were made accessible to the respondents. The conditions of the test administration were by no means arbitrary. In a nutshell, the researcher respected all the

guidelines presented by the test designer including the explanation of the purpose of the test to students prior to administration, duration, seating arrangement, techniques of responding and grading criteria.

- **Placement Test Validity**

This test is considered as valid and reliable since it is international and widely recognized by constitutions around the world. It is prepared by experts besides being tested and used beforehand. In fact, it covers a variety of language aspects, and it effectively examines two main subsequent parts of the speaking fluency which is represented in vocabulary and grammar.

### 4.8.2. College Academic Self Efficacy Scale

Bandura (1977) defined self-efficacy as "the conviction that one can successfully execute the behaviors required to produce the outcome" (p. 79). Self-efficacy refers to beliefs about one's capacity to organize and implement actions to overcome obstacles (Bandura, 1986). While the term self-efficacy refers to more generalized beliefs about ones' abilities, academic self-efficacy refers to individuals' convictions that they can successfully perform school related tasks at designated levels. As defined by Lent et al., (1997), academic self-efficacy refers to the level of confidence that a student feels with regard to his or her ability to successfully complete academic tasks or reach academic milestones. Bong and Skaalvik (2003) noted that these beliefs specifically are directed towards academic domains. Academic self-efficacy beliefs are thus distinct from nonacademic, social, emotional, or physical domains associated with general self-efficacy beliefs.

Bandura (1997) claimed that academic achievement is heavily affected by feelings of self-efficacy. Generally, research has shown that higher levels of self-efficacy correlate positively with increased academic achievement (Chemers, Hu & Garcia, 2001; Lent, Brown, & Larkin, 1984). Researchers found that students with higher levels of academic self-efficacy

achieved higher grades and persisted in their academic major longer than those with lower perceived academic self-efficacy (Lent et al., 1984).

To assess CASE among the participants of this study, the College Academic Self-Efficacy Scale (CASES), created by Owen and Froman (1988), was used. The scale was developed using three university faculty members who devised a pool of what they considered to be routine academic behaviors for college students. After being reviewed by seven graduate teaching assistants, the pool was revised and finally pilot tested by 93 undergraduate students majoring in education and psychology. After the pilot test, the instrument was revised once more and now consists of 33 items without hierarchical composition, with each question beginning with "how much confidence do you have about performing each behavior listed below?" Participants were asked to respond using a 5-point Likert-type scale ranging from 1, or "very little" to 5, or "quite a lot."

- **Reliability for the CASES Instrument**

The reliability of the CASES was established by using test-retest methods. The scale was administered twice to 88 psychology students over an eightweek period. The internal consistency reliability was measured using Cronbach's alpha. The two testing sessions yielded alphas of .90 and .92 respectively which indicates the high reliability of this instrument.

- **Validity for the CASES Instrument**

The validity of the CASES instrument was assessed in several ways. Enjoyment of task and frequency of task, both suggested by self-efficacy theory (Owen & Froman, 1988), were used to establish concurrent validity. In two separate studies, students were asked to rate frequency and enjoyment for the 33 items in the CASES instrument. The studies were classified as incremental validity research and grade point averages were 46 placed into the

regression equation followed by frequency or enjoyment, depending on which study was being analyzed (Owen & Froman, 1988).

- To establish factorial validity, a new sample of 122 students were asked to rate the difficulty of performing tasks highlighted in the 33-item CASES instrument. Researchers analyzed responses and determined that items students found relatively easy to accomplish were those in which students most likely had more experience; those items they found most difficult to accomplish were most likely the result of having less experience or success with the task. Owen and Froman (1988) concludedd that the analysis was in going a side with Bandura's (1996) self-efficacy theory.

Owen and Froman's (1988) College Academic Self-Efficacy Scale was selected for this study because it was different from most academic self-efficacy instruments. CASES was unique in that the instrument investigates feelings of academic self-efficacy as a whole as opposed to teasing out individual constructs or areas of academic self-efficacy such as English, mathematics, and reading (Zimmerman et al., 1992). Owen and Froman (1988) also believed that CASES can provide specific diagnostic findings that can influence holistic change to enhance overall Academic Self Efficacy.

The College Academic Self-Efficacy Scale (CASES) was opted for ir order to ask participants how confident they were in their ability to complete the list of behaviors associated with college success. The instrument included questions about how confident a student is in his or her ability to ask questions in large or small groups, take tests, study appropriately, run for student government, and write a high quality paper among others. This instrument was composed of thirty-three questions and used a Likert-type scale with a range of A (or 5 = Quite a lot of confidence), B (or 4 = A lot of confidence), C (or 3 = neutral), D (or 2 = A little confidence) and E (or 1 = very little confidence). A copy of the CASES is given in (Appendix J).

### 4.8.3. Study Habit Inventory

In this study, study habits of students in both the experimental and the general group, were examined using adapted version of the Study Habits Inventory from C. Gilbert Wrenn. The original inventory was developed in 1933 and the revised in 1941. The inventory focused on note taking, concentration, reading and time management skills (Wrenn, Larsen, & Effectively, 1974).

The adapted SH inventory used in the study looked at the overall level of study habits among the participants based on poor or good study habits. It is thought there are 32 items in the inventory. All these are used to frame statements depicting good as well as bad habits. The participant has to respond to each item by selecting one of the five alternative responses given against each item in the inventory. Sufficient time was given to the students to be able to respond properly.

- **The Reliability of Inventory**

The reliability of this inventory is 0.73 by Cronbach alpha technique to ensure that it is consistent in measuring what it is designed to measure. Test-retest method and 0.89 and by test-retest method with an interval of 4 weeks was 0.88, while, criterion validity is 0.93 (Garner-O'Neale, 2013). The reasons for selecting this study habit inventory are as below.

- It was easy to administer.
- It was easily available.
- It measures only study habit.
- Very easy for student to give response.
- No need any special training for administration.
- The scoring procedure is easy and accurate.

A copy of the SHI is given in (Appendix K).

### 4.8.4. Academic Self Concept Scale

While dealing with this covariate, the reader might overlap its meaning with the previous covariate which is self efficacy. Although considerable overlap may exist with regard to what has been investigated in past research, Bong and Skaalvik (2003) noted that the construct of academic self-efficacy is distinct from the construct of the academic self-concept. The academic self-concept is a more composite view and refers to generalized knowledge and perceptions about the self in achievement situations. In contrast, academic self-efficacy specifically refers to the convictions that academic tasks can be performed (Bong & Skaalvik, 2003). Although one is more general in scope, both are believed to positively affect academic achievement and outcomes through increased engagement, goal-setting, persistence, and strategy use (Ferla, Valcke, & Cai, 2009).

In this study, the ASCS (Reynolds et al., 1980) was used to measure academic self-concept of the participants. The instrument consists of 40 Likert-scale items regarding an individual's academic self-concept and is keyed in a positive direction extending from (1) strongly disagree to (2) disagree to (3) agree to (4) strongly agree. Within the ASCS, the seven constructs of academic self-concept include grade and effort dimension, study habits/organization self-perceptions, peer evaluation of academic ability, self-confidence in academics, satisfaction with school, self-doubt about ability, and self-evaluation with external standards.

Reynolds et al., (1980) formulated the seven constructs of academic self-concept and the ASCS has been utilized in repeated studies on various college student populations (Cokley, 2000; Lent et al., 1998; Reynolds, 1988). Reynolds (1988) elected to measure academic achievement by GPA stating, "Academic achievement in the form of college grades is viewed as a more salient value and attribute by which a student may judge him or herself" (p. 225).

- **The ASCS Instrument Reliability**

This instrument has been found to have an estimated reliability (internal consistency) of 0.91 (Reynolds et al., 1980; Reynolds, 1988). Reynolds et al., (1980) and Smith et al. (1986) reported correlations between ASCS and students' GPA of 0.40 ($p<0.001$). Cokley (2000) reported the test-retest reliability to be 0.88 and the Cronbach's alpha for the entire scale was reported at 0.92. The convergent validity, after correction for attenuation is reported to be 0.44 and the discriminant validity with the Marlow-Crowne Social Desirability Scale is reported to be 0.17 (Reynolds, 1988).

Reynolds et al., (1980) performed studies on undergraduate students using the ASCS along with other self-concept measurements that established a correlation between academic self-concept and academic achievement. The results of the study concluded that academic self-concept related to the overall academic achievement of their participants and the measurement of academic self-concept may be useful in forecasting aggregate academic performance (Lent et al., 1997). These data lend support to the reliability and validity of the use of the ASCS as a measurement of academic self-concept (Reynolds et al., 1980).

Acopy of ASCS is given in (Appendix L).

### 4.8.5. Learning Style Inventory

The simplest and most common way of identifying different learning styles is based on the senses is commonly called the VAK model, this framework describes learners as visual, auditory, or kinaesthetic. In order to identify the students' predominant learning style and to collect the needed data for this study, a VAK learning style questionnaire developed by Victoria Chislett and Alan Chapman (2005) has been used. This instrument suggests that preferred learning style is predetermined by a person's dominant use of one of the three sensory receivers (Duphaly, 2014, as cited in Alvinia & Ebrahimpour, 2012).

This VAK questionnaire consists of 30 multiple choice questions to which participants were asked to answer with A, B, or C. option ( A represents Visual learning style, option B represents Auditory learning style, and option C represents Kinaesthetic learning style). For the thirty items, the learning style most often selected determines the learning style label assigned to that student. Participants were given enough time to provide their responses.

- **Validity of the Tool**

The validity of the instrument was established through the suggestions and comments of some teachers of different courses. They were asked respectively to review the questionnaire for clarity and adequacy in order to achieve the present study objective. These experts were asked to review the questionnaire for content clarity, relevancy and adequacy. Their responses indicated that no changes needed be done.

- **Reliability of the Tool**

Reliability of the questionnaire was determined through the use of test-retest approach. Pearson Correlation Coefficients were computed. The reliability of Visual learning style was (0.810), Auditory learning style (0.798), and Kinaesthetic learning style (0.762). Acopy of VAK is given in (Appendix M).

### 4.8.6. Pre/post Oral Expression Achievement Test

Oral expression refers to the ability to produce spoken language (Rathvon, 2004). In this study, an achievement test was used as a research instrument to collect the required data. It was used as a pretest and a posttest to measure the participants' performance in oral expression achievement before and after the treatment. All of the participants chosen for this study were all of the same level of proficiency (according to the results of the Placement Test), which makes the test results more reliable. It would be impossible to work with students at various levels of proficiency because different levels of proficiency would require different tests and tasks to arrive at reliable results (Tavil, 2010).

To reach reliable and valid results, the pre and the post test were the same communicative test. As Chastain (1988) mentions that "a communicative test aims at developing valid, reliable and practical means of evaluating students' ability to communicate" (p. 393). Students were expected to demonstrate the ability to perform skills similar to those they had performed in class.

In the current study, the pre/post OEAT contained four tasks and each task tackled five domains ( comprehension, grammar, vocabulary, fluency of speech, and pronunciation). The details for the development of the OEAT are presented here. To prepare the OEAT, the the following points were needed for:

1. Stating the Objectives of the Test
2. Content Analysis
3. Description of the Test
4. Techniques for Conducting the Test
5. Teachers' Opinions on the Test
6. Piloting the Test
7. Evaluation Criteria of the Test

#### 4.8.6.1. Objectives of the Test

To test and measure participants' academic achievement in oral language proficiency, researchers would have opted for standard tests like IELTS tests for the reliability and validity issues. However, in this study, unfortunately it was not possible to find out a standard test that could measure the objectives of the teaching programme and the language functions within all the domains (listening comprehension, grammar, vocabulary, fluency of speech, and pronunciation). Hence**,** a pre/ post OEAT was developed, tested and, administered by the researcher.

This OEAT served as a pre-test that was used prior to the programme implementation to make sure that students of both groups (three experimental groups and one control group) were at the same oral expression profeciency level before starting the experiment, and therefore the progress achieved by the experimental groups could be attributed to the programme they had been exposed to.

Moreover, the same OEAT was used as a post-test; it was used to investigate the effect of the proposed LSBIP in developing the selected domains. This test has two objectives; the first one which was to assess the oral language proficiency level of students in a pre-planned communicative context, as well as testing listening comprehension through question/answer based tasks, and the second one was to allow the participants to expand their use of language, and engage in oral communication on a familiar topic covered by the class syllabus.

#### 4.8.6.2. Content Analysis

Four units was analysed into sub-points. The analysis of the units is given in Table 4.18 to Table 4.21.

**Table 4.18**

**Content Analysis of Unit 1: Discuss**

| Content Analysis of Unit: 1 **Discuss** | **Content Analysis** |
|---|---|
| Lesson 1<br>Lesson 2<br>Lesson 3<br>Lesson 4 | - Make suggestions<br>- Disagree with people<br>- Express uncertainty<br>- Take offence |

**Table 4.19**

**Content Analysis of Unit 2: Instructions, Explanations and Advice**

| Content Analysis of Unit: 2 **Instructions, explanations and advice** | **Content Analysis** |
|---|---|
| Lesson 1<br>Lesson 2<br>Lesson 3<br>Lesson 4 | - Asking for and giving directions<br>- Showing understanding when you are listening to explanations<br>- Making recommendations<br>- Describing a process |

**Table 4.20**

**Content Analysis of Unit 3: Complaints, Apologies and Excuses**

| Content Analysis of Unit: 3 **Complaints, apologies and excuses** | **Content Analysis** |
|---|---|
| Lesson 1<br>Lesson 2<br>Lesson 3 | - Making a complaint<br>- Saying sorry<br>- Accepting an apology |

**Table 4.21**

**Content Analysis of Unit 4: Good News, Bad News**

| Content Analysis of Unit: 4 **Good news, bad news** | **Content Analysis** |
|---|---|
| Lesson 1<br>Lesson 2<br>Lesson 3<br>Lesson 4 | - Congratulating someone on good news<br>- Responding to someone's bad news<br>- Giving good news<br>- Giving bad news |

#### 4.8.6.3. Description of the Test

The OEAT was achieved through including a variety of oral exchanges in the test (semi-structured conversations, interviews, arguments, information gap tasks and role-plays) reflecting the features of the target-use situations as much as possible. Thus, the test elicited both long and short turns and the participants got opportunities to speak in different contexts reflecting the different language functions taught in the LSBIP. The final version of the pre /post OEAT included a warm- up stage and four sections of interactional tasks corresponding to those units taught during the Programme. The OEAT stages were as follow:

Stage one or the warm-up stage dealt with an introduction and a brief interview; the researcher has introduced herself and asked the participant to introduce himself/ herself and confirm his /her identity. The researcher had to create a friendly atmosphere and eliciting expressions of greeting (hello, how are you, how is everything and so on). This was created through some compliments paid by the examiner (the researcher) as well as through few easy questions focusing on invoking "small talks". This stage was supposed to help the students relax, talk naturally. This stage has taken between 2 and 3 minutes and it was not scored.

Stage two or the main interview has involved a set of tasks/ sections or scenarios aiming at triggering the participants to demonstrate their performance in different situations. Each task or section represented a specific language function that had to be performed. The four sections or tasks were as follow:

The first task/section represents “Unit 1” which focused on the language the students can identify when they are having a discussion with people. A number of functions were measured in this part, such as *make suggestions *disagree with people *express uncertainty *take offence. Thus, in this section, all skills measured were closely related to expressing discussion.

The second section represents “Unit 2” which focused on the language the students can identify when they are having instructions, explanations or advice. So far, they include: *asking for and giving directions * showing understanding when you are listening to explanations *making recommendations *describing a process. Giving instructions included a task that required the student "to ask for and give advice" to someone. Concerning asking for and giving directions, the student was asked to look at a city map and give directions to the researcher from one place to another. The interaction between the researcher and the participant took the form of a role play with the researcher assuming the role of a stranger. Then, roles were shifted with the participant taking the role of the stranger and asking for directions, asking for clarification and thanking the researcher for help.

The third section elicited the language students might use to make a complaint and excuses. This included *Making a complaint *Saying sorry *Accepting an apology. It required the participants to respond appropriately to a set of situations. It took the form of a semi-structured rather than free role-play task.

The fourth section elicited the language students can use when they want to give or react to news. Including *Congratulating someone on good news *Responding to someone's bad news *Giving good news *Giving bad news. The prticipants listened to the examiner, answer the corresponding questions. Then the examiner provided cards to the participants representing the situations discussed, and then the examiner asked the participant to respond appropriately.

The interview ended up with a brief winding down phase aiming at putting the student at ease again and encouraging him/her to use expressions related to leavetaking (bye bye, nice to meet you, it was a pleasure talking to you…etc.). Each section and the accompanied language functions were determined procedurally before administering the OEAT. This facilitated the

selection of tasks that reflect the content of the lessons taught during the Programme as far as possible. The functions measured in the test are summarised in the table 4.22

**Table 4.22**

**Language Functions Measured throughout the OEA Test Tasks**

| Sections | Functions Measured |
|---|---|
| Section (1)<br>Discuss | Make suggestions- disagree with people- express uncertainty- take offence. |
| Section (2)<br>Instructions, explanation and advice | Asking for and giving directions, showing understanding when you are listening to explanations- making recommendations- describing a process |
| Section (3)<br>Complaints, apologies and excuses | Making a complaint- saying sorry- accepting an apology |
| Section (4)<br>Good news, bad news | Congratulating someone on good news- responding to someone's bad news- giving good news- giving bad news |

#### 4.8.6.4. Techniques for Conducting the Test

The OEAT included four tasks (scenarios) that were conducted throughout an interview. The interaction was between the researcher and the participant rather than student/student interaction because requiring students to interact together can have many obstacles and resulting from the unpredictability of the interaction, and the differences in the proficiency level of the participants.

- The researcher provided the students with four different situations (daily life situations) to involve participants in the conversations tackling all the language functions from each unit taught during the LSBIP. Then the participant had to answer the provided questions on these conversations. The researcher was very flexible and accepted to repeat the questions in case the participant asked for.

- On one hand, the interview was conducted following a pre-determined structure. On the other hand, a great degree of freedom was allowed for both the researcher and the participants. All participants had the freedom to answer the questions and developing their opinions. Once the language functions of one section had been achieved, the researcher moved on to the next unit.
- In the earlier stage of the interview, the researcher had to provide the participants with help by filling pauses, and perhaps by providing words to the participants were searching for. The questions could be repeated once if the student wanted to, but without making any changes.
- The researcher used some techniques (calming down, speaking friendly, using probing questions and yes/no questions for ethical considerations) to extract answers from the participants especially from those who were timid and shy. During conducting the OEAT, the researcher took into consideration the avoidance of the following points:
    - ❖ Correcting the participant.
    - ❖ Interrupting the participant.
    - ❖ Imposing examiner's own viewpoint.
    - ❖ Using the examiner's teaching style.
    - ❖ Giving negative feedback.

#### 4.8.6.5. Teachers' Opinions on the Test

After developing the pre/post OEAT, it was given to many EFL teachers. They were requested to judge the test face validity in terms of clarity, instruction and suitability for the students' level and requested to provide their opinions as well as considering the following points:

1. Were the questions suitable according to the units' content?
2. Was the OEAT difficult?

3. Was the OEAT properly developed and structured?

4. Did the OEAT properly measure what it was supposed to be measured ( the five domains stated earlier).

The chosen EFL teachers were asked to write down suggestions and comments if they had any. All of them indicated that the test guidelines were clear and appropriate. Yet, they suggested some modifications and noticed some errors which the researcher had to correct. Finally, they indicated that the test appeared to be a valid measure of EFL oral language proficiency.

Accordingly, the OEAT proved to be mostly a valid one, as it measured what it was supposed to be measured in most cases. However, the following remarks were highlighted:

- The OEAT was long for the participants. Therefore, it was suggested that some tasks could be omitted and keeping only those tasks that reflect closely the situations taught in the Programme.
- At the beginning of editing the OEAT, listening comprehension was supposed to be tested through four tasks for each unit in order to test all language functions taught whithin one unit. However, the jury members of the teachers sought to test listening comprehension of one language function during the interview within the exchanges and thereby the Test would not be so long and the participants would not be tired and bored.

All the previous jury's suggestions and recommendations were carefully taken into consideration. Hence, the final version of the test consisted of four tasks corresponding to the four units taught in the LSBIP. Each task tackled the language functions taught within each teaching unit. The OEAT measured the five domains that should be measured when testing oral language in each section so that each domain was measured four times.

#### 4.8.6.6. Piloting the Test

According to Connelly (2008), existing literature suggests that a pilot testing sample should be 10% of the sample projected for the larger parent study. However, Isaac and Michael (1995) suggested 10 – 30 participants; Hill (1998) suggested 10 to 30 participants for pilots in survey research; Julious (2005) in the medical field, and Belle (2002) suggested 12; Treece and Treece (1982) suggested 10% of the project sample size. To establish the reliability of the test, it was piloted through its administration, on October, from 5$^{th}$ , till 07$^{th,}$ 2015 (Friday and Saturday were not considered) to a sample of 20 university students other than the sample of the study. The objectives of the piloting of test were:

1. To decide the time limit for final form of the OEAT.
2. To decide the discrimination ability of the OEAT.
3. To see the difficulty felt by student when answering the OEAT.
4. To check the reliability of the OEAT.
5. To explain the administration prodedures of the OEAT.

- **Results of the Pilot Testing**

The pilot testing results revealed that the majority of students obtained low scores with regard to their speaking skills. Moreover, most of them stated that speaking tasks that required them to speak for a long time were more difficult than questions demanding just filling gaps or short answers. This may be due to the fact that students were mostly accustomed to answering such easy questions which do not require a lot of planning or a wide range of linguistic or communicative abilities. In addition, the following results of the pilot testing concluded:

- **Test Time**

It was estimated that a period of 30 to 35 minutes would provide enough time for each participant to complete the test. No one needed an extension of time to complete the test. This time was estimated following this procedure:

$$\frac{\textbf{The time taken by the fastest participant + the time taken by the slowest participant}}{\textbf{2}}$$

$$\frac{\textbf{25 + 35}}{\textbf{2}} = \textbf{30 minutes}$$

Thus, it was decided to allow 30 minutes for test completion by each participant. It was recognized that this would be sufficient to ensure that all the participants had sufficient time to complete the Test. The entire sample of the study is 94 students; 20 participants in EG1, 18 in EG2, 18 EG3, and total 38 in CG4 (15 Visual, 12 Auditory, and 11 Kinaesthetic) in each sub-group. The OEAT took nearly seven hours per day. Since the sample was 94, so the it took six days to complete the Test with all participants.

- **Test Suitability**

It was proved that the OEAT was suitable to the participants and that the tasks included extracted the intended domains. However, through piloting the OEAT, the researcher had to take the following points into consideration:

- Giving more time to the warm up stage to help participants feel at ease and decrease their tension and fear.
- Modifying some words and phrases because they proved to be hard for particiants to understand. Moreover, some questions were omitted to shorten the OEAT and make it more practical for participants to be answered.
- Giving clear instructions and explaining difficult words where necessary.

- **Test Reliability**

A test is regarded reliable when it gives similar results if it is administered twice within similar conditions (Mackey & Gass 2005, p. 128). Reliability of the designed OEAT was measured and computed through:

**1.** Inter-rater Reliability: By using this method, it would be possible to calculate the consistency of the ratings provided by the three raters who scored the test to see how far they agree. This was the method adopted to measure the reliability of oral tests as suggested by Baker (2001). The degree of inter-rater reliability was established by correlating the scores obtained by students from rater "I" with those from rater "II" as well as those from rater "III". It was assessed through correlation coefficients, Cronbach alpha. The following table 4.23 shows the correlation coefficients among individual raters of the pre/post OEAT.

**Table 4.23**

**Correlation Coefficients among Test Raters**

| test | Raters | | |
|---|---|---|---|
| Pre test | I,II | I,III | II,III |
| | 0.87 | 0.80 | 0.86 |
| Post test | 0.90 | 0.86 | 0.87 |

Comparison of the correlation coefficients in the above table to the correlation coefficient extracted from the statistical tables at 0.01 level, it was obvious that the estimated correlation coefficients were statistically significant at 0.01 level. This shows reliability of scoring. Hence, the above table indicated high statistically significant correlations among the three raters.

**2.** Cronbach Coefficient Alpha: This method was used to measure the reliability of the OEAT. The normal range of Cronbach coefficient alpha value is between 0.0 and + 1.0, and the higher values reflect a higher degree of internal consistency. The Cronbach coefficient alpha was calculated for each domain of the test.

**Table 4.24**

**Cronbach's Alpha for each Domain in OEAT**

| Domain | Cronbach's Alpha |
|---|---|
| Listeneing Comprehension | 0.886 |
| Grammar | 0.890 |
| Vocabulary | 0.950 |
| Fluency of Speech | 0.898 |
| Pronunciation | 0.957 |
| Total of the test | 0.969 |

Table 4.24 shows that the values of Cronbach Alpha for each domain of the OEAT. The results ensure the reliability of each doamin. Cronbach Alpha equals 0.969 for the entire OEAT, which indicates an excellent reliability of the entire Test. Thereby, it can be said that that the OEAT proved to be valid, reliable, and ready for distribution for the sample of the study.

- **Test Administration**

After estimating the suitable time for taking the OEAT based on the results of piloting, the OEAT was administered as a pre-test to both the control and experimental groups in relatively the same conditions. The test required a quiet room to conduct the interview. Participants were examined individually and their responses were recorded with a high quality tape recorder. Moreover, a booklet was handed to each participant before the test. The booklet included the topics the examiner had to ask the particpant about, the role play cards they were asked to act, the cards and pictures they had to speak about and the map they were asked to use to give and ask for directions. Although the test conditions were almost good, some obstacles were faced as follows:

- Sometimes it was hard to find a quiet place to administer the OEAT.

- Difficulties were encountered in taking participants from their classes to administer the OEAT to them.
- The time taken to administer the OEAT was too long (six days).
- Every day the examiner administered the OEAT to only 13 or 14 participants.

(The details of the Pre/Post OEAT administration and time schedule is illustrated in table 4.28).

- **Final Form of the Test**

Taking into account the remarks and comments stated above, and after incorporating the suggestions and the corresponding modifications on OEAT from teachers and piloting its preliminary form, the final form was reached. The OAET final form is presented in Appendix N.

#### 4.8.6.7. Evaluating Criteria of the Test

Evaluation should be conducted when particiapnts engage in their conversations. Revision of the examiner's evaluation can be conducted, if necessary, during the question/answer phase of the interview. For each point of evaluation, participants are graded on a Likert-type scale (1 being poor, through to 5 being excellent).

The comments section of the interview evaluation sheet can be used to record points of feedback for each participant. According to Brown (2001, p. 405-407), " The scoring rubrics can be served as a practical guidelines for classroom teachers when devising an oral test".

The following evaluation criteria were presented by Kent (2001) and were adopted in this study. Moreover, a jury memebrs of EFL teachers agreed upon the Oral Speaking Assessment Rubric used to assess the participants' oral language taking into account the following domains:

.**Fluency of Speech**

The evaluation of fluency of speech should be not based on the speed of the speech. However, it should be based upon the smoothness of speech, and taking into consideration the normal use of hesitancy in conversation; if a student ceases his conversation to giggle, or if he has memorized his conversation and cannot continue by relying upon his inherent communication skills, then this should reflect in a lower rating. A student, who speaks efficiently, and without awkwardness, should in turn be granted a higher rating.

- **Grammar Use**

  It would be unrealistic to expect that any EFL student will come to an exam and speak without any grammatical issues; so, the focus should be on being able to figure out the students' communicative intent even if grammar errors are present in sentence structures. However, the ceaseless use of the same grammartical errors by a student, such as the use of simple past for all past tense terms, should reflect in a lower rating. On the other hand, if a student is able to identify his/her grammar error and rectifies it during the discussion and conversation, should be provided a higher rating.

- **Listening Comprehension**

Many EFL students keep silent and wait for their instructor or examiner to repeat his or her statement because they don'y get what he is saying or talking about and this unfortunately will reflect in a lower rating. Other studetns may ask the examiner to repeat or clarify say for clarification and this should reflect in higher rating. Moreover, this point of examination should be applied in the question/answer activities of the test. Some students may not understand the examiner's question, even after rewording, whereas other students will understand the same question immediately.

- **Pronunciation**

Since native English speakers have a high degree of tolerance to ambiguity, accent is not considered a practical point of exam assessment, except where it hinders communicative understanding in the case of drastically impact pronunciation. In circumstances where ceaseless mispronunciation happens, or misunderstanind occurs because of the incorrect pronunciation of terminology, this sould be students should reflect in a lower rating. In the same case, if a student corrects his/her pronunciation, or knows his/her incorrect pronunciation and tries to rectify it throughout the test, then this should reflect in a higher rating

- **Vocabulary Appropriateness and Complexity**

According to the topic, a few terms or vocabulary items can be opted for from the course materials and used in student conversational presentations. If students use good and higher level of vocabulary, and select terms taught from the programme, then they should receive a higher rating. If a student incorporates very simple vocabulary and remains repeating the same vocabulary, then this should reflect in a lower rating.

Acopy of the researcher's Oral Speaking Assessment Rubric is given in Appendix O.

### 4.8.7. User's Satisfaction Scales

In this study, the researcher sought to collect quantitative data about the participants' (the experimental groups) satisfaction with the LSBIP. By the participants satisfaction it was meant the positive attitude toward the teaching and learning activities, learning experiences and the instructional strategies implemented in the LSBIP. Student satisfaction questionnaire are a great way to quickly, consistently and confidentially gather information from students and to identify areas for improvement (Brennan & Williams, 2004).

A questionnaire was designed for this purpose depending on the previous research on satisfaction (Hung, 2015; Johnson, 2013; Yordchim & Gibbs, 2014). The questionnaire

contained 10-five-point Likert items, ranging from (strongly disagree to strongly agree). It was reviewed by a number of EFL teachers to examine its validity and some modifications were carried out. The questionnaire reliability was examined using Cronbach's Alpha (0.81). It was administered to the three experimental groups; the Visual Experimental Group (EG1), the Auditory Experimental Group (EG2) and the Kinaesthetic Experimental Group (EG3) only after the intervention.

To explore the visual students' satisfaction (EG1) with the VIP experience, Means and Standard Deviations were calculated for the 10 items of the satisfaction scale as seen in Table 4.25

**Table 4.25**

**Mean Scores and Standard Deviation the VIP User's Satisfaction Scale**

| No | Items | Mean | Std. Deviation |
|---|---|---|---|
| 1 | The VIP responses to the objectives, learning activities of the lesson | 4.32 | 0.82 |
| 2 | The VIP helps to contribute to my language learning. | 4.19 | 0.90 |
| 3 | The VIP classroom has suitable methods, techniques and activities for supporting my learning. | 4.35 | 0.84 |
| 4 | The use of the VIP reduces the feeling of boring and tension. | 4.24 | 0.76 |
| 5 | The use of the VIP classroom increases my motivation | 4.24 | 0.75 |
| 6 | The use of the VIP is easy and applicable | 4.16 | 0.78 |
| 7 | The use of the VIP helps me to develop oral language skills. | 4.21 | 0.82 |
| 8 | I enjoy learning the English language through the use of the VIP | 4.50 | 0.88 |
| 9 | Overall, I am satisfied with the VIP learning experience. | 4.15 | 0.75 |
| 10 | The VIP can be used in the field of English language learning in the future. | 4.12 | 0.64 |
| Overall Mean | | 4.66 | 0.84 |

The overall mean score of student satisfaction was (M= 4.66, SD= .84). All items were high, ranging from (4.2 to 4.5). Students were most satisfied with the VIP which contributed to their language learning (M= 4.19)**,** the integration of teaching methods and activities for

supporting learning (M= 4.35), and the reduction of feeling of boring and tension in the classroom (M=4.24), the enjoyment of the learning experience (M= 4.21), and the students' overall satisfaction with the VIP experience (M= 4.50).

The VIP user's satisfaction scale is presented in Appendix P.

To explore auditory student satisfaction (EG2) with the AIP, Means and Standard Deviations were calculated for the 10 items of the satisfaction scale as seen in Table 4.26.

**Table 4.26**

**The Mean Scores and Standard Deviation of the AIP User's Satisfaction Scale**

| No | Items | Mean | Std. Deviation |
|---|---|---|---|
| 1 | The AIP responses to the objectives, learning activities of the lesson | 4.30 | 0.93 |
| 2 | The AIP helps to contribute my language learning. | 4.22 | 0.87 |
| 3 | The AIP classroom has suitable methods, techniques and activities for supporting my learning. | 4.36 | 0.83 |
| 4 | The use of the AIP reduces the feeling of boring and tension. | 4.16 | 0.75 |
| 5 | The use of the AIP classroom increases my motivation | 4.24 | 0.79 |
| 6 | The use of the AIP is easy and applicable | 4.12 | 0. 80 |
| 7 | The use of the AIP helps me to develop oral language skills. | 4.16 | 0.82 |
| 8 | I enjoy learning the English language through the use of the AIP | 4.20 | 0.88 |
| 9 | Overall, I am satisfied with the AIP learning experience. | 4.38 | 0.75 |
| 10 | The AIP can be used in the field of English language learning in the future. | 4.50 | 0.64 |
| Overall Mean | | 4.26 | 0.80 |

The overall mean score of student satisfaction was (M= 4.26, SD= .80). All items were high, ranging from (4.2 to 4.5). Students were most satisfied with the AIP which contributed to their language learning (M= 4.12), the integration of teaching methods and activities for supporting learning (M= 4.36), and the reduction of feeling of boring and tension in the classroom (M= 4.16), the enjoyment of the learning experience (M= 4.16), and the students' overall satisfaction with the AIP experience (M= 4.20).

The AIP user's satisfaction scale is presented in Appendix Q

To explore student satisfaction on using the KIP, means and standard deviations were calculated for the 10 items of the satisfaction scale as seen in Table 4.27

**Table 4.27**

**Mean Scores and Standard Deviation the KIP User's Satisfaction Scale**

| No | Items | Mean | Std. Deviation |
|---|---|---|---|
| 1 | The KIP responses to the objectives, learning activities of the lesson | 4.36 | 0.87 |
| 2 | The KIP helps to contribute my language learning. | 4.14 | 0.91 |
| 3 | The KIP classroom has suitable methods, techniques and activities for supporting my learning. | 4.20 | 0.82 |
| 4 | The use of the KIP reduces the feeling of boring and tension. | 4.22 | 0.86 |
| 5 | The use of the KIP classroom increases my motivation | 4.18 | 0.78 |
| 6 | The use of the KIP is easy and applicable | 4.22 | 0.71 |
| 7 | The use of the KIP helps me to develop oral language skills. | 4.26 | 0.80 |
| 8 | I enjoy learning the English language through the use of the KIP | 4.34 | 0.66 |
| 9 | Overall, I am satisfied with the KIP learning experience. | 4.21 | 0.79 |
| 10 | The KIP can be used in the field of English language learning in the future. | 4.42 | 0.68 |
| Overall Mean | | 4.25 | 0.78 |

The overall Mean score of student satisfaction was (M= 4.25, SD= .78). All items were high, ranging from (4.14 to 4.5). Students were most satisfied with the KIP which contributed to their language learning (M= 4.14), the integration of teaching methods and activities for supporting learning (M= 4.20), and the reduction of feeling of boring and tension in the classroom (M= 4.22), the enjoyment of the learning experience (M= 4.34), and the students' overall satisfaction with the KIP experience (M= 4.21). The KIP user's satisfaction scale is presented in Appendix R. Based on the results obtained from the VIP satisfaction scale, the AIP satisfaction scale, and the KIP satisfaction scale, the majority of the participants showed their high satisfaction about the LSBIP intervention implemented in the current study.

## 4.9. Implementation of the Instructional Programmes

For the implementation of the VIP (Appenix S), AIP (Appenix T), and KIP (Appendix U) instructional programmes, a rapport was fisrt established with the students and the OE teacher to create the proper environment for the experiment to be conducted. The participants were explained the importance of the experiment. The researcher then gave the learning style inventory (VAK) to the students' groups for identifying the learning style of the participants. Then according to high ratio of learning style of each group, the researcher selected the four groups out of twelve groups. The three experimental groups were taught four units from the BBC Learning English Programme by the researcher using different Instructional Programmes according to their learning style and global control group was taught by his OE teacher the same four units through traditional teaching method (LM). In other words, the groups were treated in the following ways:

Group-1: Visual Students Group (EG1): teaching through the Visual Instructional Programme (VIP)

Group-2: Auditory Students Group (EG2): teaching through the Auditory Instructional Programme (AIP)

Group-3: Kinaesthetic Students Group (EG3): teaching through the Kinaesthetic Instructional Programme (KIP)

Group-4: Global Students Group (CG4): teaching through the Lecture Method (LM).

The time schedule for the implementation of the programme is given in Table 4.28

**Table 4.28**

**Time Schedule of the Quasi Experiment**

| Admin.of research tool and teaching of unit | Time duration | | *Total weeks of teaching | Treatments applied | | | | Post OEAT |
|---|---|---|---|---|---|---|---|---|
| | From | To | | Exp. groups | | | CG4 | |
| | | | | EG1 | EG2 | EG3 | | |
| VAK | 07/12/2015 | 09/12/2015 | | On all the sample of the study | | | | - |
| Placement Test | 13/12/2015 | 15/12/2015 | - | On all the sample of the study | | | | - |
| Pre OEAT | 04/01/2016 | 10/01/2016 | - | On all the sample of the study | | | | - |
| Discuss | 17/01/2016 | 17/02/2016 | 4 | VIP | AIP | KIP | LM | 19/06/2016 |
| Instruction, advice | 21/02/2016 | 16/03/2016 | 4 | VIP | AIP | KIP | LM | 19/06/2016 |
| Making a complaint | 04/04/2016 | 04/05/2016 | 3 | VIP | AIP | KIP | LM | 19/06/2016 |
| Good news, bad new | 09/05/2016 | 09/06/2016 | 4 | VIP | AIP | KIP | LM | 19/06/2016 |
| CASES | 12/05/2016 | - | - | √ | √ | √ | √ | - |
| SHI | 13/05/2016 | - | - | √ | √ | √ | √ | - |
| ASCS | 14/05/2016 | - | - | √ | √ | √ | √ | - |
| Total | - | - | 15 | - | - | - | - | - |

* Sunday and Friday, Spring Holiday, and Days off were not counted in teaching weeks

According to the Table 4.28, the VAK and the placement test were administrated on the entire sample. The VAK was administered from 07/12/2015 to 09/12/2015, and the placement test was administered on 13/12/2015 to 15/12/2015. Then, based on the VAK results, the

selection for experimental groups (EG1, EG2, and EG3) and the control group (CG4) was opted for. Afterwards, the experiment was started with experimental groups with the three developed instructional programmes (VIP, AIP and KIP) respectively.

The unit 'Discuss' was taught from 17/01/2016 to 17/02/2016 (total 4 weeks), the second unit " Instructions, advice" was taught from 21/02/2016 to16/03/2016 (total 4 weeks), the third unit 'Making a complaint' was taught from 04/04/2016 to 04/05/2016 (total 3 weeks), and the fourth unit " Good news, bad news" was taught from 09/05/2016 to 09/06/2016 (total 4 weeks). The general group (CG4) was taught all the four units through LM all these weeks.

Then CASES, SHI, and ASCS were administrated by the researcher over the sample from 12/05/2016, 13/05/2016, and 14/05/2016 respectively. The Post OEAT was administrated on 19/06/2016 with the experimental and the control groups, and lasted for 6 days. Thus in the present study, total 15 weeks were required for implementing the LSBIP.

**4.10. Data Collection Procedures**

In the prseant study, data collecting procedures went through three different phases. The first phase was conducted in order to detect the research problem which is the heart of any scientific research through conducting an exploratory phase where a triangular approach was opted for using qualitative data collection tools: a Classroom Observation Checklist, FGD, Semi-structured, Interviews and quantitative data collection instruments: Questionaires (PLSPQ, PTSPQ).

The second phase was the pilot study which aimed to check the overall feasibility of the parent study. The third phase is the quasi-experimental study in order to test the research null hypotheses by either rejecting or confirming them. The latter phase was conducted by implementing the three learning style based instructional programmes as an intervention phase between pre-intervention and post- intervention.

### 4.10.1. Phase One: Exploration Phase

The exploration phase of problem identification can encompass a mixture of qualitative and quantitative tools in an attempt to gather deep and thick data about the nature and causes of the problem. It is an essential phase because it helps to confirm the existence of the problem at hand as a research problem of the study. Exploration is particularly useful when researchers lack a clear idea of the problems ( Cooper & Schindler, 2008). Data collection techniques may be used including observing, focus group discussion, administering written questionnaire, testing, among others.

In this study, in order to prove that the problem had roots within the target population, and in order to find out answers to the first raised research question which was about whether there was a match or a mismatch between teachers' teaching styles, strategies and students' learning styles, the researcher opted for both quantitative and qualitative data gathered from questionnaire, classroom observation checklist, FGD with EFL teachers, and semi-structured interviews with both ELF teachers and students were conducted to collect necessary data and gain deeper understanding of the research problem. In this phase, the researcher started collecting the qualitative data by using first the general classroom observation checklist.

According to Creswell (2011), observation is a process of gathering rich and deep firsthand information from the research setting. The researcher conducted various non-participants classroom observations by attending first year OE sessions using a general observation checklist adapted from academia (Appendix B). These Non-participant observations collected over time served as data to allow reflections to take place and make relevant conclusions. The classroom observation checklist was used to record the events and the activities and to evaluate the teachers' performances in the OE classes.

The participnats in the exploratory phase included 4 teachers at the Department of English Language and Literature at Sétif 2 University. They were randomly selected and they

presented different age, academic, and experience teaching backgrounds. At the initial phase of the present probe, the classroom observations were conducted to make sure that the problem did exist in the target population. Therefore, the groups were selected randomly to be observed for one and half an hour each per group. The series of observations confirmed the problem detected earlier and stimulated the researcher to find out possible solutions. These values were given to each item based on the frequency of its occurring in the OE class. The procedure and the activities in the classes were recorded using a recorder and the researchers' notes. The results of the classroom observations were compared with that obtained results from the teachers' FGD, the interviews, and the questionnaire

The observation checklist was adopted by the researcher to collect necessary information during the observation stage. The checklist was used to investigate the evidence for the students' learning styles, teachers' teaching strategies and the degree of match and mismatch between them. The first classroom observation drove the researcher's attention to the problem of the mismatch between students' learning styles and the teachers teaching strategies. The series of observations confirmed the problem detected earlier and stimulated the researcher to further investigation. The data collected from conducted observation sessions provide valuable information for qualitative data analysis. The data collected during the observation stage were transcribed. This transcription enabled the researcher to tally the strategies and techniques that each participant used during the lesson observation.

The observation transcript (an example of observation transcript), is given in Appendix E.

After conducting the classroom observation series, it was not possible for the researcher to clearly indentify the research problem. To that end, the researcher sought to conduct a questionnaire. This questionnaire was partially guided and adopted from Reid (1995). The questionnaire contains of 30 statements cover Reid's six learning style preferences: visual, auditory, group, kinaesthetic, tactile and individual. Students were invited to indicate their

preferences of learning style on a five–point scale such as SA – Strongly Agree (5), A – Agree (4), UND – Undecided (3), D – Disagree (2), SD – Strongly Disagree (1).

The Perceptual Learning Style Preference Questionnaire (PLSPQ) is given in Appendix F.

Data on teaching styles was collected using a modified version of the PLSPQ. In this questionnaire the teachers were asked to respond to thirty statements using a five point scale similar to that of the stuents' version of PLSPQ, except that this time the statements were designed to address their teaching style. The Perceptual Teaching Style Preference Questionnaire (PTSPQ) is given in Appendix G. After collecting the information obtained from the questionnaire they were coded and analyzed using the SPSS program in terms of descriptive statistics; the Mean (M) and the Strandard Deviation (SD).

The second qualitative data the researcher opted for were collected using an FGD. A focus group is defined as a small gathering of individuals who have a common interest or characteristic, assembled by a moderator, who uses the group and its interactions as a way to gain information about a particular issue. Kruger and Casey (2000) note, the purpose of focus groups is to promote a comfortable atmosphere of disclosure in which people can share their ideas, experiences, and attitudes about a topic.

The FGD was employed to obtain thick information about the nature and the causes of the problem detected in the classroom observation and in the questionnaire and to confirm that the problem had roots in the case being studied. Many authors (Anderson, 1990; Denscombe, 2007; Morgan, 1997; Patton, 2002; Ritchie & Lewis, 2003; Stewart & Shamdasani, 1990) suggest that the size of the focus group should range from six (6) to twelve (12) participants. On this basis, the researcher verbally requested 6 teachers of the OE at the Department of English Language and Literature. The teachers were explained the purpose of the FGD and its procedures. The participants' responses were recorded in two ways; taking notes and tape recording. The FGD is given in (Appendix A). The results of both

the observation and the FGD in the exploration phase are discussed separately in chapter seven.

In this phase, a qualitative approach is used in order to investigate the research problem, i.e., the kind of relationship between the teachers' teaching strategies and the students' learning styles in terms of match or mismatch. Semi-structured interviews were conducted as third research tool for qualitative data collection. Punch (2009, p.4) states that " the interview is the most prominent data collection tool in qualitative research". Drawing from that, the researcher decided to use a semi-structured interview to collect data from students (12) (Appendix D) and teachers (6) (Appendix C). The interview was conducted after analyzing the results of the observation, the FGD and the questionnaire as some questions were based on these results. After transcribing the interview, the researcher gave the data to two of her colleagues who volunteered to check the transcription. First, they were requested to listen to the interview, check the transcription and highlight any possible discrepancy in the content. Their feedback confirmed the researcher's initial transcription. Later, the final version was given back to the interviwees to check the content. They were asked to read the transcription and make sure that no added information that they had not mentioned in the interview or left out any. Both of them were satisfied with the conformity between what they said and what have beed transcribed. The analysis of qualitative and quantitative data collected through the exploration phase yielded answers to the first research question and it was given in a separate chapter (chapter 6).

### 4.10.2. Phase Two: Pilot Study

A pilot study or a small scale study is a mini-version of a full-scale study or a trial run done in preparation of the complete study. The latter is also called a 'feasibility' study. It can also be " a specific pre-testing of research instruments, including questionnaires or interview schedules" (Polit, et al., 2001; Baker 2001; Teijlingen & Hundley, 2001, p.1).

The pilot study will thus follow after the researcher has a clear vision of the research topic, research problem and research questions, the techniques and methods, which will be applied, and what the research schedule will look like. It is "reassessment without tears" (Blaxter, Hughes & Tight, 1996, p.121). Trying out all research techniques and methods, which the researcher has in mind to see how well they will work in practice. If necessary it can then still be adapted and modified accordingly (Blaxter, Hughes & Tight, 1996, p.121).

A pilot study was carried out before the main study in order to test the feasibility of the parent study. The researcher developed a learning style based instructional programme and applied it to a pilot group of first year EFL students at Setif 2 University. The piloting procedures of the whole research process are discussed in the next section.

The researcher conducted a pilot study at the Department of English Language and Literature from 19/10/2014 to 04/12/2014. Two groups were randomly assigned as experimental group (EGA) and control group (CGB). Participants were first year students of English selected randomly out of the entire population of first year students. The researcher randomly chose students with similar levels of English proficiency, and divided the students into two groups; Experimental Groups A ($N$ = 35) and Control Group B ($N$ = 35). During the pilot study, the Experimental Group EGA was divided into three experimental groups according to the results of the the VAK: EGA1 represents the pilot visual experimental group (N= 12), EGA2 represent the pilot auditory experimental group (N=09), EGA3 represents the pilot kinaesthetic experimental group (N= 14). The CGB4 was consisted of visual students (N= 13), auditory students (N=10), and kinaesthetic students (N= 12). The EGA1, EGA2, and EGA3 received the researcher's learning style based instructional programme which was piloted during this phase ( actually it consisted of first two lessons from unit one, first two lessons from unit 2, the first lesson from unit three, and the first lesson fom unit four to examine its effect on students' OEA). However, the control group CGB4 had traditional

method of instruction (LM). The purpose of the pilot study was to develop and revise the researcher-designed programme and to establish the feasibility of the main study.

The pilot pretest/posttest was developded to measure students' OEA before and after the treatment, so the researcher had to develop a small version of the pilot pretest and posttest to measure the language functions taught during the pilot study. The results of pilot OEA pretest were analysed using the independent T-test and the pilot OEA posttest results were analysed statistically using ANCOVA considering CASE, SH, and ASC as covariates. The results are presented in the following section.

#### 4.10.2.1. Results of Descriptive Statistics and Independent T-test for Pilot Pre OEAT Scores

The Pilot pre-test of the study was administered as a pre-testing tool. The statistical Package for Social Sciences (SPSS) was used to analyze the obtained data. A T-test analysis was run to determine if there were any statistically significant difference between the pilot visual experimental group (EGA1=12) and the sub-control group (CG4B= 13). Table 4.29 provides the descriptive statistics of the two groups in terms of the number of the participants (N), means (M) and standard deviation (SD)

**Table 4.29**

**Descriptive Statistcs of EGA1 and CGB**

| Group Statistics | | | | | |
|---|---|---|---|---|---|
| | grp-pretest | N | M | Std. Deviation | Std. Error Mean |
| pretest | EGA1 | 12 | 43.32 | 6,565 | 1,678 |
| | CG4B | 13 | 43,95 | 7,845 | 2,162 |

**Table 4.30**

**Independent Sample T-test for Pre-test Scores**

| Independent Samples Test | | | | | | |
|---|---|---|---|---|---|---|
| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | |
| | | F | Sig. | t | df* | Sig. (2-tailed) |
| Pretest | Equal variances assumed | .216 | .852 | .081 | 28 | .987 |
| | Equal variances not assumed | | | .084 | 22.438 | .938 |

df* (degree of freedom : it means the number of observations in a sample that are free to vary)

The results of the T-test scores are presented in Table 4.30 with reference to the t value (.081) and The Levene's Test for equality of variances showed that the P value (sig= .987) for the significance of difference between mean achievement scores of the experimental group EGA1 and the control group CGB with df (28) which is greater than 0.05 level. Hence, it is clear that there is no statistically significant difference in the pilot pre-test scores on participants' OEA between Experimental Group EGA1 and the control group CGB. Thus, since the difference is not significant, the two groups were assumed equivalent. So it can be said that there was no significant difference between means of scores of the experimental group EGA1 and the sub control group CG4B on the pilot pre OAET.

A T-test was conducted to determine if there were any statistically significant difference between the mean scores of auditory experimental group EGA2 (N=09) and the sub control group CGB (N=10), on the pilot pretest measuring participants' OEA. Table 4.31 represents the descriptive statistics of the two groups in terms of the in terms of the number of the participants (N), means (M) and standard deviation (SD). Table 4.32 represents the T-test results.

**Table 4.31**

**Descriptive Statistcs of EGA2 and CGB**

| Group Statistics | | | | | |
|---|---|---|---|---|---|
| | grp-pretest | N | Mean | Std. Deviation | Std. Error Mean |
| pretest | EGA2 | 09 | 40.28 | 4.356 | 1.778 |
| | Sub-CG4B | 10 | 41.85 | 4.545 | 1.132 |

**Table 4.32**

**Independent Sample T-test for Pre-test Scores**

| Independent Samples Test | | | | | | |
|---|---|---|---|---|---|---|
| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | |
| | | F | Sig. | t | df | Sig. (2-tailed) |
| Pretest | Equal variances assumed | .349 | .652 | .091 | 31 | .587 |
| | Equal variances not assumed | | | .079 | 22.932 | .538 |

The results of the T-test scores are presented in Table 4.32 with reference to the t value (t= .091) and The Levene's Test for equality of variances showed that the P value (sig= .587) for the significance of difference between mean achievement scores of the experimental group EGA2 the control group CG4B with df (df=31) which is greater than 0.05 level. Hence, it is clear that there is no statistically significant difference in pilot pre-test scores on oral expression performance between Experimental Group EGA2 and the sub control group CG4B. Thus, since the difference is not significant, the two groups were assumed equivalent. So it can be said that there was no significant difference between means of scores of the experimental group EGA2 and the control group sub CG4B on the pilot pre- OAET.

A third T-test was conducted to determine if there were any statistically significant difference between the mean scores of the kinaesthetic experimental group EGA3 (N=14) and the sub control group CG4B (N=12), on the pilot pretest measuring participants' OEA. Table

4.33 represents the descriptive statistics of the two groups in terms of the number of the participants (N), means (M) and standard deviation (SD). Table 5.34 represents the T-test results.

**Table 4.33**

**Descriptive Statistcs of EGA3 and CGB**

| Group Statistics | | | | | |
|---|---|---|---|---|---|
| | grp-pretest | N | Mean | Std. Deviation | Std. Error Mean |
| pretest | EGA3 | 14 | 40.32 | 5.643 | 2,543 |
| | Sub-CGB | 12 | 39.95 | 7.132 | 2.262 |

**Table 4.34**

**Independent sample T-test for Pre-test Scores**

| Independent Samples Test | | | | | | |
|---|---|---|---|---|---|---|
| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | |
| | | F | Sig. | t | df | Sig. (2-tailed) |
| Pretest | Equal variances assumed | 0.354 | 0.628 | 0.076 | 30 | 0.685 |
| | Equal variances not assumed | | | 0.080 | 28.745 | 0.772 |

The results of the T-test scores are presented in Table 4.34 with reference to the t value (t= .076) and The Levene's Test for equality of variances showed that the P value (sig= .685) for the significance of difference between mean achievement scores of the experimental group EGA3 the control group Sub-CG4B with df (30) which is greater than 0.05 level. Hence, it is clear that there is no statistically significant difference in the pilot pre-test scores on OEA achievement between Experimental Group EGA3 and the sub control group CG4B. Thus, since the difference is not significant, the two groups were assumed equivalent. So it can be said that there was no significant difference between means of scores of the experimental group EGA3 and the sub control group CG4B on the Pilot pre OAET.

#### 4.10.2.2. Analysis of Covariance of the Pilot Post-test Results

##### 4.10.2.2.1. Effectiveness of the Pilot VIP on OEA of Visual Students

- **When CASE as a Covariate**

**Table 4.35**

**Significance of Difference between Mean Achievement Scores**

**of the Experimental Group and the Control Group**

**Considering CASE as Covariate**

| Group | Number | Mean of CASE scores | Mean of OEA score | Adjusted mean of OEA Scores |
|---|---|---|---|---|
| EGA1 | 12 | 116.28 | 65.230 | 66.290 |
| CGB4 | 13 | 117.65 | 54.902 | 55.593 |

**Analysis of Co-variance of Achievement Scores**

| Source of Variance | Sum of Squares | df | Mean Square | F value | Sig Level |
|---|---|---|---|---|---|
| Group | 28.543 | 1 | 28.543 | 2.141 | 0.018 |
| Error | 1243.332 | 26 | 43.496 | | |
| Total | 107783.0 | 29 | | | |

Observation of the Table 4.35 shows that EGA1 and CGB consist of 12 participants and 13 participants respectively. Mean CASE scores of these two groups were 116.28 and 117.65 respectively. After controlling the effect, if any, of CASE by ANCOVA, the adjusted means of OEA of EGA1 and CGB were 66.290 and 55.593 respectively.

The F value for the significance of difference between adjusted mean pilot OEA scores of the EGA1 and Sub CGB4 was (F= 2.141) which was significant at 0.05 level. So it can be said that there was significant difference between adjusted means of pilot OEA of EGA1 and Sub CGB4 considering CASE as a covariate.

Further, according to the Table 4.35 the adjusted mean of OEA scores of EGA1 and CGB were (66.290) and (55.593) respectively. It means EGA1 was higher than Sub CGB4 in Pilot

OEA posttest. So it can be said that the pilot VIP is effective on OEA when CASE is statistically controlled.

- **When SH as a Covariate**

**Table 4.36**

**Significance of Difference between Mean Achievement Scores of the Experimental Group and the Control Group Considering SH as Covariate**

| Group | Number | Mean of SH Scores | Mean of OEA score | Adjusted mean of OEA Scores in |
|---|---|---|---|---|
| EGA1 | 12 | 111.38 | 65.230 | 65.641 |
| CGB4 | 13 | 110.18 | 54.902 | 54.674 |

**Analysis of Co-variance of Achievement Scores**

| Source of Variance | Sum of Squares | df | Mean Square | F value | Sig Level |
|---|---|---|---|---|---|
| Group | 99.387 | 1 | 99.387 | 1.108 | 0.032 |
| Error | 876.978 | 26 | 34.658 | | |
| Total | 118724.0 | 28 | | | |

Observation of the Table 4.35 shows that EGA and CGB4 consist of 12 and 13 participants respectively in each group. Mean SH scores of these two groups were 111.38 and 110.18 respectively. After controlling the effect, if any, of SH by ANCOVA, the adjusted means of OEA of EGA1 and CGB4 were (65.641) and (54.674) respectively.

The F value for the significance of difference between adjusted mean pilot OEA scores of the EGA1 and CGB was (F= 1.108) which was significant at 0.05 level. So it can be said that there was significant difference between adjusted means of pilot OEA of EGA and CGB considering SH as a covariate.

Further, according to the Table 4.36, the adjusted mean of pilot OEA scores of EGA1 and CGB4 were 65.641 and 54.674 respectively. It means EGA was higher than CGB in Pilot

OEA posttest. So it can be said that the pilot VIP is effective on OEA when SH is statistically controlled.

- **When ASC as a Covariate**

**Table 4.37**

**Significance of Difference between Mean Achievement Scores of the Experimental Group and the Control Group Considering ASC as Co-variate**

| Group | Number | Mean of ASC scores | Mean of OEA score | Adjusted mean of OEA Scores |
|---|---|---|---|---|
| EGA1 | 12 | 113.85 | 65.230 | 65.872 |
| CG4 | 13 | 112.47 | 54.902 | 54.543 |

**Analysis of Co-variance of OEA Scores**

| Source of Variance | Sum of Squares | df | Mean Square | F value | Sig Level |
|---|---|---|---|---|---|
| Group | 1065.014 | 1 | 1065.014 | 10.834 | 0.000 |
| Error | 32.54 | 35 | 11.582 | | |
| Total | 2460.534 | 45 | | | |

Observation of the Table 4.37 shows that EGA1 and sub CGB4 consist of 12 and 13 participants respectively. Mean ASC scores of these two groups were 113.85 and 112.47 respectively. After controlling the effect, if any, of CASE by ANCOVA, the adjusted means of OEA of EGA1 and sub CGB4 were 65.872 and 54.543 respectively.

The F value for the significance of difference between adjusted mean OEA scores of the EGA1 and CGB4 was (F= 10.834) which was significant at 0.05 level. So it can be said that there was significant difference between adjusted means of OEA of EGA1 and CGB4 considering ASC as a co-variate

Further, according to the Table 4.37 the adjusted mean of pilot OEA scores of EGA1 and CGB were 65.872 and 54.543 respectively. It means EGA1 was higher than sub CGB in Pilot

OEA posttest. So it can be said that the pilot VIP is effective on OEA when ASC is statistically controlled.

#### 4.10.2.2.2. Effectiveness of the Pilot AIP on OEA of Auditory Students

- **When CASE as a Covariate**

**Table 4.38**

**Significance of Difference between Mean Achievement Scores of the experimental Group and the Control Group Considering CASE as Covariate**

| Group | Number | Mean of CASE scores | Mean of OEA score | Adjusted mean of OEA Scores |
|---|---|---|---|---|
| EGA2 | 09 | 116.28 | 65.23 | 66.290 |
| CGB4 | 10 | 115.65 | 55.41 | 55.593 |

**Analysis of Co-variance of Achievement Scores**

| Source of Variance | Sum of Squares | df | Mean Square | F value | Sig Level |
|---|---|---|---|---|---|
| Group | 28.543 | 1 | 28.543 | 2.141 | 0.01 |
| Error | 1243.332 | 26 | 43.496 | | |
| Total | 107783.0 | 29 | | | |

Observation of the Table 4.38 shows that EGA2 and CGB4 consist of 09 and 10 participants respectively. Mean CASE scores of these two groups were 116.28 and 115.65 respectively. After controlling the effect, if any, of CASE by ANCOVA, the adjusted means of OEA of EGA and CGB were 66.290 and 55.593 respectively.

The F value for the significance of difference between adjusted mean OEA scores of the EGA and Sub CGB4 was (F= 2.141) with P value (Sig= .01) which was significant at 0.05 level. So it can be said that there was significant difference between adjusted means of OEA of EGA1 and Sub CGB4 considering CASE as a covariate

Further, according to the Table 4.38 the adjusted mean of OEA scores of EGA2 and CGB4 were (66.290) and (55.593) respectively. It means EGA1 was higher than Sub CGB4 in

Pilot OEA posttest. So it can be said that the pilot AIP is effective on OEA when CASE is statistically controlled.

- **When SH as a Covariate**

**Table 4.39**

**Significance of Difference between Mean Achievement Scores of the Experimental Group and the Control Group Considering SH as Covariate**

| Group | Number | Mean of SH Scores | Mean of OEA score | Adjusted mean of OEA Scores in |
|---|---|---|---|---|
| EGA2 | 09 | 111.38 | 65.23 | 65.641 |
| CGB4 | 10 | 110.18 | 55.41 | 54.174 |

**Analysis of Co-variance of Achievement Scores**

| Source of Variance | Sum of Squares | df | Mean Square | F value | Sig Level |
|---|---|---|---|---|---|
| Group | 99.387 | 1 | 99.387 | 4.108 | 0.01 |
| Error | 876.978 | 26 | 34.658 | | |
| Total | 118724.0 | 28 | | | |

Observation of the Table 4.39 shows that EGA2 and CGB4 consist of 09 and 10 participants respectively. Mean SH scores of these two groups were 111.38 and 110.18 respectively. After controlling the effect, if any, of SH by ANCOVA, the adjusted means of OEA of EGA2 and CGB4 were (65.641) and (54.174) respectively.

The F value for the significance of difference between adjusted mean OEA scores of the EGA2 and CGB4 was (F= 4.108) which was significant at 0.05 level. So it can be said that there was significant difference between adjusted means of OEA of EGA1 and Sub CGB4 considering SH as a covariate.

Further, according to the Table 4.39, the adjusted mean of OEA scores of EGA2 and Sub CGB4 were (65.641) and (54.174) respectively. It means EGA1 was higher than CGB4 in

Pilot OEA posttest. So it can be said that the piloy AIP is effective on OEA when SH is statistically controlled.

- **When ASC as a Covariate**

**Table 4.40**

**Significance of Difference between Mean Achievement Scores of the Experimental Group and the Control Group Considering ASC as Covariate**

| Group | Number | Mean of ASC scores | Mean of OEA score | Adjusted mean of OEA Scores |
|---|---|---|---|---|
| EGA2 | 09 | 113.85 | 65.23 | 64.87 |
| CG1 | 10 | 112.47 | 55.41 | 50.54 |

**Analysis of Co-variance of OEA Scores**

| Source of Variance | Sum of Squares | df | Mean Square | F value | Sig Level |
|---|---|---|---|---|---|
| Group | 218.476 | 1 | 218.476 | 11.812 | 0.02 |
| Error | 1287 .203 | 26 | 49.632 | | |
| Total | 1687.346 | 35 | | | |

Observation of the Table 4.40 shows that EGA2 and CGB4 consist of 09 and 10 participants respectively. Mean ASC scores of these two groups were 113.85 and 112.47 respectively. After controlling the effect, if any, of CASE by ANCOVA, the adjusted means of OEA of EGA2 and Sub CGB4 were 64.87 and 50.54 respectively.

The F value for the significance of difference between adjusted mean OEA scores of the EGA and CGB was (F= 11.812) which was significant at 0.05 level. So it can be said that there was significant difference between adjusted means of OEA of EGA2 and Sub CGB4 considering ASC as a covariate

Further, according to the Table 4.40 the adjusted mean of OEA scores of EGA2 and CGB4 were (64.87) and (50.54) respectively. It means EGA2 was higher than CGB4 in Pilot

OEA posttest. So it can be said that the pilot AIP is effective on OEA when ASC is statistically controlled.

#### 4.10.2.2.3. Effectiveness of the Pilot KIP on OEA of Kinaesthetic Students

- **When CASE as a Covariate**

**Table 4.41**

**Significance of Difference between Mean Achievement Scores of the experimental Group and the Control Group Considering CASE as Covariate**

| Group | Number | Mean of CASE scores | Mean of OEA score | Adjusted mean of OEA Scores |
|---|---|---|---|---|
| EGA3 | 14 | 116.28 | 66.38 | 66.290 |
| CGB4 | 12 | 117.65 | 53.94 | 53.593 |

**Analysis of Co-variance of Achievement Scores**

| Source of Variance | Sum of Squares | df | Mean Square | F value | Sig Level |
|---|---|---|---|---|---|
| Group | 0.099 | 1 | 0.099 | 13.978 | 0.005 |
| Error | 1589.300 | 25 | 63.496 | | |
| Total | 67783.00 | 29 | | | |

Observation of the Table 4.41 shows that EGA3 and CGB4 consist of 14 and 12 participants respectively. Mean CASE scores of these two groups were 116.28 and 117.65 respectively. After controlling the effect, if any, of CASE by ANCOVA, the adjusted means of OEA of EGA3 and CGB4 were 66.290 and 53.593 respectively.

The F value for the significance of difference between adjusted mean OEA scores of the EGA3 and Sub CGB4 was (F= 13.974) which was significant at 0.05 level. So it can be said that there was significant difference between adjusted means of OEA of EGA3 and Sub CGB4 considering CASE as a co-variate

Further, according to the Table 4.41 the adjusted mean of OEA scores of EGA3 and CGB4 were (66.290) and (53.593) respectively. It means EGA3 was higher than Sub CGB4 in

Pilot OEA posttest. So it can be said that the pilot KIP is effective on OEA when CASE is statistically controlled.

- **When SH as a Covariate**

**Table 4.42**

**Significance of Difference between Mean Achievement Scores of the experimental Group and the Control Group Considering SH as Covariate**

| Group | Number | Mean of SH Scores | Mean of OEA score | Adjusted mean of OEA Scores in |
|---|---|---|---|---|
| EGA3 | 14 | 111.38 | 66.38 | 66.641 |
| CGB4 | 12 | 110.18 | 53.94 | 53.574 |

**Analysis of Co-variance of Achievement Scores**

| Source of Variance | Sum of Squares | df | Mean Square | F value | Sig Level |
|---|---|---|---|---|---|
| Group | 29.708 | 1 | 29.708 | 15.108 | 0.000 |
| Error | 1245.978 | 25 | 74.630 | | |
| Total | 8187.240 | 29 | | | |

Observation of the Table 4.42 shows that EGA3 and CGB4 consist of 14 and 12 participants respectively. Mean SH scores of these two groups were 111.38 and 110.18 respectively. After controlling the effect, if any, of SH by ANCOVA, the adjusted means of OEA of EGA1 and CGB4 were (66.641) and (53.574) respectively.

The F value for the significance of difference between adjusted mean OEA scores of the EGA3 and CGB4 was 15.108 which was significant at 0.05 level. So it can be said that there was significant difference between adjusted means of pilot OEA of EGA3 and CGB4 considering SH as a co-variate

Further, according to the Table 4.42, the adjusted mean of OEA scores of EGA1 and CGB4 were (66.641) and (53.574) respectively. It means EGA was higher than CGB in Pilot

OEA posttest. So it can be said that the pilot KIP is effective on OEA when SH is statistically controlled.

- **When ASC as a Covariate**

**Table 4.43**

**Significance of Difference between Mean Achievement Scores of the Experimental Group and the Control Group Considering ASC as Covariate**

| Group | Number | Mean of ASC scores | Mean of OEA score | Adjusted mean of OEA Scores |
|---|---|---|---|---|
| EGA3 | 14 | 113.85 | 66.38 | 66.87 |
| CGB4 | 12 | 112.47 | 53.94 | 53.54 |

**Analysis of Co-variance of OEA Scores**

| Source of Variance | Sum of Squares | df | Mean Square | F value | Sig Level |
|---|---|---|---|---|---|
| Group | 786.634 | 1 | 786.634 | 14.354 | 0.000 |
| Error | 1383.963 | 25 | 46.367 | | |
| Total | 78303.00 | 29 | | | |

Observation of the Table 4.43 shows that EGA3 and CGB4 consist of 14 and 12 participants respectively. Mean ASC scores of these two groups were 113.85 and 112.47 respectively. After contrlloing the effect, if any, of CASE by ANCOVA, the adjusted means of OEA of EGA and CGB were 66.87 and 53.54 respectively.

The F value for the significance of difference between adjusted mean OEA scores of the EGA3 and CGB4 was (F= 14.354) which was significant at 0.05 level. So it can be said that there was significant difference between adjusted means of OEA of EGA3 and CGB4 considering ASC as a co-variate

Further, according to the Table 4.43 the adjusted mean of OEA scores of EGA3 and CGB4 were 66.87 and 53.54 respectively. It means EGA3 was higher than Sub CGB4 in Pilot

OEA posttest. So it can be said that the pilot KIP is effective on OEA when ASC is statistically controlled.

The results shown in Table 4.35 till Table 4.43 revealed that students OEA in the pilot post-test is better than in the pilot pre-test when considering CASE, SH, and ASC as covariates. So the results of the pilot study made the researcher reach the first interpretation which indicates that any progress among the participants is the result of the suggested treatment. This primary outcome of the pilot study can prove the feasibility of the parent study (Wittes & Brittain, 1990).

### 4.10.3. Phase Three: Quasi-experimental Study

Before the intervention (the implementation of the LSBIP), it was necessary to identify the learning styles of the students for deciding experimental groups. So, the VAK was administered over all EFL students (460) before implementing the experimental. For this, the rapport was established with students in each class. After that, CASE, SH and ASC were measured using the CASES, the SHI, and the ASCS respectively while the intervention. These variables were considered as covariates in the present study. Therefore, the data regarding these variables were required.

During the intervention, the researcher applied the three instructional programmes; the VIP, the AIP, and the KIP with EG1, EG2, and EG3 respectiviely taking into consideration the teaching strategies that were appropriate and suitable for each experimental group. However, the CG4 was taught through the traditional teaching method (LM).

After implementation of the instructional programmes, it was necessary to get data regarding the achievement of the students of all these four groups. So, the OEAT was developed and used by the researcher, it was administered over the participants of all four groups at the end of the implementation of these three instructional programmes.

After administration of each tool, the responses of the participants of each tool were scored according to the scoring key of the respective tool. The scoring procedure of each response is described in the following paragraphs.

## 4.11. Data Analysis Procedures

### 4.11.1. Scoring Respondents' Responses on Research Instruments

#### 4.11.1.1. Placement Test

The test contains 100 Multiple Choice Questions and was designed to last for 45 minutes. If students get less than 60% of the answers right, they should use the level indicated in the title, eg. For the Challenges 1 Placement Test they should use Challenges 1. If they get more than 70% of the answers right, they should use the higher level. 60-70% of right answers put students in the middle of the two levels and the decision as to where to place these students should depend on the level of the rest of the class. The participants' responses on the placement test indicated that the students were intermediate (85.2%).

#### 4.11.1.2. College Academic Self Efficacy

The CASES was designed to ask students how confident they were in their ability to complete the list of behaviors associated with college success. The instrument included questions about how confident a student is in his or her ability to ask questions in large or small groups, take tests, study appropriately, run for student government, and write a high quality paper among others. A reliability analysis was run for the instrument and the instrument reported a Cronbach's α of .9018, confirming the reliability of the scores on this instrument for this study. This instrument was composed of thirty-three questions and used a Likert-type scale with a range of A (or 5 = Quite a lot of confidence), B (or 4 = A lot of confidence), C (or 3 = neutral), D (or 2 = A little confidence) and E (or 1 = very little confidence). The instrument is scored by summing the scores on each question and dividing by the number of questions in the instrument. Participants had the ability to score between a

range of 33 points (the lowest 55 amount of confidence) and 165 points (the highest amount of confidence). The scores achieved whithin the sample of this study were ranging from 106 to 136. The mean total score of participants in this particular study was 111 points.

#### 4.11.1.3. Study Habit Inventory

For the purpose of scoring numerical values were assigned to each of the 5 categories of responses: Always, Often, Sometimes, Seldom, and Never. The numerical values for the positive and also for the negative items are shown in the table below. Possible maximum score on study habit inventory of each student was indicated on the top of the answer sheet. The score on the inventory is possible ranging from 32 to 160. High score on the inventory represents good study habit while low score represents poor study habit. In this study, the participnats scores were ranging from 58 to 138.

**Table 4.44**

**Numerical Values for Different Alternatives of the Positive and Negative Items**

| | Alternatives | | | | |
|---|---|---|---|---|---|
| Item | Always | Often | Sometimes | Rarely | Never |
| Positive | 5 | 4 | 3 | 2 | 1 |
| Negative | 1 | 2 | 3 | 4 | 5 |

#### 4.11.1.4. Academic Self Concept Scale

The ASCS consists of 40 statements with a four point likert scale with no neutral point. This scale measures an aspect of academic general self-concept. Scores can range from 40 to 160. The higher the score is, the stronger the level of academic self-concept (Ogbu, 1987, p.261). In other words, the sum of the items with a high score indicates a high or strong level of academic self-concept. High score on the inventory represents high self concept while low score represents low self concept. In this study, the participnats scores on this instrument were ranging from 65 to 153.

#### 4.11.1.5. Learning Style Inventory

This VAK questionnaire consists of 30 multiple choice questions to which respondents are asked to answer A, B , or C. ( option A represents Visual learning style, option B represents Auditory learning style, and option C represents Kinaesthetic learning style) was administered to students.

#### 4.11.1.6. Oral Expression Pre/ Post- Achievement Test Scoring

Assessment Rubric for OEAT of the rating scale was designed (Appendix O) in the light of the domains identified in the current study. Thus, the rating scale helped to provide detailed feedback about the effectiveness of the Programme with respect to each domain as well as with respect to the language functions taught during the LSBIP. The descriptors used in the scale were characterized to be brief, clear, definite, and comprehensible independently without reference to other descriptors.

For each domain, five bands/levels were identified. Level/band (5) represented very good performance, level (4) represented good performance, level (3) represented fair or accepted performance, level (2) stood for poor or deficient performance and level (1) for very poor or unaccepted performance. Each band/level included a set of indicators performance of each domain. Thus, each band descriptor generated a quantitative grade score for ranking and scoring students' performance. The score assigned for each domain is 5, so the total score for each unit is 25. Hence, the test was scored out of 100. The test specification indicating sections and scores assigned to each section is given in Table 4.45.

**Table 4.45**

**Pre-post test Specification Indicating Test Sections and Scores Assigned to**

| Sections | Grammar | Pronunciation | Vocabulary | Fluency of speech | Listening comprehension | Total score on the test/ Sections |
|---|---|---|---|---|---|---|
| Section 1 Discuss | 5 | 5 | 5 | 5 | 5 | 25 |
| Section 2 Instructions, explanations, and advice | 5 | 5 | 5 | 5 | 5 | 25 |
| Section 3 Copmaints, apologies and excuses | 5 | 5 | 5 | 5 | 5 | 25 |
| Section 4 Good news, bad news | 5 | 5 | 5 | 5 | 5 | 25 |

#### 4.11.1.7. Satisfaction Scales

The satisfaction scales were administered to the experimental groups only after the treatment to examine their satisfaction with the model. The scales had 10 items and students had to choose one of the responses (strongly agree, agree, neutral, disagree and strongly disagree). The degree of satisfaction was as follow: from (1 to less than 1.8) very low, (1.8 to less than 2.6) low, (2.6 to less than 3.4) moderate, (3.4 to less than 4.2) high, and (4.2 to 5) very high.

### 4.12. Data Collected

At the end of the experiment, after scoring of each of the response of each subject on different tools, final data were available of the total 94 participants. So, the data about these 94 participants were used for further analysis in order to test the null hypotheses of the present study. The details of the final sample is presented in the table 4.46

**Table 4.46**

**Details of the Final Sample**

| Details of the subject considered in the final sample Class | Total no. of students | Type of learners | No. of subjects considered | Learning style | Group |
|---|---|---|---|---|---|
| B5 | 38 | Visual | 20 | Visual Learning Style | Experimental group-1 |
| B4 | 39 | Auditory | 18 | Auditory Learning Style | Experimental group-2 |
| A3 | 38 | Kinaesthetic | 18 | Kinaesthetic Learning Style | Experimental group-3 |
| A6 | 38 | Global | V-15<br>A-12<br>K-11 | Global Learning Style | Global group |

For all these 94 participants, the data were available regarding their Learning Style, Self-Efficacy, Study Habit, Self-Concept, and Oral Expression Achievement Test. The data regarding learning style and group were in nominal scale, while data regarding all other variable were in interval scale.

### 4.13. Procedure of Data Analysis

In the present study, the main objective of the study was to examine the effectiveness of three instructional programmes as compare to traditional method. The variables like age and content were controlled maintaining these variables equal to all the groups (the three experimental groups and the one control group), but it was not practical to make all groups equal regarding CASE, SH, and ASC. So, these three variables were considered as co-variates. Hence, in this situation, the statistical analysis technique ANCOVA was used to study the significance of the difference between two or more groups by statistically controlling the effect of the covariates. The SPSS Programme was used for performing all data analysis.

## Conclusion

This chapter catered the methodological design and explained the research methodology, methods, tools, sampling and procedures adopted in this study. It has also described the data collection procedures following three phases in the research and the conducted quasi-experiment. These procedures of data collection particular to this study defined the data analysis procedures. The SPSS Programme was used for performing all data analysis: The Independent T-test was used to analyse the pre OEAT scores and the analysis of covariance ANCOVA was used to analyse the post OEAT scores. The next chapter describes the three learning style based instructional programmes (visual learning style based instructional programme that was designed for visual students, auditory learning style based instructional programme developed for auditory students and kinaesthetic learning style based instructional programme designed for kinaesthetic students) as independent variables of this study.

## Chapter Five :Development of Learning Style Based Instructional Programmes

# Chapter Five

## Development of Learning Style Based Instructional Programmes

### Introduction

The present study was carried out to examine the effectiveness of different Learning Style Based Instructional Programmes on the students' OEA. According to the stated objectives of the present study, as a crucial part of the experiment, Learning Style Based Instructional Programmes were needed. Considering this need and requirement, the three Learning Style based Instructional Programmes (VI¨P, AIP, KIP) had to be developed. The description of the procedures of the developed programmes is presented in this chapter.

### 5.1. Development of Instructional Programmes

As implied in the previous literature review, it is certainly accepted that students differ in the ways they learn, acquire, retain, and retrieve information as they differ in their choices about what to wear every day (Felder & Henriques, 1995). Moreover, a learning style is a preference for the method by which an individual learns something and how that individual remembers what has been learned (Pashler et al., 2008).

In this study, the researcher dealt with the VAK students with their different characteristics. Since, the ways students receive information is of foremost importance in designing instruction to meet their needs, the researcher learnt about the characteristics of the VAK students and then made a design of the appropriate Instructional Programme. On this basis, the researcher developed three Instructional Programmes based on three learning styles containing different instructional strategies.

The structure of this study was to combine and adapt some teaching strategies to students' preferred learning styles. In the theoretical literature about learning styles, it was obvious that the VAK students are different in their characteristics with each other. So, the

researcher took into consideration the results of the Placement Test (discussed in chapter 5) and thought about the characteristics of the VAK students and then made a plan for the implementation of instructional lessons. On this basis, the researcher opted for three instructional programmes based on different instructional strategies based on the three different learning styles. For developing the LSBIP, the steps were followed as:

1. Content analysis
2. Lesson planning for each unit
3. The Programme validity
4. Piloting the Programme
5. Final form of instructional lessons based on visual, auditory, and kinaesthetic learning styles

### 5.1.1. Content Analysis

In the present study, four units as OE lessons were developed and selected from the BBC Learning English Programme as the content for the instructional programmes. For preparing the teaching programme, the content of each unit was analyzed. Each unit focused on particular main language functions and each language function has its own exponenents.

The main topic of these units is “How to”. The aim of this programme which was adopted from the BBC Learning English is to provide the students with different language functions and their exponents for to be able to identify the expressions that can be used in daily life. The four units that were selected are: “Discuss”, “Instructions, explanations and advice”, “Complaints, apologies and excuses”, “Good news, bad news”, respectively. In the following paragraphs, the content of each unit is presented in details:

**Topic: How to…**

**Unit 1/ Discuss**

- These programmes are all about language the students can use when they are having a discussion with people. They will learn useful expressions to help them:

  - make suggestions

  - disagree with people

  - express uncertainty

  - take offence

**Unit 2/ Instructions, explanations and advice**

- These programmes cover how to give and accept instructions, explanations and advice. They include:

  - Asking for and giving directions

  - Showing understanding when you are listening to explanations

  - Making recommendations

  - Describing a process

**Unit 3/ Complaints, apologies and excuses**

- These programmes are about the language the students might use to give feedback at work, make a complaint and give praise. The programmes in this section include:

  - Making a complaint

  - Saying sorry

  - Accepting an apology

**Unit 4/ Good news, bad news**

- These programmes are about the language the students can use when they want to give or react to news, including:

  -Congratulating someone on good news

-Responding to someone's bad news

-Giving good news

-Giving bad news

### 5.1.2. Lesson Planning

The lesson planning process is of vital importance for the successful development of the class (Salaberri & Sanchez, 2012, as cited in Tang & Logonnathan, 2015, p. 187). Not many teachers enter a classroom without some kind of plan as lesson plans are systematic records of a teacher's thoughts about what will be covered during a lesson (Richards, 2002, p. 31). Richards (2002) suggests that lessons plans help the teacher think about the lesson in advance to "resolve problems and difficulties, to provide a structure for a lesson, to provide a "map" for the teacher to follow and to provide a record of what has been taught".

The overall framework of this study is to provide different learning experiences of the same instructional content, the same teaching points and the same instructional objectives to the participants. So, the researcher had to plan and implement different instructional strategies that include the participants' preferred learning styles. These instructional strategies could be implemented in different way in different groups of the students where the three experimental groups should be taught by the researcher while the control group should be taught the same instructional programme by its own teacher in the traditional way of teaching (LM). Therefore, a systematic structure of each lesson plan was developed.

When the researcher started the lesson planning, it was of great help to rely on the previous five year experience gained from the teaching experience at the middle school. The researcher already knew that four fundamental questions should be asked whenever a lesson plan is needed and developed. Those questions are; Who am I teaching? What am I teaching? How I will teach it? and How will I know if the students understand? Moreover, when planning lessons, there are three stages to be taken into consideration; 1) the pre to teaching

(icebreakers, games, warmers, lead in), 2) while lesson; which is split into preseantation and practice, and 3) post lesson; which is the productive stage.

In this study, the LSBIP was based on teaching language functions. A function is a reason why we communicate. According to Harmer (2008), "A language function is a purpose you wish to achieve when you say or write (p, 76)". He further claims that by "performing the function, you are performing an act of communication. Functions are a way of describing language use. We can also describe language grammatically or lexically (through vocabulary)". When we describe language through functions we emphasize the use of the language and its meaning for the people who are in the context where it is used (Spratt, Pulverness & Williams, 2005).

Just as stages of teaching grammar, there are three stages of teaching language functions. Though they are criticized for being limited in certain aspects (Skehan, 1996; Richards & Rodgers, 2001; Lewis, 1993), they are still found to be very useful in teaching language functions. The three stages of it are; Presentation, Practice and Production in short P-P-P model. As Willis and Willis (1996, cited in Richards & Rodgers, 2001) state a lesson plan based on PPP should have three phases that are discussed in the following section.

In this study, the researcher measured the participants' oral proficiency (OEA) in terms of their scores on the OEAT. One of the models that has been used to develop speaking skill is the "Presentation, Practice and Production (PPP)", starting with introducing the new teaching content, followed by controlled practice and a free practice. This model aims at moving from accuracy to fluency, focusing on form. The first step, "Presentation", is where the instructor examines how much of the target language the students know. The teacher will then present the language structure, usually with a PowerPoint or on a board. The goal of presentation is to "help the learner acquire new linguistic knowledge" (Ellis, 1992). In the second step called "Practice", there is controlled practice of the target language given to the

students. This could be in the form of worksheets or oral exercises targeted at individual students. The practice provides learners with repetition of the target structure, followed by generating output including these structures (Thornbury, 1999). Practicing really plays a significant role in learning pronunciation and learning lexical chunks. Since accuracy is also regarded as an indicator of the improvement, the main target of practicing is to make learners be able to use the structures to communicate naturally and correctly in real life situations (Ellis, 1992; Thornbury, 1999). The instructor can also check whether learners understand the item presented in the first step or not (Ellis, 1992). The third step, "Production", aims at increasing fluency in linguistic use through autonomous and more creative activities (Criado, 2013). In this step, the students start to produce language more freely. Discussions, oral pesentations, oral or written texts, role plays and problem-solving activities are sample activities in this step.

The PPP model is common teaching model in most college EFL classrooms in, which begins with teachers' presentation of vocabulary, grammar structures, ways to brainstorm and organize ideas, followed by some isolated practice on grammatical rules, cohesion and coherence, and ending with a teacher's written comments on students' written output. In this approach, teachers and students focus on whether the latter's products are readable, grammatically correct and comply with discourse conventions (Nunan, 1989).

The PPP is attractive to teachers because language structures and language functions can be systematically organized in a syllabus. With a list of linguistic contents in a PPP syllabus, teachers and learners can easily identify what will be learned and what will be tested (Lap, 2005). Moreover, PPP is appealing to language teachers and learners because it reflects a notion of "practice makes perfect" and "allows the teacher to control the content and pace of each lesson" as well as provides "a clear teacher role" (Thornbury & Harmer, 1999 ; Skehan,

2003 as cited in Carless, 2009, p. 51). In other words, PPP provides teachers with the power to control their classrooms (Skehan, 1998).

However, since the 1990s PPP has received widespread criticism from scholars such as Lewis (1995) and Willis and Willis (1996). These critics claim that PPP is too linear and behaviorist in nature, and in this way, PPP does not take learners' readiness into consideration (Ellis, 2003). Thus, PPP is unlikely to lead to the successful acquisition of the forms being taught (Skehan, 1996). In addition, Thornbury and Harmer (1999) claim that PPP assumes that accuracy precedes fluency, which is often not the case. Last but not least, PPP is teacher-centered, which does not fit learner-centered frameworks being promoted in contemporary views on education (Harmer, 1991).

Despite the criticism, "the PPP lesson structure has been widely used in language teaching materials and continues in modified form to be used today" (Richards, 2005, p. 8). According to Richard, many lessons in contemporary materials are structured around the three phases of PPP. Kim (2009), in her experience as a writing teacher in Korea, found that PPP was helpful for her IELTS writing classrooms because step-by-step guidance helped her students feel more confident in presenting their opinions in essays, and PPP also gave her more control over the students' learning process so that she could help them better.

In this study, language functions and its exponents were taught as follows; in the first stage of teaching language functions, the teacher (the researcher) presented language functions through conversation or dialogue form a given context (from the BBC Learning English Programme). This stage is a pre-stage for communicative activity. In this stage the teacher has a discussion with the students regarding possible exponents for language function to be taught. Adhikari (2012) states that contextualization, identification of participants, motivation and preparation and descriptions of the social settings of the language use are the some activities that we can use here. This is a pre-communicative activity so the teacher has

to create the context and should give description to the students in order to make them know where and in which context such language functions to be used.

The second stage in which students are given opportunity to practice language functions presented in the first stage. To provide opportunity to practice, they are involved in pair work to conduct mini-dialogues, communicative drills, multiple choice exercices, gap exercices etc were used as means to practice language functions. In this stage the students were made to memorize and learn how to use different exponents appropriately in different contexts. This stage is the most important stage in the PPP model because it includes both variety and frequency of teaching activities. This was the argument why the researcher had to develop 15 sessions for each instructional programme (VIP= 15 lessosn, AIP= 15 lessons and KIP= 15 lessons).

This is the final stage of teaching language functions in which the learners use the language functions freely as in the real life situations. This stage is also known as communicative stage as the learners focus on fluency rather than accuracy. Richards (2006) claims that students practice utilizing new structures and in diverse contexts often using their own content and information in order to develop fluency with new patterns. Role play, oral games, guessing games, interviews, mini exchange, demonstrations etc. were some useful activities to teach language functions.

The PPP model was used in this study mainly because it is easy three staged plan, allows for receptive and productive language skills, and flexible for unit strategy approaches. Moreover, English language is considered as a FL in the Algerian context where it is neither used to teach other subjects nor used outside the classroom, hence an extensive practice of it in the classroom is required and the PPP model can be adopted to achieve such a goal.

From the Placement Test results, it was found that the participants had an intermediate level. So the researcher took into consideration the characteristics of intermediate learners

when developing the LSBIP. An intermediate learner has a moderate oral and written vocabulary • Can carry on limited conversation in English • May use complete sentences, but uses poor grammar • Has difculty with prepositions and verb tenses • Knows few idioms or slang words. Follow the same lesson planning steps for those classes, focusing on the student needs (Richards, 2006).

In this study, the following points involve the systematic steps for developing the lesson plan. It includes:

1. Content or Teaching points
2. Instructional Objectives and Their Specifications
3. Instructional Strategies
4. Instructional Tools
5. Teacher's Activities
6. Students' Activities
7. Evaluation

#### 5.1.2.1. Content or Teaching Points

In the first column of the lesson planning, the subject matter or content is written in the form of main teaching points. In developing the teaching point, the emphasis is laid on analyzing the contents in the forms of concepts, facts, principles, etc. while constructing a unit of a language; it should be analyzed into new vocabulary, new phrases, central ideas, and idioms (Singh 2008).

Teaching points enable the teacher to teach things with a full awareness of the depth of the material. Also they don't allow the teacher to miss any point while teaching, thus a list of teaching points for each lesson in each unit was prepared. For example, for Lesson-1: Make suggestion from Unit-1: How to Discuss, the teaching points included:

- Language for making suggestions: question opener+ subject+ infinitive without ‘to’

  Eg, why don’t I/you/we/they buy …..? Why doesn’t he/she Shall I/we

- Question opener + infinitive without ‘to’.

**5.1.2.2. Instructional Objectives and Their Specifications**

Instructional objectives are concerned with the writing of educational or instructional objectives in clear and concise behaviour terms (Singh, 2008). The researcher had set instructional objectives for each unit according to the content of teaching points. As for example, Lesson-1: Make suggestion from Unit-1: How to Discuss, the instructional objectives were set as: At the end of the lesson, the students will be able to identify the language for when they want to make suggestions.

**5.1.2.3. Instructional Strategies**

Different types of instructional strategies were used for providing desirable teaching-learning experiences. They can be helpful for both teacher and students to understand particular educational point of a lesson easily and clearly. In this study, each lesson plan involved different intructional strategies for Visual student lesson plan, Auditory student lesson plan and Kinaesthetic student lesson plan due to the characteristics of the students. For example, Lesson-1: Make suggestion from Unit-1: How to Discuss, the following instructional strategies were adopted for visual students: Video thechnique- Demonstration method- Use of Highlighter activity, and Drama technique.

**5.1.2.4. Instructional Tools**

A variety of tools can be used in the classroom to support student learning. The instructional tools represent the support system of a lesson (Northrup & Pamela, 2007). It means, at a given stage of planning the teacher should consider the tools that will be required for providing learning experience to the students. For example, for Lesson-1: Make

suggestion from Unit-1: How to Discuss, the following tools were required for visual students: the white board- the flashcards- the handouts- the script.

#### 5.1.2.5. Teacher's Activities

This column describes the "activities the teacher is going to involve students to do during the lesson to attain the predetermined instructional objectives of the activities that teacher is going to of lesson planning, all those activities are mentioned which a teacher performs for the realization of the stipulated objectives" (Jared, 2016, p. 175). This point represents what the teacher has to perform during a particular stage generally in the warm up and in the presentation stage of PPP model. The teacher here has to make a comprehensive list of all the necessary activites. For example, for the Lesson-1, from Unit-1: How to Discuss, the following teacher's activities were listed for visual students.

- Teacher will present the students the conversation on making suggestion from the BBC Learning English office and make them listen to.
- Teacher will show the students with the script to follow up from.
- Teacher will explain that a member of the team is leaving to go and work somewhere else and her colleagues are planning a party for her.
- Teacher will demonstrate some facial expressions and gestures to make the student understand the language function (make suggestion).
- Teacher will explain the grammatical structures and the exponents.
- Teacher will show to the students the flashcards about the expressions they can use as to make suggestions.

#### 5.1.2.6. Students' Activities

The activities undertaken by students for the realization of teaching-learning objectives are mentioned in this column of lesson planning (Singh, 2008). This component stands for the responses of the learners towards the stimulus represented by the teacher. In

other words this component demonstrates how far students will be involved in teaching-learning activity and in which way they will be active in the learning process. The students' activities are maily found in the second P and third P in each lesson plan.

For example, for Lesson-1: Make suggestion from Unit-1: How to Discuss, the following activities were listed for visual students.

- Students will listen to the conversation on making suggestion from the BBC Learning English office.
- Students will observe the script from the handout.
- Students will observe and highlight the expressions used to make suggestions.
- Students will answer different questions asked by the teacher.
- Students answer a five multiple choice question activity to give the correct sentence
- In the third P, students read a script about two friends making plans in a café, and then they answer a couple of questions.
- Students dramatize the scene.
- Students watch a video and then extract expressions used for making suggestions and then substitute them with other expressions.
- Students observe the flashcards and make their own suggestions using the stuctures learnt.

**5.1.2.7. Evaluation**

This step of lesson planning mentioned the evaluation techniques or devices used for finding out the extent to which the stated objectives have been realized through the teaching-learning act. The results of such an evaluation provide the needed feedback to both the students as well as teacher for bringing desirable improvement in the processes of teaching and learning (Singh, 2008). The evaluation is within the third P of the lesson plan, because it is the P where the studetns are provided with free practice, they have completely mastered the

form and learnt how to produce it without mistake in the previous P. The Teacher will make evaluation of students by activities:

For example, for Lesson-1: Make suggestion from Unit-1: How to Discuss, the following activity of the students were listed for visual students:

1. The teacher demonstrates the flashcards and asks them to make suggestions.
2. The students watch the following video and brainstorm the suggestions made.
3. The student read the script about two friends who are at a café making plans for the weekend and answer the questions.
4. The students dramatize the scene.

Below is a sample lesson plan for visual students for Lesson-1: Make Suggestion from Unit-1: How to Discuss in PPP format including all the seven components of the lesson discussed previously and based around receptive and productive skills. The final form of the lesson plan is illustrated in Figure 5.1.

**Unit-1: How to Discuss**

**Lesson Plan One: Making Suggestions**

- **Teaching Points**

  - Language for making suggestions: question opener+ subject+ infinitive without 'to'

    E.g., why don't I/you/we/they buy …..? Why doesn't he/she Shall I/we

  - Question opener + infinitive without 'to'

- **Instructional Objectives**

  - By the end of the lesson, the students will learn and be able to identify the language when they want to make a suggestion.

- **Instructional Strategies**

  - Highlighter activity- Demonstration method – Video technique- Drama technique

➢ **Instructional Aids**

-White board- colorful highlighter- flashcards- scripts

**Warm Up**

- The teacher demonstrates suggestion using gestures and facial expressions about switching on the light because the room is dark.

Eg: why' don't you switch on the light? It is dark in here

-The teacher demonstrates another suggestion using gestures and facial expressions to one student to change his place and come closer.

Eg: why don't you come closer?

- The teacher writes the two suggestions on the white board and asks the students about her intention here? What language or expression has been used to express this intention?

**Stage One: Presentation**

- Teacher should make the students listen and follow up from the script of the conversation on discussion from the BBC Learning English offices.
- Teacher should explain that the team is leaving to go and work somewhere else and her colleagues are planning a party for her.
- -Teacher should then, ask the students to look at some of the expressions they use as they come up with ideas about what to do for the party.
- -Teacher should write down on the board the expressions stated by the students.
- Teacher explain the grammatical structures used in the conversation to make suggestions.
- Teacher asks the students to come back to the script and highlight the expressions and grammatical structures used for making suggestions.

**Stage Two: Practice**

***Activity one:*** Five multiple-choice questions on making suggestions. How well will you do?

For each question highlight the correct sentence

1: What shall we do today?

a: Why don't we go to the cinema? b: Why don't we to go to the cinema?

2: I don't know what to buy mum for her birthday.

a: Why not getting her a painting? b: Why not get her a painting?

3: I don't know what to get my brother for Christmas.

a: Why not you get him some music? b: Why don't you get him some music?

4: I don't know when we should tell her.

a: Let's talking to her tonight. b: Let's talk to her tonight.

5: What time shall we leave?

a: Shall we leave early in the morning? b: Shall we leave to leave early in the morning?

**www.bbclearningenglish.com**

***Activity two:*** Jane is having trouble making suggestions. Most of them have mistakes. Highlight and correct the ones that are wrong.

1. Let's I go to the movie ith you.

2. Let's visit the art museum this weekend.

3. Let's not camping at this park.

4. Let us going to dinner tonight.

5. Why don't you meet me at the library to study?

6. Why do not we go to the concert?

7. Why don't us a vacation?

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***Activity three:*** cross out the terms that are not suggestions. Highlight the terms that are suggestions

| | | |
|---|---|---|
| 1.You have to | 4. Let's | 7.Why don't we |
| 2. Let's not | 5.We must not | 8. Why don't I |
| 3. We must | 6.You can't | 9. We have to |

-Use the highlighted terms to complete the following conversation:

Jeff: Hi Sue. I was wondering if you can help me with my homework tomorrow.

Sue: Sure Jeff. …….meet at Anna's bakery at 9:00 pm?

Jeff: Oh, no……meet so late. I have to get up early the next day.

Sue: Okay. If xe can't meet at nine, ……..try to get together in the morning.

Jeff: But I have an English class in the morning.

Sue: Well, it seems like we aren't going to be able to meet at all!.....just send you the answers to the homework problem?

Jeff: But that would be cheating!

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**Stage three: Production**

***Activity one:*** The teacher demonstrates the flashcards and asks them to make suggestions

I just won the lottery

I have just bought a new car

My favorite musician is going to play tonight


it is my birthday today

it is raining today

The bus is too late and need to get there quickly


I wish I could get a cup of coffee right now

I have a big exam next week

***Activity two:*** watch the following video. How many times does someone make a suggestion? Brainstorm the suggestions made.

**http://www.bbc.co.uk/learningenglish/english/features/english-at-work**

***Activity three*:** Read the script about two friends who are at a café making plans for the weekend and answer the following questions

1. What were John and Mary talking about?
2. What did John suggest for Mary?
3. Find out the expressions used by john to express his suggestions?
4. How did Mary respond to John's suggestions?

- Dramatize the scene

***The script***

John: Hi Mary! What are you doing this weekend?

Mary: I am not sure. What would you like to do?

John: why don't we get to the concert at Symphony Hall on Sunday?

Mary: I am busy on Sunday. Let's do something on Saturday instead.

John: why don't we go to a movie?

Mary: that sounds better. Let's go to the Rocky Horror Picture Show. I have not seen that in a long time.

John: let's no go to the *Rochy Horror Picture Show*. I don't really like that movie, and there are always so many eccentric people in the audience. I would rather go to see *Beaty and the Beast.*

Mary: Okay, Where is the movie showing?

John: it's showing at the Old-Time theater downtown. It's at the intersection of 7th Street and Brown Avenue.

Mary: Why don't we meet for dinner first? I heard there is a fantastic French restaurant near there.

John: I don't think we should go out for French food. I am sort of broke, and French food is always expensive. Let's get some Chinese food instead. That's a lot cheaper.

Mary: I guess so, but the last time I had Chinese food I had a stomachache. The food is too spicy, and I have a really hard time eating with chopsticks. Why don't we just get a hamburger?

John: Perhaps you are right. Now that I think of it, the movie starts very early. It might be too early in the evening to have dinner before the movie.

Mary: well, let's have dinner after the movie then. We can go to the pub on 9th Street. They have good food there. What do you think?

John: I think that is a fantastic idea! Let's do it!

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**Figure 5.1: Visual Lesson Plan One: Making Suggestions**

### 5.1.3. Programme Validity

The LSBIP is adopted from The BBC Learning English Programme which is supposed to be valid. However, because some modifications were made, the researcher sought to take sample lessons from the Programme to be given to EFL teachers and to the expert who approved it and suggested some modifications. To validate the lesson planning done by the researcher, all the lesson plans of the four units; fifteen lesson plans of visual student, auditory student and kinaesthetic student were given to OE teachers and TEFL teachers for their comments. After getting feedback on lesson plans changes were made according to these comments and the suggestions were incorporated.

### 5.1.4. Piloting the Programme

The researcher piloted the instructional programme by taking two lessons from unit one *Discuss, one lesson from unit two *Instructions, esplanations and advice, one lesson from unit three * Complaints, apologies and excuses and one lesson from unit four *****good news, bad news, and were tried out during the phase of the pilot study considering the following objectives:

1. To decide appropriateness of the content for each lesson.
2. To find whether the strategies are appropriate or not.
3. To decide the appropriatness of the activities developed by the researcher.

After tryout of the lessons from each unit, necessary changes in planning were made. Some materials were added to the Programme, and some added activities were developed by the researcher. Besed on these changes, the following points were raised:

- Determining the time taken by the students to do the tasks and practice the different activities.
- Determining to what extent the students enjoyed the tasks, the supplementary listening texts and activities included and added to the Programme

- Experimenting the activities and instructional startegies used in the Programme.
- Give proper experience to Visual student, Auditory student and Kinaesthetic student according to their characteristics.

### 5.1.5. Final Form of Instructional Programme

After the pilot study and getting teachers' and expert's opinions and comments, teaching programmes were finalized. They consisted of the following characteristics.

1. All of the programmes were based on content of four units: *Discuss, * Directions, instructions, and advice, * Complaints, apologies and excuses,* Good news, bad news.
2. The programmes consisted of 15 lessons. The classification of total lessons according to different instructional programmes is given Table 5.1.

**Table 5.1**

**Classification of Total Lessons of Instructional Programmes**

| The Units | Instructional Programme | | |
|---|---|---|---|
| | VIP | AIP | KIP |
| Discuss | 04 | 04 | 04 |
| Directions, instructins and advice | 04 | 04 | 04 |
| Complaints, apologies and excuses | 03 | 03 | 03 |
| Good news, bad news | 04 | 04 | 04 |
| Total Lessons | 15 | 15 | 15 |

3. Each lesson was presented according to the PPP model and consisted of seven components; instructional objectives, teaching point, instructional strategies, instructiona tools, teachers' activities, students' activities, and evaluation.
4. To implementation of each lesson took between 90 and sometimes to 100 minutes. It depended on the material and the activites used.

5. The lesson plan format was the same for all three groups – visual students group, auditory studensts group and kinaesthetic students group.

Detailed lesson plans of Visual Instructional Programme, Auditory Instructional Programme and Kinaesthetic Instructional Programme are given in Appendix S, Appendix T, and Appendix U respectively.

**5.2. Development of Instructional Materials for Different Instructional Programmes**

In the current study, there experimental groups were selected according to the three types of students' learning styles (VAK students). To provide them with teaching experience according to their learning style, three instructional programmes were developed. Therefore, the researcher had to develop three different instructional programmes including some instructional strategies that were appropriate to the nature of the content, the characteristics of the students, the learning context and the desired learning outcomes. These issues must guide the selection of the teaching strategies.

In each Instructional Programme, instructional materials were required for every instructional strategy. Therefore, the researcher developed instructional material appropriate to the content and instructional strategies for each programme following the steps as below:

1. Content analysis and the instructional strategies
2. Selection of instructional strategies for the content points
3. Development of instructional material for different students
4. Try-out of instructional material
5. OE teacher's opinion on the instructional material
6. Final form of the instructional material.

**5.2.1. Content Analysis and the Instructional Strategies**

The content of the selected teaching units were analyzed taking into consideration the instructional strategies (i,e the purpose of this content analysis was to figure out and decide upon

which instructional strategy will most be appropriate for a teaching point. For example, teaching Unit-1: How to discuss including the following lessons: *making suggestions, *disagree with people *express uncertainty * take offence, on one hand should be appropriate in terms of vocabulary, activities, tools, techniques and methods etc. On the other hand, different students having different learning style will prefer to use different instructional strategies for learning these content points. Therefore, they should be provided with different learning experiences. Therefore, for the visual students visual instructional strategies were most appropriate for teaching of all these content points, whereas for the auditory students, auditory instructional strategies were most appropriate, and for teaching the kinaesthetic students, kinaesthetic instructional strategies were most appropriate.

### 5.2.2. Selection of Instructional Strategies for the Content Points

The researcher had to review the characteristics, teaching strategies, suggestions and learning strengths of visual, auditory and kinaesthetic students as it was raised in chapter two, and then decided upon the appropriate strategies for each type of students. A content analysis was made and, the appropriateness of instructional strategies for each type of students was studied.

The instructional strategies selected for each type of students are presented in the Figure 5.2.

Instructional Strategies

↓

| Visual Students | Auditory Students | Kinaesthetic Students |
|---|---|---|
| - Demonstration Method | - Lecture method | - Cut and Paste task activity |
| - Video technique | - Group discussion Method | - Games Activity |
| - Drama Technique | - Tape Recording Technique | - Role Play |
| - Use of Highlighter Activity | - Brainstorming Activity | - Puzzles |
| - Mind Mapping | - Verbal games activity | - Group work activity |

**Figure 5.2: Instructional Strategies Selected for Instructional Programmes**

According to Figure 5.2, five instructional strategies for Visual students, five instructional strategies for Auditory students and five instructional strategies for Kinaesthetic students, were selected for developing the instructional materials.

### 5.2.3. Development of Instructional Materials for Different Students

When developing the teaching instructional material, the researcher took into consideration the following two measures: the content points and the different learning style of the students. It means that all the students cannot learn all the teaching content points by using just one of the instructional material (i,e visual students having visual learning style cannot be comfortable with the instructional material through which auditory students or kinaesthetic students are more comfortable with. So considering these two measures, instructional materials were developed based on different instructional strategies.

#### 5.2.3.1. Development of Instructional Material for Visual Students

For visual students, five instructional strategies were selected after reviewing the selected literature regarding the VAK students' instructional strategies. For each instructional programme; instructional strategy, instructional material and guidelines for using it were discussed.

##### 5.2.3.1.1. Preparing Instructional Material based on Demonstration Method as an Instructional Strategy

In teaching English, the teacher can present and perform the material of vocabulary and language functions by using demonstration method. That is gesture or action is showed to the students to introduce the new vocabulary. McNeill (2005) says, "Gesture in initial, action, part highlights the other approach, which of gesture as part of the social interaction in which the person participates. Part of the story of gesture is the role that it performs in interaction: gesture as something engaged in our social lives." From the explanation above, the teacher can present the vocabulary by using demonstration method

through mime, action, role play, or gesture because that is more effective and easy to be understood for students. But, the materials have to be adapted when using demonstration method such as about verb, adjectives, or nouns (Linse, 2005).

The researcher selected many audio conversations with their corresponding scripts from the BBC Learning English Programmed for Today,( last updated version in 2013) that explains the language functions and their exponents presented in all the four units in this study. These audios were used in order to provide all the students with the same input to avoid creating an effect of an extraneous variable. However, for visual students, in the first P which is the presentation stage, the teacher (the researcher) showed them the scripts and at the same time demonstrated the language functions using gestures, flashcards, pictures, images and mimes. So, four audios were selected for the unit-1 'discuss, four audios for unit-2 "instructions, explanations and advice", three audios for unit-3 "complaints, apologies and, excuses" and four audios for the unit- 4 " good news and bad news" with their scripts . Moreover, in the third P which is the Production stage, the teacher showed the visual students video conversation about making suggestions to take into account the particiapation of the students. For using demonstration method in the VIP, the researcher followed these steps.

- The demonstration should be planned in advance.
- Teacher should make the students listen to the conversation and follow up from the script to observe the language functions presented in each lesson of each unit.
- Teacher should explain using facial expressions, pictures, flashcards and cartoon to help students understand the language functions.
- The teacher should maintain the interest of the students by sometimes acting as a 'showman' or an actor.

- The teacher should be clear about the purpose of demonstration and should know beforehand the aims of the demonstration, the generalizations to be made and the attitudes to be developed while demonstrating.
- The teacher should ask the students to write what they observe.
- The teacher should then proceed to demonstrate in the light of these aims (McNeill, 2000).

#### 5.2.3.1.2. Preparing Instructional Material based on Drama Method as an Instructional Strategy

Drama is a technique which presents audio-visual learning experience for learners. This technique can be used in the classroom on particular teaching point with the help of students and teachers. Moreover, drama technique can be used with visual, auditory and kinaesthetic learners because as it was stated earlier (literature review) though Murphy et al., (2004) postulate that every student has his /her own learning style (one dominant learning style), Tsang, Kwan and Tse (2007, as cited in Kwan, McNaught, Tsang, 2011) comment that some students may have more than one learning style and therefore there is no clear-cut in determining one's learning style.

In drama technique two or more students can participate (McNeill, 2000). In this study, Dramas on particular teaching point were prepared and adopted (some were ready made while others were designed). Many suggestions were incorporated on drama scripts. Students were prepared for particular drama on particular teaching point under guidance of the teacher. Teacher gave lots of practice to them. The aim of the drama was to make easy and give visual experience. The students are very interested in drama (Robinson, 2001). For using this strategy, the researcher followed these steps:

- the teacher should use drama that is relevant to the syllabus, the chance to increase awareness of paralinguistic features, linguistic accessibility, intrinsic interest,

practicability in terms of lesson time, student numbers and space, and the possibility of using dramatic activities in the future, thereby providing continuity. The teachers ought to have a clear idea of what they want to achieve in both general and specific terms.

- The teacher should explain and discuss with the studens the theme of the drama.
- The teacher should ask what the students will need to do in the language to successfully carry out the activity, ask if the students know any of the phrases they are likely to need to express these functions, and ask which functions will be called upon (Maley & Duff 1984, p.24 as cited in in Davies, 1999).
- The teacher should present the idea, theme, or problem to the students, organizing any preliminary work and making sure that the students know precisely what to do.
- The students should discuss in groups what they are going to do and exactly how they are going to do this. (Holden, 1982, 1982, p. 14, as cited in Davies, 1999).
- In developing the VIP for EG1, the teacher prepared and adopted total eight drama scripts on different teaching points (see Appendix S).

#### 5.2.3.1.3. Preparing Instructional Material based on Highlighter Activity as an Instructional Strategy

This activity is useful for a visual learner to show him the key word of the topic or sub-topic. Generally mind accepts immediately highlighted points which learner makes during reading or writing activity. Highlighter activity is very useful for visual students. The teacher used this activity bearing in mind the following procedures:

- Highlighting words from the script used to teach different teaching content.
- The Highlighted words, exponents and vocabulary are selected after reading the particular point carefully.
- Use colorful highlighter for different points.

- Introduce students to the Selective Highlighting/Underlining strategy and discuss the purpose of the activity (i.e., focus on vocabulary, main ideas, etc.).
- Highlighting only the facts which are important or the key vocabulary or the expressions but not the entire sentence.
- Teachers asked students to use various colors of highlighters to identify main ideas from details (e.g., use orange to represent main ideas and yellow to represent supporting details) (Jones, 2006).

#### 5.2.3.1.4. Preparing Instructional Material based on Video Technique as an Instructional Strategy

Videos are important in educational applications. It is one of the best technologies which provide learners with an opportunity to view and learn in interesting, attracting, and motivating way. According to Sherman (2003, p.1), "videos are any kind of programs that we can see directly on cinema, television or DVD, films, documentary, advertisement, and game show". Videos can be used as resources to learn English with enjoyment and give us a lot of advantages. Cooper (1991, p. 11) stated that "video is a super charged medium of communication and a powerful vehicle of information. It is packed with messages, images, and ambiguity, and so represents a rich terrain to be worked and reworked in the language learning classroom. Video activity is very helpful with visual students. The teacher when used the videos, took into consideration the following:

- The video should identify a clear topic to be discussed, a question to be answered or an objective to be reached. Because an eduacational video should begin by stating the topic and objectives.
- The content of the video should be accurate (in terms of level and culture)
- There should be a balance between educational content and entertainment. The video should contain an educational value and entairtainment.

Most videos used in the VIP are adopted from the BBC Learning English, BBC Learning English at Work, Daily English Conversation Practice. To that end, these videos were eduacational videos and were suitable for learners with intermediate level as in the case of the sample of this study.

#### 5.2.3.1.5. Preparing Instructional Material based on Mind Mapping as an Instructional Strategy

The aim of the mind mapping strategy is to improve the students' deeper understanding of words through portraying the relationships between and among words (Graves, 2006). Word maps are visual displays of word meanings organized to portray relationships with other words. Research findings revealed that to develop students' vocabularies, teachers need to promote in-depth word knowledge (Beck et al., 2002). The mind mapping strategy, is one of the most powerful approaches to teaching vocabulary because it engages students in considering words and concepts relationships (Graves, 2006). The teacher used this strategy according to the following:

1. the words to be taught should be carefully selected. Select words and concepts by considering the words that are crucial to understand the text.
2. Project a blank word map on the white board. Show how to develop a word map and illustrate to students how to apply the word map for building and exploring word associations.
3. Write the key words on the word map. In each blank, the teacher illustrates the key words that will be taught.
4. Use the think-aloud strategy to (a) illustrate word relationships; (b) think about the meaning of the key word or related words; (c) show how to further the meaning of the word by examples, synonyms and antonyms, of the word; (d) find the definition of the word in a dictionary and find its diverse uses in different context or a discussion with another student

about the word's meaning; and (e) draw a map of the word to illustrate its meaning in context.

5. Students present and share their maps to and with the class. During this sharing period, students use the information on their word maps to develop and expand the class map. Students write new information on the group map and are encouraged to revise their own word maps to incorporate these new ideas (Brinkmann, 2003).

The details of the VIP are given in table 5.2.

**Table 5.2**

**Detailed Visual Instructional Programme**

| Unit | Topic | Strategy Used |
|---|---|---|
| 1.Discuss | - make suggestions<br>- disagree with people<br>- express uncertainty<br>- take offence | - Drama technique - highlighter activity – video technique.- demonstration method<br>- As per lesson- 1<br>- Demonstration-video technique- highlighter activity- mind map activity -As per lesson -1 |
| 2. Instructions, explanations and advice | - asking for and giving directions<br>- showing understanding when you are listening to explanations<br>- making recommendations<br>- describing a process | - Demonstration- drama technique- Highlighter activity- video technique<br>- Demonstration-drama technique - video technique- mind map<br>- Demonstration- video technique - highlighter activity-<br>- Demonstration-highlighter activity- video technique |
| 3. Complaints, apologies and excuses | - Making a complaint<br>- Saying sorry<br>- Accepting an apology | - Demonstration-drama technique- highlighter activity- video technique<br>- Demonstration- highlighter activity-<br>- video technique<br>- Demonstration-drama technique- highlighter activity-video technique |
| 4. Good news, bad news | -Congratulating someone on good news<br>-Responding to someone's bad news | -Drama-dmonstration-highlighter activity- video technique<br>- Demonstration method-highlighter |

| | | |
|---|---|---|
| | -Giving good news<br><br>-Giving bad news | activity- drama technique- video technique<br>- Demonstration method-video technique- highlighter activity-drama technique<br>- Demonstration method-drama technique-highlighter activity-video technique |

### 5.2.3.2. Development of Iinstructional Material for Auditory Students

Based on the previous literature review (chapter two), Out of different instructional strategies researcher opted for some appropriate strategies keeping always into consideration the teaching points and the characteristics of Auditory students. For Auditory students, five instructional strategies were selected after reviewing the literature regarding instructional strategies. For each instructional strategy, instructional material and some guidelines for using it were discussed.

#### 5.2.3.2.1. Preparing Instructional Material based on Lecture Method as an Instructional Strategy

Lecture method is possibly the most popular and widespread teaching method, in which the teacher is the center of the class. He gives information and the students listen to take notes. It is a simple method for teaching. Teacher can use it for every teaching point(Surgenor, 2010). A proper lecture note on particular topic is to be prepared by teacher including full of examples. The best way to implement the lecture method is in its use in accordance with other teaching methods; this helps the students retain their interest, motivation and attention, allows for more student participation, and emphasizes different learning styles (Surgenor, 2010).

The teacher followed the following guidelines as suggested by Kumar et al., (1992) to use the lecture method.

1. Teacher should choose the occasions for his lectures with great care. The lecture should be carefully planned, on the lines of a development lesson plan.
2. The teacher should develop a personality that evokes warmth and enthusiasm. His/her voice, facial expression, diction and gestures should be pleasant and suited to the lecture at hand.
3. Lecture method should be provided with appropriate and relevant materials to make them interesting, meaningful and easier to understand.
4. The teacher should be sensitive to non-verbal reactions of the students during the lecture process. So that to counteract the boredom in class.
5. Lecture is including full of examples, events or short stories.
6. The teacher should encourage students to ask questions if there are points in the lecture which are not clear to them. If nobody does this, he/she should be the one to ask questions. Doing so will enable him/her to evaluate how well the lecture was understood.

#### 5.2.3.2.2. Preparing Instructional Material based on Group Discussion as an Instructional Strategy

Classroom discussion is one of the most vital class strategies for improving students' communicative ability; it is gradually being applied to teach English as a foreign language. Classroom discussion refers to any classroom activity in which the whole class is divided up into pairs or larger groups. Hess (2009) described discussion as a public speak about something upon which the group looks for improving its knowledge, understanding and/or judgment and it will be of a suitable form.

Group discussion is the good method for auditory students. The teacher followed William's (1989) the suggested guidelines when using this method which were followed by the researcher in tis study:

1. Teacher should conduct the group discussion process in such a way that students can get proper guidance and direction so discussion can be concentrated on the topic.
2. In any topic, if students get confused teacher should give them proper guidance by asking questions, and then group discussion can be continued.
3. Students are to be divided in the group of 5 to 7. Planning has to be done in such a way that every student can actively participate.
4. Instructional planning has to be done in such a way that proper discipline can be maintained and proper group can be made involved in Group Discussion.
5. For the group proper seating arrangement should be done, so faces can be seen by each other.

#### 5.2.3.2.3. Preparing Instructional Material based on Brain Storming Activity as an Instructional Strategy

In this technique students do mental exercise and think divergently to get the answer of the activities like educational puzzles. Brain storming activity is much useful for student because of it direct to think over relevant topic, in all direction (Litchfield, 2009). Following guidelines can be used when preparing teaching material based on this strategy:

1. Teacher should have much logical details to make puzzles for brainstorming.
2. Teacher should know right answer or details before given to students.
3. It is necessary that whole class participate in this activity.
4. Divide the class into small groups (4-6).
5. Classify the small groups in separate sections of the classroom, making sure that someone in the group has paper and pencil to write down the ideas suggested in the brainstorming session (a recorder).

#### 5.2.3.2.4. Preparing Instructional Material based on Tape Recording Technique as an Instructional Strategy

The tape recoreder is one of the audio media with great possibilities fro increasing the effectiveness of learning. They provide certain contextual aspects and some extra linguistic elements that help in the understanding of texts and messages (Wilson, 1980) . They also allow fro the participation of students through repetition and recording activities. Tape recording technique was prepared following the listening materials, in the form of audio tapes, cassettes, or CDs are played with the help of tape-recorder and CD player. It gives audio experience to the students. Recording had been done at the beginning of each teaching point. In this technique the researcher had to make sure that the words of sentences were slow, proper and clear.

According (Wilson, 1980) the Following guidelines can be prepared for teacher using this material:

1. The teacher must be familiar or practice the basic functioning of the tape recorder before using it in the classroom setting.
2. Proper functioning of the tape recorder cassette must be ensured by the teacher before final use in the classroom.
3. The teacher must prepare, customize and practice the tape-recorded lesson before use in the actual classroom.
4. The teacher must prepare tape-recorded material and catalogue it properly.
5. The teacher should place the tape-recorder in the center of the classroom, so that it is audible to all students.
6. The teacher should ensure that external disturbances are minimized.
7. Recording was done that much only as per required according to topic.

### 5.2.3.2.5. Preparing Instructional Material based on Verbal Games Activity as an Instructional Strategy

El Shamy (2001, p.15) defines a game as "a competitive activity played according to rules within a given context, where players meet a challenge to achieve an objective and win". The verbal games are which can be performed in the classroom context, with words or sentences in two or more groups in order to test one particular teaching points. Byrne (1995) states that are not just a diversion, a break from routine activities, but a way of making the learner to use and practice the language in the course of the game and they ought to be fun, enjoyed and stress remover however they should be governed by some rules. These rules, comprises : creating competition between learners, relaxation and specifically learning, have to be clear, well-explained so as no obstacle is faced. Games sould be designed to meet the teaching and learning objectives in terms of different levels as well as topics that suit different students' levels what make them enjoy and have fun all together and achieve the desired results (Byrne,1995) .

Based on the teaching point and the instructional objectives, the teacher developed and used some verbal games with auditory students. e.g. one verbal game was developed to teach lesson two 'showing understanding' from unit two 'Instructions, explanations and advice'. The following guidelines were prepared by the teacher using this material:

1. Teacher should develop a verbal game that contains easy words, sentences and examples.
2. Teacher should also say the objective related to these games.
3. Teacher should make the whole class participate in games.
4. Teacher should create a friendly and let students have fun and enjoy the game (Byrne,1995).

A detailed AIP is given in Table 5.3.

**Table 5.3**

**Detailed Auditory Instructional Programme**

| Unit | Topic | Strategy Used |
|---|---|---|
| 1.Discuss | - make suggestions | - Lecture method- discussion method- tape recording technique |
| | - disagree with people | - Lecture method- discussion method- tape recording technique brainstorming activity-verbal game activity |
| | - express uncertainty | - Lecture method- discussion method- tape recording technique-verbal game brainstorming activity |
| | - take offence | - Lecture method- discussion method- tape recording technique- brainstorming activity |
| 2. Instructions, explanations and advice | - asking for and giving directions | - Lecture method- tape recording technique- brainstorming activity- discussion method |
| | - showing understanding when you are listening to explanations | - Lecture method- discussion method- tape recording technique- verbal game- brainstorming activity |
| | - making recommendations | - Lecture method- discussion method- tape recording technique |
| | - describing a process | - Lecture method- discussion method- tape recording technique brainstorming activity- verbal game |
| 3. Complaints, apologies and excuses | - Making a complaint | - Lecture method- discussion method- tape recording technique- brainstorming activity |
| | - Saying sorry | - Lecture method- discussion method- tape recording technique- brainstorming activity |
| | - Accepting an apology | - Lecture method- discussion method- tape recording technique- brainstorming activity |
| 4. Good news, bad news | -Congratulating someone on good news. | - Lecture method- discussion method- tape recording technique- verbal game- brainstorming activity |
| | -Responding to someone's bad news. | - Lecture method- discussion method- tape recording technique- verbal game activity- brainstorming activity |

| | | |
|---|---|---|
| | -Giving good news | - Lecture method- discussion method- tape recording technique- verbal game activity- brainstorming activity |
| | -Giving bad news | - Lecture method- discussion method- tape recording technique- verbal game activity- brainstorming activity |

#### 5.2.3.3. Development of Instructional Material for Kinaesthetic Students

Again, the researcher selected some appropriate strategies out of teaching strategies that have been found in the literature review keeping in mind the characteristics of kinaesthetic student. For Kinaesthetic students, four instructional strategies were selected. For each instructional strategy, instructional material and guidelines for using it were prepared.

##### 5.2.3.3.1. Preparing Instructional Material based on Cut and Paste Activity as an Instructional Strategy

Cut and Paste activity is designed to help the classroom teacher reinforce tne content and its vocabulary. After participating in activities related to each topic, students will have an opportunity to interact with concepts and vocabulary by completing the corresponding activity pages. The following guidelines were prepared for teacher using this material (Smith, 2003):

1. At the very beguining, the teacher should revise the teaching points and functions, and then decides what matter is to include in cut and paste activity.
2. Teacher should use this activity as an assessment activity to see if the students have mastered the content area knowledge.
3. Teacher should guide the students to prepare a journal of cut and paste task activity of relevant subject.
4. Teacher should give understanding of particular teaching on when students do the activity of cut and paste.

#### 5.2.3.3.2. Preparing Instructional Martial based on Games Activity as an Instructional Strategy

Body games are fun activities that increases interaction, thinking, learning, and problem solving strategies (Foreman, 2003). Often, games are characterized by the aspect of allowing the players to perform information in a short period of time. A faw body games make the players engage in a physical activities while completing mental learning activities (Amy, 2010). Games help to construct a constructivist classroom environment where students and their learning are central (Foreman, 2003). "Learning through performance requires active discovery, analysis, interpretation, problem-solving, memory, and physical activity and extensive cognitive processing" (Foreman, 2003, p.16).

Furthermore, the teacher through games would be able to observe each learner and see what areas the inviduals or the group is struggling with or excelling at as well as the social interaction and dynamics of the group (Amy, 2010)."The learning process should be interesting, easy and it should be fun to learn. It also should fit with an everyday task and the working environment in order to achieve optimum results" (Pivec & Dziabenko, 2010, p.1). According to Amy (2010), the following guidelines were preparedtaken into consideration by the teacher (researcher) while using this material:

1. Before using games, they must have clear learning objective and purposes. Te teacher should clearly define what the students are going to learn and practice through the activities and procedures of the game.
2. The teacher should classify the students into groups or teams to stimulate competition. The grouping may depend on many things but it should ultimately depend on the activity the students will be achieving.
3. The teacher should be certain to explain all necessary procedures and rules clearly, simply and slowly.

4. The teacher should be consistent and fair. If necessary, use a timer to make sure that everyone has the same amount of time to answer.

5. It is necessary that all student participate in playing games.

#### 5.2.3.3.3 Preparing Instructional Material based on Role Play as an Instructional Strategy

Role-playing provides students with "opportunities to explore and practise new communication skills in a safe, non-threatening environment, express feelings, and take on the role of another person by "walking in another's shoes" ( Burke,1994, p.354). According to (Barrie et al., 1991), the following guidelines were prepared and taken into consideration by the teacher (researcher) while using this material:

1. Explain the role play activity for the students and the learning objectives.

2. The teacher should give students the freedom to choose their partners.

3. Provide a limited time for students to develop and practise their role-plays.

4. Provide students with some suggestions for participating and observing their classmates.

5. The teacher should ask the students to be good listeners, being quiet, attentive and serious during the role-play.

6. The teacher asks the other students who are watching to show support by clapping and using positive words of encouragement and feedback.

7. Laugh at the appropriate moments. Do not laugh at role-play participants.

#### 5.2.3.3.4. Preparing Instructional Material based on Puzzles as an Instructional Strategy

A puzzle-based activity creates a broader contextual framework, and stimulates critical thinking and logical reasoning skills that can then be used to develop a student's performance on content specific assessments (Merrick, 2010). According to (Merrick,

2010), the following guidelines were prepared and taken into consideration by the teacher (researcher) while using this material:

1. The teacher should introduce the strategy and explain the learning activity.
2. Assign the students into groups and teams.
3. Determine a set of reading selections and assign one selection to each group or team.
4. Give all the group memebers a framework for managing their time on the various parts of the puzzle activity.
5. The teacher sould provide students with clear questions to help them gather information appropriately without loosing time.
6. The teacher sould encourage the groups by telling them that the winners will be rewarded.
7. The teacher should all the time remind the students of the learning objective of the learning activity based on the puzzle.
8. The teacher should ask the participants to enjoy the activity and try their best.
9. The teacher should from time to time provide students with assistance to work on the puzzle if they ask for.

#### 5.2.3.3.5. Preparing Instructional Material based on Group Work Activity as an Instructional Strategy

Group work is one of the most interesting and effective instructional strategies that can be applied in the EFL classroom to help students aquire better learning. It can increase student motivation and is an important life skill as well (Kutnick & Blatchford, 2013) Effective group work activities " provide opportunities for your students to work together, either with a partner, a small group, or the entire class, to accomplish a task. In these instances, everyone has a specific role, and there are clear individual and shared responsibilities" ( Roskelly, 2003, p. 192). According to Roskelly (2003), the following

guidelines were prepared and taken into consideration by the teacher (researcher) while using this material:

1. The teacher should first determine how to organize the classroom groups. He/she have to decide whether the students will work in pairs, or groups of four, or six or some other organization? Here the teacher should have a balance , whichever seems more appropriate for the task
2. The teacher should explain the task and model it with several students
3. The teacher should set a time limit
4. When the students practice theactivity in groups , the teacher should move around the class and give help as needed.
5. The teacher should allow the students to select their group members.
6. The teacher should break the ice and let students laugh and enjoy the activity while working together
7. The teacher should make sure that hole class is involved.

A detailed AIP is given in table 5.4.

**Table 5.4**

**Detailed Kinaesthetic Instructional Programme**

| Unit | Functions | Strategy Used |
|---|---|---|
| 1.Discuss | - make suggestions<br>- disagree with people<br>- express uncertainty<br>- take offence | - Role play- group work activity-<br>- Role play- group work activity- cut and paste activity<br>- group work activity- cut and paste- puzzle<br>- cut and paste –game- group work |
| 2. Instructions, explanations and | - asking for and giving directions<br>- showing understanding when you are listening to explanations | - Role play- bodygame- group work activity- puzzle<br>- Role play-game- group work activity |

| | | |
|---|---|---|
| advice | - making recommendations<br>- describing a process | - Role play- cut and paste- body game- group work activity<br>- Group work activity-puzzle |
| 3. Complaints, apologies and excuses | - Making a complaint<br>- Saying sorry<br>- Accepting an apology | - Role play- cut and paste- group work activity<br>- Role play- group work activity<br>- Group work activity-role play-puzzle- game |
| 4. Good news, bad news | -Congratulating someone on good news<br>-Responding to someone's bad news<br>-Giving good news<br>-Giving bad news | - Role play- group work activity-body game<br>-puzzle-game-group work activity-role play activity<br>- Role play- - Group work activity-role play- body game activity<br>- Group work activity-role play-body game activity |

### 5.3. Global Instructional Programme

In this group, students were taught the same four unit under the title How to from the BBC Learning English Programmed: *Discuss, *Instructions, explanations and advice, *Complaints, apologies and excuses, *Good news, bad news, were taught to this group through traditional teaching method. So, this group is considered as a Control Global Students Group. The Global Students Group represents the control group (CG4) in this study where it receives no treatment. The Control Global Group cosnsited of 38 participants; where 15 were Visual students, 12 were Auditory students, and 11 were Kinaesthetic students.

### Conclusion

In this chapter, the LSBIP was developed. The participants were devided into three experimental groups; EG1 for Visual students, EG2 for Auditory students, and EG3 for Kinaesthetic students. Consequently, three LSBIP were developed; VIP, AIP, and KIP. The

VIP was developed by selecting some tinstructional strategies (demonstration method, drama technique, highlighter activity, mind mapping activity and video technique) form the literature review according to the teaching points and the material to be taught. The AIP was developed by selecting some instructional strategies (group discussion method, tape recording technique, brain storming activity, lecture method, and verbal games) according to the teaching points and the material to be taught. Finally, the KIP was developed by selecting some instructional strategies (cut and paste activity, games activity, role paly, puzzles, and group work activity) according to the teaching points and the material to be taught.

# Chapter Six: Findings and Discussions

## Introduction

This chapter presents the findings, the statistical analysis of the collected data and the discussions of the obtained results. This statistical analysis was done pursuing different statistical techniques. The interpretations and discussions of the analyzed data have been presented in reference to the objectives and hypotheses of the study.

## 6.1. Methods of Data Analysis

Many statistical methods and techniques are available for the analysis of data, but appropriate statistical techniques should be selected that suit the research problem. In the present study, a quasi-experimental design was opted for in order to test the null hypotheses. There were four groups of scores: 1) the pre-test scores of the control group, 2) the pre-test scores of the experimental group, 3) the post-test scores of the control group, and 4) the post-test scores of the experimental group. In this study, the T-test was used ( the T-test is used to compare the means from two independent samples i.e. two groups that have different people in each) to determine whether the null hypothesis is accepted or rejected (Chumney, 2006). The independent sample T-test analysis was used to determine whether the means from two separate groups are significantly different when the groups are normally distributed (A normal distribution is an arrangement of a data set in which most values cluster in the middle of the range and the rest taper off symmetrically toward either extreme), and the analysis of covariance (ANCOVA) was used to analyse the post-tests scores for the control and the experimental groups with respect to CASE, SH, and ASC as covariates. The ANCOVA is used in two major ways; as a technique for globalling extraneous variables and as a mean of increasing power (Chumney, 2006).

ANCOVA an extension of ANOVA that provides a way of statistically controlling the (linear) effect of variables one does not want to examine in a study (Vogt, 2011, p.9). These extraneous variables are called covariates, or control variables. ANCOVA allows us to remove covariates from the list of possible explanations of variance in the dependent variable. ANCOVA does this by using statistical techniques (such as regression to partial out the effects of covariates) rather than direct experimental methods to control extraneous variables (Vogt, 2011). ANCOVA allowed the researcher to adjust the participants OEA achievement scores in order to determine if the experimental groups and the control group still have different OEA scores after making the adjustment (Leech, Barrett & Morgan, 2005).

The function of ANCOVA is that increases the power of a statistical ability to reject a false null hypothesis, that is, to make a corrected decision to reject the null hypothesis. In this chapter the analysis of the data is presented in two phases; the first phase, the analysis has been performed to measure the statistical difference between the experimental groups and the control group in the pretest. The second phase deals with the analysis to examine the effect of each Instructional Programme on OEA of Auditory, Visual and Kinaesthetic students considering CASE, SH, and ASC as the covariates in the posttest.

## 6.2. Study Results

The current study was conducted to examine the effectiveness of LSBIP on students' OEA. This section presents the findings of statistical analyses of the data gathered to answer the research questions of the study and to test the research null hypotheses either by confirming or by rejecting them. Moreover, the obtained results were discussed.

### 6.2.1. Identification of the Match or Mismatch between Teaching Strategies, Styles, and Learning Styles

This section provides the results of the observation, the questionnaire, the focus group discussion and the semi structured interviews carried prior to the quasi-experimental study

(during the exploratory phase) in order to investigate the kind of relationship and the extent of match or mismatch, if any, between the EFL teachers' teaching strategies, styles and the students' learning styles at Sétif 2 University. This observation, questionnaire, FGD, and semi-structured interviews were carried out for the sake of providing answers to the first research question.

- **Research Question 1**

"Is there a match or mismatch between the teachers' teaching strategies, styles and the students' learning style preferences?"

Before conducting the quasi-experimental research, the first research question needed to be clearly answered in order to identify the research problem which is the heart of any scientific research. This research question required quantitative and qualitative data. To this end, a general classroom observation checklist was first used during the OE classes to record the events, the activities and to evaluate the teachers' and the students' performances. The classroom observation was backed up with an FGD with teachers and semi-structured interviews with teachers and students. The results of these three qualitative data collection tools are discussed in the following paragraphs.

As it was mentioned earlier, it was very essential to observe the OE classes to understand the practical scenarios in the classroom. So, to collect the necessary data, four OE teachers were observed through a general 'Classroom Observation Form'. During the classroom observation, the researcher decided not to inform the teachers in advance. That is why it was done to collect data in a natural setting. The complete process of what happened with in a regular classroom was followed carefully.

**Teacher 1**

This was a listening class. At the very begining, the teacher explained that the students will listen to a story. The researcher noticed that the students were enthusiastic. The teacher

asked the students to listen to the story carefully and try to find out answers to questions by filling the gaps. The researcher observed that the students were struggling with the listening task because they ignored most of the vocabulary presented in the story. The students listened three times to the story, and then the teacher started to extract answers from them. While doing so, the researcher noticed that once they (the participating elements) meet a new word, they ask directly for its equivalent in Arabic, or they interrupt the lesson to check it in the dictionary. The teacher was explaining the new vocabulary deductively and even used the mother tongue of the students. The researcher noticed again that the teacher while explaining the story did not use any extra material to clarify the words to the students. Moreover, some of the words were above the studenst' level. Students few times pronounced the words as the teacher asked them. There was no other activity besides this one. The class finished before time.

**Teacher 2**

This was a spoken class; the teacher started the calss by explaining the instructional objective. She said that students were going to learn about some idiomatique expressions in English. Most students had no responsive attitude. The teacher asked students to strat writing down some idiomatique expressions on a piece of paper and then she asked them to try to figure out their meanings and provide the class with their own examples. The students were given the desired time to complete the assignment. Some students were working and some other students were chatting with each other. The class was little noisy. Sometimes teacher was moving around to see whether the students are doing the activity correctly or not. Afterwards, the teacher asked the students to answer. Most of the students were hesitated, shy, and did not have any answer. The teacher showed a negative attitude and she was quickly moving from one student to the other if one failed to speak out or had no answer**.** There were sudden tensed situation as the teacher repeatedly asked them to speak. At last few

students tried to guess the meaning of some idiomatique expressions. After listening to them the teacher started to dictate their meanings and from time to time she used the Arabic language. The teacher finished the class by saying that next class they must try and speak.

**Teacher 3**

The teacher explained to the whole class that they are going to watch a piece of American movie and while watching it they have to find out the expressions used to express anger. The researcher observed that the students were excited to watch the movie (very small part of it). The teacher used the overhead projector. The teacher explained what the students are going to watch and the item be taught. They were learning some anger expressions. While watching, the students were asking to repeat the dialogues a few times. Some students were watching attentively but some other students were talking as the teacher was busy with the multimedia. The teacher started to ask questions about the movie when suddenly a technical difficulty stopped the overhead projector for about 10 minutes. The class was noisy as the students were disappointed for not watching the whole part of the movie.

**Teacher 4**

This was a spoken class. The teacher told the studetns that they are going to learn names of some food. The teacher started the lesson using some pictures of food, where some pictures of common food were used. It was observed that classes were dominated by teacher talk involving demonstrations, explanations, short questions and answers and low student participation. Although there was an extensive use of vocabulary and it was taught explicitly, there was no contextual presentation of the words nor there grammatical teaching points to be taught. Further, the teacher domination of the discussion created little if any opportunities for the students to use the vocabulary presented. The repetition opportunities were very limited as no chances for practice were created. Meanwhile, the whole discussion was teacher-dominated with few interaction and discussion opportunities created for students. This low

student interaction could be the result of little background knowledge about the theme and the one-listening opportunity offered. Moreover, there are no opportunities for vocabulary practice since there was no vocabulary activities presented for the stage of practice was missing. The teacher did not encourage the use of the dictionary and relied on spelling to introduce new words instead of using the whiteboard. Overall, the teaching pattern used was the PPP pattern although the practice stage was absent and the production stage was dominated by the teacher.

Another observation session of teacher 4 was conducted. It was a spoken class. The teacher neither mentioned the topic of the lesson nor explained the objective of the lesson. The stages for lesson planning were absent. The teacher asked directly the students to individually start writing down about one happy event to talk about later on. The researcher noticed that the teacher here started directly with the final P where the students had to product written and spoken texts without receiving in preseantation or practice. The teachers started the lesson with very short warm up through which the concept a happy event was introduced. Some students asked for clarification and each time the teacher was using the Arabic language to explain the new words and concepts. After a moment, the teacher asked the students to start writing down about any happy event happened to them. Though the teacher provided them with some topic to choose and gave them the opportunity to express freely their ideas, the classroom was far from being students' centred classroom. (The classroom observation transcription is given in Appendix E for further details).

The classroom observation revealed that on one hand, the students' participation was hard to ensure as they were paying a short attention to the activities as they were not busy doing or enjoying the activities. While many students failed to do the task, some other students faced difficulty performing the task. The majority of the students were passive students prefer to sit back and let the active students take charge. On the other hand, most

teachers did not vary their teaching activites. The lessons were based on just lecture method most of the time. Role playing, in-class demonstration, games and hands on activities were were not observed in the classes and were totally absent. Moreover, it was observed that most of the teachers did not use a wide range of teaching techniques to match the learning style preference of each student. They also did not consciously design instructions appropriate to students' learning styles, strengths and weaknesses. This mismatch between the students' learning style preferences and the teachers' instructional approach may highly influence students' attitudes and motivation as it was observed. This claim needs to be investigated in future research on learning styles. Therefore, this study was called for in order to examine to what extent, if any, the match between learning styles and instructional methods can improve students' academic achievement.

The results obtained from the FGD were reported by major themes. These themes are used as headings. First theme was stated from question one which was about the teachers' knowledge and understanding of students' success and failure. The second theme was about, teachers' awareness of students' learning preferences and diffrences. The third theme was extracted from question three that examined the teachers' description of the relationship between learning styles and their teaching strategies.

**Theme one: Teachers' knowledge and understanding of students' success and failure**

Question 1 was about how teachers would explain and justify the success of some students in the ELF classroom while others fail. The teachers' explanation, interpretation and understanding of the concepts success and failure were investigated. It was important for the researcher to understand how did they perceive and explain these two main concepts and how would justify the fact that some students do not retain, remember, and grasp knowledge what they have learnt. Here, the researcher purposefully did not want to mention the concepts of

learning styles and teaching strategies to figure out to what extent teachers were familiar with those two concepts. One teacher said this could be explained by the students' IQ differences because he believed that the IQ has a lot to do with someone's ability to excel in the classroom. He added that students with high IQ normally are better achievers than those with low IQ. Another teacher attributed students' academic failure or success to many factors such as classroom management, students' motivation towards the subject being taught, students self esteem and to students' social and cultural backgrounds. One teacher said I think that some students fail while others succeed because of many reasons. One of them is that they always quickly forget what they learn. Another one added "well, I think that a student failure or success depends on whether he receives interest from his teachers or not. Moreover, the failure or success in the academic achievement has to do with the way students study. I mean some students just take notes; others learn by heart or summarize the key points. The teachers were further asked about the way they think students learn better. The following are examples of their responses: "I think that students learn better the way I was taught; I mean through recieving lecture. This is one of the popular teaching methods that help students learn better. If this is not true, I would not be here".

From the previous responses, it was obvious that the teachers' explanations of the academic success or failure can be attributed to many reasons like student study habit, classroom management, students' motivation etc. However, all teachers had not mentioned the concept of learning styles and did not attribute the academic success or failure to learning preferences of the students or the instructional strategies of the teachers. This could be explained by the fact that many teachers were not familiar with those concepts or at least they didn't figure out the connection between them. Besides, it was clear that lecture method was the most popular and dominant teaching method.

**Theme Two: Teachers' awareness of students' preferences and differences**

Here, the teachers asked this question in order to figure out to what extent do they aknowledge the fact that their students are different and they have some different learning preferences. The opinion of the teachers conflicted with the mostly preferred styles of the students. They do not agree with the kinaesthetic style of learning. For example, one teacher said, "The students prefer group work and pair work but not all the time. I do not find them that much active in the class. Even they are not willing to give an answer of my question. It seems unnatural to me that they prefer learning by participating in the class and hesitate to talk with teacher. Another teacher said "Most of the students are introvert and they become more benefitted from teachers' lecture. I think they are not able to take responsibility to learn the foreign language by themselves. It is not possible to arrange classes according to their preference because it will bring a hazardous situation both for the students and teachers. It is impossible to arrange class according to the students' preference because the classroom size is large and it is unmanageable to them, the poor teacher cannot reach all the students and to make them speak during the class". Moreover, one teacher said "If I allow them to speak with each other in the classroom very few of them will speak English. There is a little possibility of speaking correct English. If I continue it long run they will learn each others' mistake. Again, when I correct them in every step they feel shy and demotivated to carry on. They are doing well in the exam hearing teachers' lecture and learn correct English so if I switch from my preference way of teaching to their style the learning will not be effective. If they learn the language first they can express it wherever they need to use English. Without the basic foundation they will not be able to use it rather it will create a haphazard situation in the classroom".

**Theme Three: Teacher's instruction accommodation to students' learning styles**

Through the remaining questions, the researcher collected data on the third theme which clarifies the teachers' overall perception about whether they should accommodate their instruction to their students' different learning styles. One teacher said "I have arranged several times the visual adaptations of some interesting texts in the classroom. In this case they are very much interested to enjoy it and they get involved with the topic. When I showed them some text related situation they failed to pick up the language by seeing or hearing it. Students try to form group only with those who are advanced and those who are extroverted. Thus, majority do not feel interested to communicate in the classroom.' Another teacher added 'I have a preference for teacher-centred instruction or approach. Beacause in our department, the teacher is the holder of all knowledge all time, and the characteristic of teacher-centered approach is lecture. I do believe that giving lectures is the most accepted and frequent teaching method. Moreover, our students cannot rely on themselves or on each other and they always look for the teacher's active presence in the classroom. They feel hesitate to make argument with teacher though they have full freedom to speak. So, they feel more comfortable when they listen to the teacher's lecture.'

Results of the semi-structured interviews also served to yield answers to the first research question. They were conducted with both teachers and students after the observation and the the FGD. There are several reasons to conduct follow-up semi-structured interviews. Interviews can provide a rich source of data by asking participants more in-depth questions and allowing them to elaborate on their responses to questionnaires (DeCapua & Wintergerst, 2005; Gay, Mills, & Airasian, 2006).

Semi-structured interviews were used as open-ended questions allowed the researcher to focus on particular topics and provide flexibility for two-way communication. The objective

of using a semi-structured interview with the teachers because it was decided to conduct a questionnaire with them. However, after dealing with some questions, they said that they cannot provide answers because the questions were restricted and did not allow them to clarify things. Through the interview, it was possible to gain further in-depth information on teachers' instruction and their views towards the match between teaching strategies and learning styles in their language classroom. Same as the teachers' interview, students' interview allowed the researcher to ask clarification or explanation of their perspectives, to compare their responses with that of the teachers', and to improve the reliability and validity of the research.

Question one was about the factors that teachers believe can affect their way of teaching. The teachers responded as follow:

"When designing my lesson, I should take into consideration the cultural background of the students. In OE, it is essential to learn a foreing culture but sometimes it would not be appropriate to do so because you know we have some taboos in our culture. For example I cannot teach about drinking, dating, Christmas day etc."

Another one said "how I teach is sometimes based on the materials provided. I do personally have my own preferences, because I believe that the way I learnt helped me a lot and so will do my students in helping them to fulfil the assessment requirements and finish the learning tasks."

"I've limited control on students' classroom oral prsentations. I ask them to talk about any subject they want to talk about expressing freely their ideas. So I don't limit my self to the materials".

"I think we have to provide our students with an affective learning environment first. In OE sessions, many students may feel anxious and confused if they find themselves in front of

the whole class and the teacher. So I have to build a good relationship to help them develop their language proficiency."

Question two was asked to find out whether teachers take into their consideration their students differences and preferences while teaching, the following were their responses:

"It's not practical to ask the students what they prefer. We will never reach a consensus. I design the activities according to my experience. I know what activities can motivate students and what types of tasks are useful for their learning. Even though I prefer a particular way of teaching personally, it may not be successful in with some students. Let's say the lower achiever students".

"Personally, I liked group learning when I was a student. So, I think my personal learning is directly related to my teaching. I give them projects to work on and present them in groups. However, I feel that many students are not motivated and not satisfied simply because they neither want to work with others nor presenting orally in front of the whole class. Eventually, one can never satisfy all the students".

"Theroretically speaking, yes it would be good to do so. However, practically speaking, it is impossible. I cannot ask my students what do they prefer or how do they prefer to learn simply this could create unnecessary problems especially in the case of those uninterested students.

"No, certainly not. I would not do that. My students just sit there, copy the notes, and listen to me. They don't take an active role in classroom. I guide them step-by-step. They always wait for the answers and expect teachers to give them everything even exam tips. It seems like they don't want to think or make efforts. So how do you expect me to ask them about their preferred ways of learning!".

Question three seeks to figure out teachers' perceptions about the relationship between learning styles and teaching strategies. Most of the teachers agreed that a match between

learning styles and teaching strategies has nothing to do with an effective learning environment. The following were their responses:

"Students will learn from competent teacher who has knowledge over the course. A teacher who masters the language since he is the primary source of that students"

"I'm not sure whether I'm trying to design activities according to my students' styles or not. But I think, not sure, that they are happier with my way of teaching."

"I think developing university students language proficieny does not depend on knowing our students as much as it depends on the lesson itself; the quality of delivered information, the way we assess students, etc… It is more serious than just knowing the students. Because some teachers do really know their students but they are not good teachers."

"My teaching is not really up to my students.... I think students should learn efficiently the learning objectives of the lecture. They are adults. I believe they have the ability to learn from a teacher who does not take their preferred ways of learning into consideration. They should be flexible if they want to be successful members in society."

Question four prompts the teachers' match or mismatch between their instructional strategies and their students' prferred ways of learning. They responded as follow:

"Honestly, I do believe that in the power of the traditional systems of course registration"

"I may not be comfortable with changing my teaching philosophy and/or adopting certain teaching methods for the purposes of responding to student learning styles".

"No, I don't. I strongly believe in the fact that the way you learn is the way you teach because I believe that what makes sense in our own brain must make sense to everyone else". " oh no!. Although willing, I am often not prepared to alter my way of teaching and I frequently fall back on that which is familiar and comfortable".

When it came to the students' semi-structured interview, the emerging themes from the above discussion were as follows:

Question one response: "Generally speaking, the lessons are monotonous, and expected. I mean I already know how the lesson is going to be next time. Because every time we do the same thing, we talk about topics we would like to talk about and that's it".

"To be honest, i don't know whether teachers are responsible for that or not, but I consider myself a passive student and I just revise the topics until the exams, hence I forgot".

"I am not very much, nothing there to attract my attention. I feel like a fish out of water. Though it is the same teacher, the same classmates, the same classroom and even the same chair but I totally feel disconnected".

Question two responses: "I like working with others in class activities, such as writing something or doing a presentation. I'm not good at English and I can't trust my language ability. I believe that my classmates can help me and at the same time, I can use my knowledge to help other students. I like this kind of learning activities"

"I adore watching American movies and I learn much from them than I do in OE classroom. So I really want to have such a learning experience inside the classroom. I think it would be great if our teacher let us watch videos, films etc on a given lesson. It would be great".

"I feel more comfortable to present or submit my work when working with others. Other people don't know I made the mistakes because I did the work with other classmates. It's less embarrassing. Maybe I'm good at organizing ideas and my friends are good at grammar".

"I prefer to listen to teacher's explanations and taking notes."

"I like my teacher to provide me with handouts, because I feel more confortable with handouts. I use them to revise, to prepare myself for the exam, and to refresh my memory"

"I don't like doing group projects with my classmates because I'm worried that they may affect my academic results, especially those lazy and/or lower ability students. I especially hate when my teacher asks me to present my topic in fron of others".

“I like classroom discussions, I think I learn from discussing topics with my teacher and classmates, but sometimes it is a little bit boring”.

Question three responses:

“I guess that I prefer to see the information written on the white board or in texts. However, my teacher all the time presents the lesson in auditory way. So I find myself totally lost and consequently I stop following”

“I like very much exchanging ideas and answers with my friends and colleagues and I think I do learn when I do this outside the classroom. We usually revise in groups and it works with me, but unfortunately this is not alloed in the classroom. I can justify the teacher’s attitude by avoiding chaos and noise in the classroom though it is may preferred way of learning I find it enjoyable and have fun while learning”.

Question four resposes:

“ I don’t think that my teacher try to adjust his/her instructional strategies to my preferred way of learning. I think there a gap between these two concepts”

“ I enjoy the way my teacher present the lesson. I prefer to receive information through listening activities”

“ I believe that there is no connection between my teacher’s teaching methods and the way I prefer to learn”.

All in all, the exploratory phase results indicated that teachers generally did not consider matching their teaching strategies with students’ learning styles. They claimed that students’ academic achievement is influenced by many factors other than learning styles. Regarding the semi-structured interview with the teachers and the semi-structured interview with the

students in addition to the classroom observation, it can be inferred that there was a correlation between the data obtained from these qualitative data instruments.

Although, the qualitative data clearly indicated the gap between the preffered ways of learning of students and the instructional methods of the teachers, the researcher sought to examine quantitatively the extent, if any, of match or mismatch between the students'learning styles and teachers' teaching styles to find out whether the teachers' teaching style fits with the students' learning styles and whether the qualitative data are correlated with quantitative data. So, In addition to the qualitative analysis, a quantitative analysis was run to compare the differences between the learning and teaching styles. Chi-square analysis [the chi-square test is used to check for a statistically significant association between two variables when the data are form of counts (Chumney, 2006)] was used to identify the relationship between the perceptual learning styles of the students and the the perceptual teaching styles of the teachers.

Reid's (1987) PLSP Questionnaire was used to collect the data. PLSPQ is a self-report questionnaire which is designed to help foreign language learners to identify the ways they learn best. The PLSPQ (Appendix F) is the most widely used self reporting instrument designed to identify the learning styles of non native speakers of English. Many research studies have used it as a valid and reliable instrument as the validity of the PLSPQ "was done by the split-half method" (Reid, 1987, p. 92). In this study, the students were asked to indicate how much they agreed with thirty statements of the questionnaire. It should be noted that these questions corresponded with Reid's six categories of learning styles. This questionnaire is meant to assess the preferred styles of the students based on how they learn using their four perceptual preferences: visual, auditory, kinaesthetic, and tactile, and two social preferences: group and individual. In Reid's questionnaire, these 6 learning styles are rated as 'major', 'minor', or 'negative'. Major style refers to a preferred learning style; minor style is one in

which learners can still function well; negative means they may have difficulty learning that way. According to Reid, a student's score on a learning style is considered negative or negligible if it is below the 50% of the maximum possible score on that leaning style, minor if it is between 50% and 74%, and major if it is above 74%.

Data on language teaching styles was collected using a modified version of the Perceptual Learning Style Preference Questionnaire (PTSPQ) (Appendix G). In this questionnaire the teachers were asked to respond to thirty statements using a five point scale similar to that of the learner version of PLSPQ, except that this time the statements were designed to address their teaching style. Again, the teaching styles were classified as as major, minor or negative using the same criteria for the sututdents' questionnaire.

- **Descriptive Statistics for Students' PLSPQ**

The results of the PLSPQ revealed that out of 154 students: 58.7% of the students were visual students, 38.6 % had auditory tendencies, 76% were kinaesthetic, 75.14% were tactile, 75 % were group students and 23.40% preferred individual learning. The following table shows the learners' preferences.

**Table 6.1. Students' Perceptual Learning Style**

| Style | Visual | Auditory | Kinaesthetic | Tactile | Group | Individual |
|---|---|---|---|---|---|---|
| Students | 58.7% | 38.6 % | 76% | 75.14% | 75 % | 23.40% |
| Type | Minor | Negligible | Major | Major | Major | Negligible |

- **Descriptive Statistics for Teachers' PTSPQ**

The results of the PTSPQ indicated that among the six major teaching styles, 33.8% of the teachers favored visual style**,** 83.7% preferred auditory style, 22.9% were kinaesthetic, 23.5% had tactile tendencies, 21.6% favored group teaching styles**,** and 77% of them preferred individual teaching style. From these resutls, it can be noticed that the major

perceptual teaching style was auditory style (83.7%). This data is presented in the following table 6.2.

**Table 6.2. Teachers' Perceptual Learning Style**

| Style | Visual | Auditory | Kinaesthetic | Tactile | Group | Individual |
|---|---|---|---|---|---|---|
| Teachers | 33.8% | 83.7 % | 22.9% | 23.5% | 21.6 % | 77% |
| Type | Negligible | Major | Negligible | Negligible | Negligible | Major |

- **Learning Style Vs Teaching Style**

In order to identify the relationship and the extent of match or mismatch between the perceptual learning style of the students and the perceptual teaching style of the teachers, a Chi-square analysis was employed. The results of the analysis revealed that there was no statistical significant relationship between perceptual learning style and perceptual teaching style. In all these cases, it should be noted that the analysis failed to detect a significant correlation between the two variables (not significant) (Table 6. 3).

**Table 6.3. Chi-Square Analysis of Learning Style and Teaching Style**

| Style | Df | Asymp. Sig. (2-sided) |
|---|---|---|
| Visual | 1 | .220 |
| Auditory | 1 | .474 |
| Kinaesthetic | 2 | .141 |
| Tactile | 2 | .429 |
| Group | 2 | .123 |
| Individual | 2 | .304 |

The findings from the PLSPQ showed that the learning styles most preferred by students were: kinaesthetic learning style, tactile learning group, group learning style. Students expressed the least preference for the auditory, visual, and individual learning style. The

findings also revealed that the teaching styles most preferred by teachers were: auditory, visual, and individual teaching styles; followed by kinaesthetic teaching, tactile teaching, and group teaching styles. Teachers showed the least preference for the kinaesthetic, tactile and group teaching styles. There was therefore a clear mismatch between learning and teaching styles regarding all six styles indicated in Reid's PLSPQ.

Through the triangular approach in the exploratory phase, it was possible to find out answers to the first research question raised at the beginning of the present study. Through the qualitative and the quantitative analysis it was evident that there was a mismatch between the teachers' teaching styles and strategies and the students' learning styles.

### 6.2.2. Descriptive Statistics and Independent Sample T-test for Pretest Scores

A T-test analysis was run to determine if there were any statistically significant differences between the experimental groups (EG1, EG2, EG3) and the control group (CG4) mean scores on the pre-test measuring OEA. The OEA pre-test of the study was administered as a pre-testing tool. The statistical Package for Social Sciences (SPSS) was used to analyze the obtained data. Table 6.4 represents the statistical analysis of pre-test data in the CG4 (visual sub group) and the visual experimental group (EG1). It provides the descriptive statistics of the two groups in terms of the number of the participants (N), means (M) and standard deviation (SD). The results of descriptive statistics and T-test scores are presented in Table 6.4 and 6.5.

**Table 6.4**

**Descriptive Statistcs of EG1 and Sub-CG4**

| Group Statistics | | | | | |
|---|---|---|---|---|---|
| | grp-pretest | N | Mean | Std. Deviation | Std. Error Mean |
| pretest | EG1 | 20 | 42.85 | 5.518 | 1.234 |
| | Sub-CG4 | 15 | 41.93 | 8.285 | 2.139 |

**Table 6.5**

**Independent Sample T-test for Pre-test Scores**

| Independent Samples Test | | | | | | |
|---|---|---|---|---|---|---|
| | | Levene's Test for Equality of Variances | | T-test for Equality of Means | | |
| | | F | Sig. | t | df | Sig. (2-tailed) |
| pretest | Equal variances assumed | 3.457 | .072 | .393 | 33 | .697 |
| | Equal variances not assumed | | | .371 | 22.991 | .714 |

The independent T-test is an inferential statistical test that determines whether there is a statistically significant difference between the means in two unrelated groups. The results of the T-test scores are presented in Table 6.5. with reference to the t value (t= .393) and The Levene's Test for equality of variances showed that the P value (sig= .697) for the significance of difference between mean achievement scores of the control group and the experimental group with df (33) which is greater than 0.05 level. Hence, it is clear that there is no statistically significant difference in pre-test scores on OAE between experimental group (EG1) and sub-visual control group (CG4). Thus, since the difference is not significant, the two groups were assumed equivalent. So it can be said that there was no significant difference between means of scores of the experimental group and the control group on the pre-test.

To determine if there were any statistically significant differences between the EG2 and Sub Auditory CG4 mean scores on the pre-test measuring OEA. Table 6.6 represents the statistical analysis of pre-test data in the Sub Auditory CG4 and the Auditory Experimental Group (EG2). It provides the descriptive statistics of pre-test data in the Sub Auditory CG4 and the Auditory Experimental Group EG2 in terms of the number of the participants (N), means (M) and standard deviation (SD) and T-test scores are presented in Table 6.7

**Table 6.6**

**Descriptive Statistcs of EG2 and Sub-CG4**

| Descriptive Statistics | | | | | |
|---|---|---|---|---|---|
| | grp-prétest | N | Mean | Std. Deviation | Std. Error Mean |
| pretest | EG2 | 18 | 43.50 | 6.947 | 1.637 |
| | Sub CG4 | 12 | 43.25 | 7.545 | 2.178 |

Although the results in table 6.6 show observed differences but still the EG2 and Sub CG4 mean scores in the pre-test were closed. In order to check if the observed differences were significant or not, an independent sample T- test was run. The results are presented in table 6.7 below.

**Table 6.7**

**Independent Sample T-test for Pre-test Scores**

| Independent Samples Test | | | | | | |
|---|---|---|---|---|---|---|
| | | Levene's Test for Equality of Variances | | T-test for Equality of Means | | |
| | | F | Sig. | t | df | Sig. (2-tailed) |
| pretest | Equal variances assumed | .327 | .572 | .093 | 28 | .926 |
| | Equal variances not assumed | | | .092 | 22.332 | .928 |

The results of the T-test scores are presented in Table 6.7 with reference to the t value (t= .093). The Levene's Test for equality of variances showed that the P value (sig= .926) for the significance of difference between mean OEA scores of the Sub Auditory CG4 and the EG2 with df (28) which is greater than 0.05 level. Hence, it is clear that there is no statistically significant difference in pre-test scores on OEA between experimental group (EG2) and sub-Auditory control group (CG4). Thus, since the difference is not significant, the two groups were assumed equivalent. So it can be said that there was no significant difference

between means of scores of the experimental group EG2 and the Sub Auditory control group CG4 on the pre-test.

A T-test analysis was run to to determine if there were any statistically significant differences between the mean scores on the OEA pre-test of EG3 and Sub Kinaesthetic CG4 on the OEA Pretest. Table 6.8 represents the statistical analysis of pre-test data in the Sub Kinaesthetic (CG4) and the Auditory Experimental Group (EG3). It provides the descriptive of pre-test data in the Sub Kinaesthetic (CG4) and the Kinaesthetic Experimental Group (EG3) in terms of the number of the participants (N), means (M) and standard deviation (SD) and T-test scores are presented in Table 6.9

**Table 6.8**

**Descriptive Statistcs of EG3 and Sub-CG4**

| Group Statistics | | | | | |
|---|---|---|---|---|---|
| | grp-pretest | N | Mean | Std. Deviation | Std. Error Mean |
| pretest | EG3 | 18 | 41.78 | 8.371 | 1.973 |
| | Sub CG4 | 11 | 43.82 | 7.587 | 2.288 |

Although the results in table 6.8 show observed differences but still the EG3 and Sub CG4 mean scores in the pre-test were closed. In order to check if the observed differences were significant or not, an independent sample T- test was run. The results are presented in table 6.9 below.

**Table 6.9**

**Independent Sample T-test for Pre-test Scores**

| Independent Samples Test | | | | | | |
|---|---|---|---|---|---|---|
| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | |
| | | F | Sig. | t | df | Sig. (2-tailed) |
| pretest | Equal variances assumed | .203 | .656 | -.659 | 27 | .515 |
| | Equal variances not assumed | | | -.675 | 22.943 | .506 |

The results of the T-test scores are presented in Table 6.9 with reference to the t value (t = -.659) and The Levene's Test for equality of variances showed that the P value (sig= .515) for the significance of difference between mean achievement scores of the control group and the experimental group with df (27) which is greater than 0.05 level. Hence, it is clear that there is no statistically significant difference in pre-test scores on OEA between experimental group (EG3) and sub-Kinaesthetic control group (CG4). Thus, since the difference is not significant, the two groups were assumed equivalent. So it can be said that there was no significant difference between means of scores of the experimental group and the control group on the pre-test.

### 6.2.3. Analysis of Covariance for Posttest Results

The analysis of the OEA posttest results is presented in three sections. In the first section, the first analysis has been realized to examine the effectiveness of VIP on students' OEA of the Visual Experimental group (EG1) and General visual Students from the sub-control group (CG4) considering CASE as the covariate. The second analysis has been realized to examine the effectiveness of VIP on students' OEA of the Visual Experimental group (EG1) and Geaneral visual Students from the sub- control group (CG4) considering SH as the covariate. The third analysis was concerned with the examination of the effectiveness of VIP on students' OEA of the Visual Experimental group (EG1) and Geaneral visual Students from the sub- control group (CG4) considering ASC as the covariate.

In the second section, the first analysis was realized to examine the effectiveness of AIP on students' OEA of the Auditory Experimental Group (EG2) and Generl auditory students from the sub-control group (CG4) considering CASE as the covariate. The second analysis has been realized to examine the effectiveness of AIP on students' OEA on the Auditory Experimental Group (EG2) and Geaneral Auditory Students from the sub-control group (CG4) considering SH as the covariate. The third analysis has been realized to examine the

effectiveness of AIP on students' OEA on the Auditory Experimental group (EG2) and Geaneral Auditory Students from the sub- control group (CG4) considering ASC as the covariate.

In the third section, the first analysis was realized to examine the effectiveness of KIP on students' OEA of the Kinaesthetic Experimental Group (EG3) and General Kinaesthetic students from the sub-control group (CG4) considering CASE as the covariate. The second analysis has been realized to examine the effectiveness of KIP on students' OEA on the Kinaesthetic Experimental Group Experimental group (EG3) and Geaneral Kinaesthetic Students from the sub-control group (CG4) considering SH as the co-variate. The third analysis has been realized to examine the effectiveness of KIP on students' OEA on the Kinaesthetic Experimental (EG3) and Geaneral Kinaesthetic Students from the sub-control group (CG4) considering ASC as the covariate.

As it was stated in chapter three, variables such as study habits, students' self-concept, and students' self effcicacy were related to academic achievement. Moreover, previous studies have shown high correlation between students' academic achievement and Study Habit, Self Efficacy, and Self Concept ( Brody, 1992; Sood, 2006; Kervin, 2006; Shaffer & Kipp, 2013; Williams, 1993). In the present study the groups were selected according to the preferred learning styles of the students using the VAK. It was practically impossible to make groups equal on the basis of the study habit, self efficacy, and self concept. So the effects of these three covariates on OEA were controlled statistically using the statistical analysis of covariance ANCOVA (Polit & Beck, 2008; Chumney, 2006).

The probability value (P value) used to examine if there was a statistical significant difference between the groups. Moreover, the effect size of these results also needed to be assessed to determine the degree of the effect. In this respect, the value which needed to be

considered is Partial Eta Squared. The commonly used guidelines proposed by Cohen (1988) were used to interpret the values of the effect size. These values are presented in table 6.10.

**Table 6.10: Interpretation of Effect Size Values**

| Values | Interpretation |
|---|---|
| 0.2 - 0.3 | Small Effect |
| = 0.5 | Moderate Effect |
| 0.8 or larger | Large Effect |

The main effect of the between-subjects variable (groups: control versus experimental) needed to be considered to compare the posttest results in terms of the effectiveness of LSBIP in developing OEA considering CASE, SH, and ASC as covariates. In this regard, the row labeled "groups" needed to be considered. A probability value of less than or equal to 0.05 for groups indicates a significant difference between the two groups whereas a probability value of more than 0.05 indicates an insignificant difference between the experimental and the control groups ( Gravetter & Wallnau, 2013).

#### 6.2.3.1. Effectiveness of the VIP on OEA of Visual Students with Respect to CASE

To study the effectiveness of the VIP on students' OEA of visual students, the null hypothesis-1 "There will be no statistically significant difference between the adjusted mean scores of OEA achievement of visual students taught through the VIP and visual general students taught through the Traditional Teaching Method considering CASE as a covariate " was developed. For testing this hypothesis, two groups of the students were opted for: the EG1 and the sub-group in the control group CG4. The EG1 was given treatment by the VIP and the CG4 was given experience by teaching traditionally (LM). The data of these two groups were collected regarding their CASE and OEA. The data were analyzed by the analysis of covariance (ANCOVA). Results are given in the Table 6.11.

**Table 6.11**

**Significance of Difference between Mean Achievement Scores of the Visual Students Group and the Sub-Control Group Considering CASE as Covariate**

| Group | Number | Mean of CASE scores | Mean of OEA. score | Adjusted mean of OEA. scores |
|---|---|---|---|---|
| EG1 | 20 | 116.54 | 60.90 | 60.893 |
| CG4 | 15 | 115.28 | 47.87 | 47.732 |

| Tests of Between-Subjects Effects | | | | | | |
|---|---|---|---|---|---|---|
| Dependent Variable: tot-posttest | | | | | | |
| Source | Type III Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
| Corrected Model | 2037,043[a] | 24 | 84,877 | 1,669 | ,201 | ,800 |
| Intercept | 84126,104 | 1 | 84126,104 | 1654,397 | ,000 | ,994 |
| groups | 465,327 | 1 | 465,327 | 9,151 | ,013 | ,478 |
| selfefficacy | 338,209 | 17 | 19,895 | ,391 | ,957 | ,399 |
| groups * selfefficacy | 223,726 | 6 | 37,288 | ,733 | ,634 | ,306 |
| Error | 508,500 | 10 | 50,850 | | | |
| Total | 109634,000 | 35 | | | | |
| Corrected Total | 2545,543 | 34 | | | | |
| a. R Squared = ,800 (Adjusted R Squared = ,321) | | | | | | |

The table 6.11 comprises a certain number of analyses in congruence with ANCOVA in order to measure and control the real effect of each variable (the experimental variable and the covariate). First we start with the analysis of the results with respect to the effect of the experimental variable (groups) while controlling the effect of the covariate (CASE), and in this respect, the results indicated that the source of variance of the posttest results in relation to the experimental variable (groups) examines the first null hypothesis based on the absence of significant differences between the adjusted means.

The results indicated that the F value for the significance of difference was (F= 9.151) with P value (P= 0,013) which means that the first null hypothesis "There will be no statistically significant difference between adjusted mean OEA scores of visual Students taught through the VIP and general Students taught through the Traditional Teaching Method considering CASE as a covariate" was rejected and its alternative hypothesis was accepted. Moreover, we observe that the Partial Eta Squared (0.478) which indicates a strong relationship between the experiment (groups) and the posttest.

The table above that indicates the Tests of Between-Subjects Effects also includes the results related to the neat effect of the covariate (CASE) as well as adjusting the effect of the experimental variable by reference to F Vlue ( F= 0.391) and P Value ( 0.957) hence there was no significant difference between the mean of the covariate. We further note the moderate effect size of the covariate (Partial Eta Squared =0.39), accordingly, this effect size could generally be considered as low or insignificant compared to the effect size of the experimental variable (groups)

Further, according to the Table- 6.11, the adjusted mean of OEA scores of Visual Students group and Control group were 60.893 and 47.732 respectively. It means Visual Students Group was higher than Sub Visual Control Group in OEA. So it can be said that the VIP is effective on OEA for Visual Students when CASE is statistically controlled.

#### 6.2.3.2. Effectiveness of the VIP on OEA of Visual Students with Respect to SH

To study the effect of the VIP on OEA of Visual Students, null hypothesis-2 "There will be no statistically significant difference between adjusted mean OEA scores of Visual Students taught through the VIP and General Students taught through the Traditional Teaching Method considering SH as a covariate" was formulated. For testing this hypothesis, two groups of the students were opted for: the Visual Experimental Group EG1 and the Sub-Visual Control Group CG4. The EG1 was given treatment by the VIP and the CG4 was given

experience by teaching traditionally. The data of these two groups were collected regarding their SH and OEA. The data were analyzed by the analysis of co-variance (ANCOVA). Results are given in the Table 6.12.

**Table 6.12**

**Significance of Difference between Mean Achievement Scores of the Visual Students Group and the Control Group Considering SH as Co-variate**

| Group | Number | Mean of SH scores | Mean of OEA. score | Adjusted mean of OEA. scores |
|---|---|---|---|---|
| EG1 | 20 | 110.09 | 60.90 | 60.822 |
| CG4 | 15 | 111.02 | 47.87 | 48.076 |

| **Tests of Between-Subjects Effects** | | | | | | |
|---|---|---|---|---|---|---|
| Dependent Variable: tot-posttest | | | | | | |
| Source | Type III Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
| Corrected Model | 2296,043[a] | 27 | 85,039 | 2,386 | ,118 | ,902 |
| Intercept | 84959,607 | 1 | 84959,607 | 2383,636 | ,000 | ,997 |
| groups | 936,088 | 1 | 936,088 | 26,263 | ,001 | ,790 |
| studyhabit | 503,609 | 20 | 25,180 | ,706 | ,746 | ,669 |
| groups * studyhabit | 324,442 | 6 | 54,074 | 1,517 | ,298 | ,565 |
| Error | 249,500 | 7 | 35,643 | | | |
| Total | 109634,000 | 35 | | | | |
| Corrected Total | 2545,543 | 34 | | | | |
| a. R Squared = ,902 (Adjusted R Squared = ,524) | | | | | | |

The table 6.12 comprises a certain number of analyses in congruence with ANCOVA in order to measure and control the real effect of each variable (the experimental variable and the covariate). First we start with the analysis of the results with respect to the effect of the experimental variable (groups) while controlling the effect of the covariate (SH), and in this respect, the results indicated that the source of variance of the posttest results in relation to the experimental variable (groups) examines the second null hypothesis based on the absence of significant differences between the adjusted means.

The results indicated that the F value for the significance of difference was (F= 26.263) with P value (P= 0,001) which means that the second null hypothesis "There will be no statistically significant difference between adjusted mean OEA scores of visual Students taught through the VIP and general Students taught through the Traditional Teaching Method considering SH as a covariate" was rejected and its alternative hypothesis was accepted. Moreover, we observe that the Partial Eta Squared (0.790) which indicates a strong relationship between the experiment (groups) and the posttest.

The table above that indicates the Tests of Between-Subjects Effects also includes the results related to the net effect of the covariate (SH) as well as adjusting the effect of the experimental variable by reference to F Value ( F= 0.706) and P Value ( 0.746) hence there was no significant difference between the mean of the covariate. We further note the moderate effect size of the covariable (Partial Eta Squared =0.66), accordingly, this effect size could generally be considered as low or insignificant compared to the effect size of the experimental variable (groups)

Further, according to the Table- 6.12 the adjusted mean of OEA scores of Visual Students group and Control group were 60.822 and 48.076 respectively. It means Visual Students Group was higher than Sub Visual Control Group in OEA. So it can be said that the VIP is effective on OEA for Visual Students when SH is statistically controlled.

#### 6.2.3.3. Effectiveness of the VIP on OEA of Visual Students with Respect to ASC

To study the effect of the VIP on OEA of Visual Students, the null hypothesis-3 "There will be no statistically significant difference between adjusted mean OEA scores of Visual Students taught through the VIP and General Students taught through the Traditional Teaching Method considering ASC as a covariate" was formulated. For testing this hypothesis, two groups of the students were opted for: the EG1 and the Sub-Group in the Control Group CG4. The EG1 was given treatment by the VIP and the CG4 was given experience by teaching

traditionally. The data of these two groups were collected regarding their ASC and OEA. The data were analyzed by the analysis of co-variance (ANCOVA). Results are given in the Table 6.13.

**Table 6.13**

**Significance of Difference between Mean Aachievement Scores of the Visual Students Group and the Control Group Considering ASC as Co-variate**

| Group | Number | Mean of ASC scores | Mean of OEA. score | Adjusted mean of OEA. scores |
|---|---|---|---|---|
| EG1 | 20 | 113.49 | 60.90 | 60.944 |
| CG4 | 15 | 112.54 | 47.87 | 48.148 |

| Tests of Between-Subjects Effects | | | | | | |
|---|---|---|---|---|---|---|
| Dependent Variable: tot-posttest | | | | | | |
| Source | Type III Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
| Corrected Model | 2484,543[a] | 31 | 80,147 | 3,942 | ,142 | ,976 |
| Intercept | 91903,889 | 1 | 91903,889 | 4519,863 | ,000 | ,999 |
| groups | 1254,400 | 1 | 1254,400 | 61,692 | ,004 | ,954 |
| selfconcept | 791,054 | 19 | 41,634 | 2,048 | ,306 | ,728 |
| groups * selfconcept | 269,000 | 11 | 24,455 | 1,203 | ,496 | ,815 |
| Error | 61,000 | 3 | 20,333 | | | |
| Total | 109634,000 | 35 | | | | |
| Corrected Total | 2545,543 | 34 | | | | |
| a. R Squared = ,976 (Adjusted R Squared = ,728) | | | | | | |

The table 6.13 comprises a certain number of analyses in congruence with ANCOVA in order to measure and control the real effect of each variable (the experimental variable and the covariate). First we start with the analysis of the results with respect to the effect of the experimental variable (groups) while controlling the effect of the covariate (ASC), and in this respect, the results indicated that the source of variance of the posttest results in relation to the experimental variable (groups) examines the third null hypothesis based on the absence of significant differences between the adjusted means.

The results indicated that the F value for the significance of difference was (F= 61.692**)** with P value (P= .004) which means that the third null hypothesis "There will be no statistically significant difference between adjusted mean OEA scores of visual Students taught through the VIP and general Students taught through the Traditional Teaching Method considering ASC as a covariate" was rejected and its alternative hypothesis was accepted. Moreover, we observe that the Partial Eta Squared ( .954) which indicates a strong relationship between the experiment (groups) and the posttest.

The table above that indicates the Tests of Between-Subjects Effects also includes the results related to the neat effect of the covariate (ASC) as well as adjusting the effect of the experimental variable by reference to F Value ( F= 2.048) and P Value ( .306) hence there was no significant difference between the mean of the covariate. We further note the moderate effect size of the covariate (Partial Eta Squared = .728), accordingly, this effect size could generally be considered as low or insignificant compared to the effect size of the experimental variable (groups)

Further, according to the Table- 6.13 the adjusted mean of OEA scores of Visual Students group and Control group were 60.944 and 48.148 respectively. It means Visual Students Group was higher than Sub Visual Control Group in OEA. So it can be said that the VIP is effective on OEA for Visual Students when ASC is statistically controlled.

#### 6.2.3.4. Effectiveness of the AIP on OEA of Auditory Students with Respect to CASE

To study the effect of the AIP on OEA of Auditory Students, the null hypothesis-4 "There will be no statistically significant difference between adjusted mean OEA scores of Auditory Students taught through the AIP and General Students taught through the Traditional Teaching Method considering CASE as a covariate" was formulated. For testing this hypothesis, two groups of the students were opted for: the Auditory Experimental Group

(EG2) and the Sub Auditory Control Group (CG4). Auditory Students Group was given treatment by the AIP and the Control Group was given experience by teaching traditionally. The data of these two groups were collected regarding their CASE and OEA. The data were analyzed by the analysis of covariance (ANCOVA). Results are given in the Table 6.14

**Table 6.14**

**Significance of Difference between Mean Achievement Scores of the Auditory Students Group and the Control Group Considering CASE as Co-variate**

| Group | Number | Mean of CASE scores | Mean of OEA. score | Adjusted mean of OEA. scores |
|---|---|---|---|---|
| EG2 | 18 | 117.60 | 62.06 | 61.913 |
| CG4 | 12 | 117.87 | 53.83 | 54.385 |

| **Tests of Between-Subjects Effects** | | | | | | |
|---|---|---|---|---|---|---|
| Dependent Variable: tot-posttest | | | | | | |
| Source | Type III Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
| Corrected Model | 950,950[a] | 18 | 52,831 | ,562 | ,866 | ,479 |
| Intercept | 71663,967 | 1 | 71663,967 | 762,076 | ,000 | ,986 |
| groups | 217,014 | 1 | 217,014 | 2,308 | ,015 | ,753 |
| selfefficacy | 420,610 | 15 | 28,041 | ,298 | ,984 | ,289 |
| groups * selfefficacy | 51,042 | 2 | 25,521 | ,271 | ,767 | ,047 |
| Error | 1034,417 | 11 | 94,038 | | | |
| Total | 105591,000 | 30 | | | | |
| Corrected Total | 1985,367 | 29 | | | | |
| a. R Squared = ,479 (Adjusted R Squared = -,374) | | | | | | |

The table 6.14 comprises a certain number of analyses in congruence with ANCOVA in order to measure and control the real effect of each variable (the second experimental variable and the covariate). First we start with the analysis of the results with respect to the effect of the experimental variable (groups) while controlling the effect of the covariate (CASE), and in this respect, the results indicated that the source of variance of the posttest results in

relation to the experimental variable (groups) examines the fourth null hypothesis based on the absence of significant differences between the adjusted means.

The results indicated that the F value for the significance of difference was (F= 2.308) with P value (P= .015) which means that the four null hypothesis "There will be no significant statistically difference between adjusted mean OEA scores of auditory Students taught through the AIP and general Students taught through the Traditional Teaching Method considering CASE as a covariate" was rejected and its alternative hypothesis was accepted. Moreover, we observe that the Partial Eta Squared (.753) which indicates a strong relationship between the experiment (groups) and the posttest.

The table above that indicates the Tests of Between-Subjects Effects also includes the results related to the neat effect of the covariate (CASE) as well as adjusting the effect of the experimental variable by reference to F Value ( F= .298) and P Value ( .984) hence there was no statistical significant difference between the mean of the covariate. We further note the small effect size of the covariable (Partial Eta Squared = .289), accordingly, this effect size could generally be considered as low or insignificant compared to the effect size of the experimental variable (Partial Eta Squared = . 753).

Further, according to the Table- 6.14 the adjusted mean of OEA scores of Auditory Students group and Control group were 61.913 and 54.385 respectively. It means Auditory Students Group was higher than Sub Auditory Control Group in OEA. So it can be said that the AIP is effective on OEA for Auditory Students when CASE is statistically controlled.

#### 6.2.3.5. Effectiveness of the AIP on OEA of Auditory Students with Respect to SH

To study the effect of the AIP on OEA of auditory learners, null hypothesis-5 "There will be no statistically significant difference between adjusted mean oral expression achievement scores of Auditory Students taught through the AIP and general students taught

through the Traditional Teaching Method considering SH as a covariate was formulated". For testing this hypothesis, two groups of the students were opted for: the Auditory Experimental Group (EG2) and the Sub Auditory Control Group (CG4).

Auditory Students Group was given treatment by the AIP and the Control group was given experience by teaching traditionally. The data of these two groups were collected regarding their SH and OEA. The data were analyzed by analysis of covariance (ANCOVA). Results are given in the Table 6.15.

**Table 6.15**

**Significance of Difference between Mean Achievement Scores of the Auditory Students Group and the Control Group Considering SH as Covariate**

| Group | Number | Mean of SH scores | Mean of OEA. score | Adjusted mean of OEA. scores |
|---|---|---|---|---|
| EG2 | 18 | 109.30 | 62.06 | 62.045 |
| CG4 | 12 | 108.98 | 53.83 | 54.500 |

| **Tests of Between-Subjects Effects** | | | | | | |
|---|---|---|---|---|---|---|
| Dependent Variable: tot-posttest | | | | | | |
| Source | Type III Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
| Corrected Model | 1709,700[a] | 23 | 74,335 | 1,618 | ,286 | ,861 |
| Intercept | 85858,682 | 1 | 85858,682 | 1868,750 | ,000 | ,997 |
| groups | 41,356 | 1 | 41,356 | ,900 | ,027 | ,710 |
| studyhabit | 755,428 | 17 | 44,437 | ,967 | ,562 | ,433 |
| groups * studyhabit | 424,467 | 5 | 84,893 | 1,848 | ,238 | ,606 |
| Error | 275,667 | 6 | 45,944 | | | |
| Total | 105591,000 | 30 | | | | |
| Corrected Total | 1985,367 | 29 | | | | |
| a. R Squared = ,861 (Adjusted R Squared = ,329) | | | | | | |

The table 6.15 comprises a certain number of analyses in congruence with ANCOVA in order to measure and control the real effect of each variable (the second experimental variable and the covariate). First we start with the analysis of the results with respect to the effect of the experimental variable (groups) while controlling the effect of the covariate (SH), and in this respect, the results indicated that the source of variance of the posttest results in relation to the experimental variable (groups) examines the fifth null hypothesis based on the absence of significant differences between the adjusted means.

The results indicated that the F value for the significance of difference was (F= .900) with P value (P= .027) which means that the fifth null hypothesis "There will be no statistically significant difference between adjusted mean OEA scores of auditory Students taught through the AIP and general Students taught through the Traditional Teaching Method considering SH as a covariate" was rejected and its alternative hypothesis was accepted. Moreover, we observe that the Partial Eta Squared (.710) which indicates a strong relationship between the experiment (groups) and the posttest.

The table above that indicates the Tests of Between-Subjects Effects also includes the results related to the net effect of the covariate (SH) as well as adjusting the effect of the experimental variable by reference to F Value ( F= .967) and P Value ( .562) hence there was no significant difference between the mean of the covariate. We further note the small effect size of the covariable (Partial Eta Squared = .433), accordingly, this effect size could generally be considered as low or insignificant compared to the effect size of the experimental variable (Partial Eta Squared = .710).

Further, according to the Table- 6.15 the adjusted mean of OEA scores of Auditory Students group and Control group were 62.045 and 54.500 respectively. It means Auditory Students Group was higher than Sub Auditory Control Group in OEA. So it can be said that the AIP is effective on OEA for Auditory Students when SH is statistically controlled.

### 6.2.3.6. Effectiveness of the AIP on OEA of Auditory Students with Respect to ASC

To study the effect of the AIP on OEA of Auditory Students, null hypothesis- 6 " There will be no statistically significant difference between adjusted mean OEA scores of Auditory Students taught through the AIP and general students taught through the Traditional Teaching Method considering ASC as a covariate" was formulated. For testing this hypothesis, two groups of the students were opted for: the Auditory Experimental Group (EG2) and the Sub Auditory Control Group (CG4). Auditory Students Group was given treatment by the AIP and the Control Group was given experience by teaching traditionally. The data of these two groups were collected regarding their ASC and OEA. The data were analyzed by the analysis of co-variance (ANCOVA). Results are given in the Table 6.16

**Table 6.16**

**Significance of Difference between Mean Achievement Scores of the Auditory Students Group and the Control Group Considering ASC as Covariate**

| Group | Number | Mean of ASC scores | Mean of OEA. score | Adjusted mean of OEA. scores |
|---|---|---|---|---|
| EG2 | 18 | 118.40 | 62.06 | 62.588 |
| CG4 | 12 | 118.90 | 53.83 | 53.262 |

| Tests of Between-Subjects Effects | | | | | | |
|---|---|---|---|---|---|---|
| Dependent Variable: tot-posttest | | | | | | |
| Source | Type III Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
| Corrected Model | 1584,867[a] | 26 | 60,956 | ,457 | ,887 | ,798 |
| Intercept | 84934,519 | 1 | 84934,519 | 636,214 | ,000 | ,995 |
| groups | 273,780 | 1 | 273,780 | 2,051 | ,024 | ,676 |
| selfconcept | 912,940 | 19 | 48,049 | ,360 | ,931 | ,495 |
| groups * selfconcept | 119,833 | 6 | 19,972 | ,150 | ,976 | ,230 |
| Error | 400,500 | 3 | 133,500 | | | |
| Total | 105591,000 | 30 | | | | |
| Corrected Total | 1985,367 | 29 | | | | |
| a. R Squared = ,798 (Adjusted R Squared = -,950) | | | | | | |

The table 6.16 comprises a certain number of analyses in congruence with ANCOVA in order to measure and control the real effect of each variable (the second experimental variable and the covariate). First we start with the analysis of the results with respect to the effect of the experimental variable (groups) while controlling the effect of the covariate (ASC), and in this respect, the results indicated that the source of variance of the posttest results in relation to the experimental variable (groups) examines the sixth null hypothesis based on the absence of significant differences between the adjusted means.

The results indicated that the F value for the significance of difference was (F= 2.051) with P value (P= .024) which means that the sixth null hypothesis “There will be no statistically significant difference between adjusted mean OEA scores of auditory Students taught through the AIP and general Students taught through the Traditional Teaching Method considering ASC as a covariate” was rejected and its alternative hypothesis was accepted. Moreover, we observe that the Partial Eta Squared (.676) which indicates a strong relationship between the experiment (groups) and the posttest.

The table above that indicates the Tests of Between-Subjects Effects also includes the results related to the neat effect of the covariate (ASC) as well as adjusting the effect of the

experimental variable by reference to F Value ( F= .360) and P Value (.931) hence there was no significant difference between the mean of the covariate. We further note the moderate effect size of the covariable (Partial Eta Squared =. 495), accordingly, this effect size could generally be considered as low or insignificant compared to the effect size of the experimental variable (Partial Eta Squared = .710).

Further, according to the Table- 6.16 the adjusted mean of OEA scores of Auditory Students group and Control group were 62.588 and 53.262 respectively. It means Auditory Students Group was higher than Sub Auditory Control Group in OEA. So it can be said that the AIP is effective on OEA for Auditory Students when ASC is statistically controlled.

#### 6.2.3.7. Effectiveness of the KIP on OEA of Kinaesthetic Students with Respect to CASE

To study the effect of the KIP on OEA of Kinaesthetic Students, null hypothesis-7 "There will be no statistically significant difference between adjusted mean oral expression achievement scores of kinaesthetic Students taught through the KIP and general Students taught through the Traditional Teaching Method considering CASE as a covariate." was formulated. For testing this hypothesis, two groups of the students were opted for: the Kinaesthetic Experimental Group (EG3) and the Sub Kinaesthetic Control Group (CG4).

Kinaesthetic Students group was given treatment by the Kinaesthetic Instructional Programme and the Control group was given experience by teaching traditionally. The data of these two groups were collected regarding their CASE and OEA. The data were analyzed by the analysis of covariance (ANCOVA). Results are given in the Table 6.17

**Table 6.17**

**Significance of Difference between Mean Achievement Scores of the Kinaesthetic Students Group and the Control Group Considering CASE as Covariate**

| Group | Number | Mean of CASE scores | Mean of OEA. score | Adjusted mean of OEA. scores |
|---|---|---|---|---|
| EG 3 | 18 | 117.03 | 61.78 | 61.764 |
| CG4 | 11 | 116.58 | 50.45 | 50.467 |

| Tests of Between-Subjects Effects | | | | | | |
|---|---|---|---|---|---|---|
| Dependent Variable: tot-posttest | | | | | | |
| Source | Type III Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
| Corrected Model | 1912,075[a] | 20 | 95,604 | 1,349 | ,345 | ,771 |
| Intercept | 74782,830 | 1 | 74782,830 | 1054,827 | ,000 | ,992 |
| groups | 800,333 | 1 | 800,333 | 11,289 | ,008 | ,885 |
| selfefficacy | 875,180 | 13 | 67,322 | ,950 | ,552 | ,607 |
| groups * selfefficacy | 175,006 | 6 | 29,168 | ,411 | ,852 | ,236 |
| Error | 567,167 | 8 | 70,896 | | | |
| Total | 98303,000 | 29 | | | | |
| Corrected Total | 2479,241 | 28 | | | | |
| a. R Squared = ,771 (Adjusted R Squared = ,199) | | | | | | |

The table 6.17 comprises a certain number of analyses in congruence with ANCOVA in order to measure and control the real effect of each variable (the third experimental variable and the covariate). First we start with the analysis of the results with respect to the effect of the experimental variable (groups) while controlling the effect of the covariate (CASE), and in this respect, the results indicated that the source of variance of the posttest results in relation to the experimental variable (groups) examines the seventh null hypothesis based on the absence of significant differences between the adjusted means.

The results indicated that the F value for the significance of difference was (F= 11,289) with P value (P= .008) which means that the seventh null hypothesis “There will be no

statistically significant difference between adjusted mean OEA scores of Kinaesthetic Students taught through the KIP and general Students taught through the Traditional Teaching Method considering CASE as a covariate" was rejected and its alternative hypothesis was accepted. Moreover, we observe that the Partial Eta Squared (.885) which indicates a strong relationship between the experiment (groups) and the posttest.

The table above that indicates the Tests of Between-Subjects Effects also includes the results related to the neat effect of the covariate (ASC) as well as adjusting the effect of the experimental variable by reference to F Value ( F= .950) and P Value (.552) hence there was no significant difference between the mean of the covariate. We further note the moderate effect size of the covariable (Partial Eta Squared = .607), accordingly, this effect size could generally be considered as low or insignificant compared to the effect size of the experimental variable (Partial Eta Squared = .885).

Further, according to the Table- 6.17 the adjusted mean of OEA scores of Kinaesthetic Students group and Control group were 61.764 and 50.467 respectively. It means Kinaesthetic Students Group was higher than Sub Kinaesthetic Control Group in OEA. So it can be said that the KIP is effective on OEA for Kinaesthetic Students when CASE is statistically controlled.

#### 6.2.3.8. Effectiveness of the KIP on OEA of Kinaesthetic Students with Respect to SH

To study the effect of the kinaesthetic instructional programme KIP on OEA of Kinaesthetic Students, null hypothesis-8 "There will be no statistically significant difference between adjusted mean oral expression achievement scores of kinaesthetic students taught through the KIP and general students taught through the Traditional Teaching Method considering Study Habit as a covariate" was formulated. For testing this hypothesis, two groups of the students were opted for: the Kinaesthetic Experimental Group (EG3) and the Sub Kinaesthetic Control Group (CG4).

Kinaesthetic Students group was given treatment by the Kinaesthetic Instructional Programme and the Control group was given experience by teaching traditionally. The data of these two groups were collected regarding their SH and OEA. The data were analyzed by the analysis of covariance (ANCOVA). Results are given in the Table 6.18

**Table 6.18**

**Significance of Difference between Mean Achievement Scores of the Kinaesthetic Students Group and the Control Group Considering SH as Co-variate**

| Group | Number | Mean of SH scores | Mean of OEA. score | Adjusted mean of OEA. scores |
|---|---|---|---|---|
| EG 3 | 18 | 111.14 | 61.78 | 62.010 |
| CG4 | 11 | 111.68 | 50.45 | 49.895 |

| **Tests of Between-Subjects Effects** | | | | | | |
|---|---|---|---|---|---|---|
| Dependent Variable: tot-posttest | | | | | | |
| Source | Type III Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
| Corrected Model | 2229,241[a] | 24 | 92,885 | 1,486 | ,383 | ,899 |
| Intercept | 78456,464 | 1 | 78456,464 | 1255,303 | ,000 | ,997 |
| groups | 408,091 | 1 | 408,091 | 6,529 | ,001 | ,820 |
| studyhabit | 1021,082 | 18 | 56,727 | ,908 | ,614 | ,503 |
| groups * studyhabit | 344,825 | 5 | 68,965 | 1,103 | ,475 | ,580 |
| Error | 250,000 | 4 | 62,500 | | | |
| Total | 98303,000 | 29 | | | | |
| Corrected Total | 2479,241 | 28 | | | | |
| a. R Squared = ,899 (Adjusted R Squared = ,294) | | | | | | |

The table 6.18 comprises a certain number of analyses in congruence with ANCOVA in order to measure and control the real effect of each variable (the third experimental variable and the covariate). First we start with the analysis of the results with respect to the effect of the experimental variable (groups) while controlling the effect of the covariate (SH), and in this respect, the results indicated that the source of variance of the posttest results in relation

to the experimental variable (groups) examines the Eighth null hypothesis based on the absence of significant differences between the adjusted means.

The results indicated that the F value for the significance of difference was (F= 6.529) with P value (P= .001) which means that the null hypothesis 8 "There will be no statistically significant difference between adjusted mean OEA scores of Kinaesthetic Students taught through the KIP and general Students taught through the Traditional Teaching Method considering SH as a covariate" was rejected and its alternative hypothesis was accepted. Moreover, we observe that the Partial Eta Squared (.820) which indicates a strong relationship between the experiment (groups) and the posttest.

The table above that indicates the Tests of Between-Subjects Effects also includes the results related to the neat effect of the covariate (SH) as well as adjusting the effect of the experimental variable by reference to F Value ( F= .908) and P Value (.614) hence there was no significant difference between the mean of the covariate. We further note the moderate effect size of the covariable (Partial Eta Squared = .503), accordingly, this effect size could generally be considered as low or insignificant compared to the effect size of the experimental variable (Partial Eta Squared = .820).

Further, according to the Table- 7.18 the adjusted mean of OEA scores of Kinaesthetic Students group and Control group were 62.010 and 49.895 respectively. It means Kinaesthetic Students Group was higher than Sub Kinaesthetic Control Group in OEA. So it can be said that the KIP is effective on OEA for Kinaesthetic Students when SH is statistically controlled.

#### 6.2.3.9. Effectiveness of the KIP on OEA of Kinaesthetic Students with Respect to ASC

To study the effect of the kinaesthetic instructional programme KIP on OEA of Kinaesthetic Students, the null hypothesis-9 "There will be no statistically significant difference between adjusted mean oral expression achievement scores of Kinaesthetic Students taught

through the KIP and general Students taught through the Traditional Teaching Method considering ASC as a covariate " was formulated. For testing this hypothesis, two groups of the students were opted for: the Kinaesthetic Experimental Group (EG3) and the Sub Kinaesthetic Control Group (CG4). Kinaesthetic Students group was given treatment by the Kinaesthetic Instructional Programme and the Control group was given experience by teaching traditionally. The data of these two groups were collected regarding their ASC and OEA. The data were analyzed by the analysis of covariance (ANCOVA). Results are given in the Table 6.19.

**Table 6.19**

**Significance of Difference between Mean Achievement Scores of The Kinaesthetic Students Group and The Control Group Considering ASC as Co-Variate**

| Group | Number | Mean of ASC scores | Mean of OEA. score | Adjusted mean of OEA. scores |
|---|---|---|---|---|
| EG 3 | 18 | 115.76 | 61.78 | 61.652 |
| CG | 11 | 115.20 | 50.45 | 50.300 |

| Tests of Between-Subjects Effects | | | | | | |
|---|---|---|---|---|---|---|
| Dependent Variable: tot-posttest | | | | | | |
| Source | Type III Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
| Corrected Model | 2307,241[a] | 25 | 92,290 | 1,610 | ,392 | ,931 |
| Intercept | 77680,823 | 1 | 77680,823 | 1354,898 | ,000 | ,998 |
| groups | 318,897 | 1 | 318,897 | 5,562 | ,002 | ,890 |
| selfconcept | 1111,308 | 17 | 65,371 | 1,140 | ,528 | ,566 |
| groups * selfconcept | 355,309 | 7 | 50,758 | ,885 | ,600 | ,674 |
| Error | 172,000 | 3 | 57,333 | | | |
| Total | 98303,000 | 29 | | | | |
| Corrected Total | 2479,241 | 28 | | | | |
| a. R Squared = ,931 (Adjusted R Squared = ,352) | | | | | | |

The table 6.19 comprises a certain number of analyses in congruence with ANCOVA in order to measure and control the real effect of each variable (the third experimental variable and the covariate). First we start with the analysis of the results with respect to the effect of the experimental variable (groups) while controlling the effect of the covariate (ASC), and in this respect, the results indicated that the source of variance of the posttest results in relation to the experimental variable (groups) examines the ninth null hypothesis based on the absence of significant differences between the adjusted means.

The results indicated that the F value for the significance of difference was (F= 5.562) with P value (P=. 002) which means that the null hypothesis 9 "There will be no statistically significant difference between adjusted mean OEA scores of Kinaesthetic Students taught through the KIP and general Students taught through the Traditional Teaching Method considering ASC as a covariate" was rejected and its alternative hypothesis was accepted. Moreover, we observe that the Partial Eta Squared (.890) which indicates a strong relationship between the experiment (groups) and the posttest.

The table above that indicates the Tests of Between-Subjects Effects also includes the results related to the net effect of the covariate (ASC) as well as adjusting the effect of the experimental variable by reference to F Value ( F= 1.140) and P Value (.528) hence there was no significant difference between the mean of the covariate. We further note the moderate effect size of the covariable (Partial Eta Squared =. 566), accordingly, this effect size could generally be considered as low or insignificant compared to the effect size of the experimental variable (Partial Eta Squared = .890).

Further, according to the Table- 6.19 the adjusted mean of OEA scores of Kinaesthetic Students group and Control group were 61.652 and 50.300 respectively. It means Kinaesthetic Students Group was higher than Sub Kinaesthetic Control Group in OEA. So it can be said that the KIP is effective on OEA for Kinaesthetic Students when ASC is statistically controlled.

According to these results, the VIP, AIP, and KIP were effective on Visual Students', Auditory Students', and Kinaesthetic Students' OEA respectively. Which means that all the nine stated null hypotheses were rejected at P value (a=0.05). Since the VIP, AIP, and the KIP were all effective, the researcher decided to conduct a further analysis to test the statistical significant difference between the three programmes (VIP, AIP, and KIP) considering CASE, SH, and ASC as covariates in order to examine whether these three instructional programmes were equally effective or there are statistical significant differneces between them. The results are given in the following paragraphs.

### 6.2.3.10. Effectiveness of the VIP, AIP, and KIP on OEA of Visual, Auditory and Kinaesthetic Students with Respect to CASE

To examine the effectiveness of the VIP, AIP, and KIP on OEA of visual, auditory and kinaesthetic Students, three groups of the students were taken: Visual Students Group EG1, Auditory Students Group EG2, and Kinaesthetic Students Group EG3. The EG1 received treatment by the VIP; the EG2 rcieved treatment by the AIP and, the EG3 received treatment by the KIP. The data of these three groups were collected regarding their CASE and OEA. The data were analyzed by ANCOVA. Results are given the Table 6.20

**Table 6.20**

**Significance of Difference between Mean OEA Scores of EG1, EG2, EG3 Considering CASE as Co-variate**

| Group | Number | Mean of CASE scores | Mean of ach. score in Science | Adjusted mean of ach. scores in Science |
|---|---|---|---|---|
| EG1 | 20 | 116.54 | 60.90 | 60.893 |
| EG2 | 18 | 117.60 | 62.06 | 61.913 |
| EG3 | 18 | 117.03 | 61.78 | 61.764 |

**Analysis of Co-variance of OEA Scores**

| Analysis of co-variance of OEA scores Source of Variance | Sum of Squares | df | Mean Square | F value | Sig. level |
|---|---|---|---|---|---|
| Group | 48.072 | 2 | 48.072 | 1.083 | 0.967 |
| Error | 1058.266 | 58 | 15.005 | | |
| Total | 109302.00 | 60 | | | |

Observation of the Table 6.20 shows that Visual, Auditory, and Kinaesthetic Students group consist 20, 18 and 18 participants respectively. Mean CASE scores of these three groups were 116.54, 117.60 and 117.03 respectively. After controlling the effect of CASE by ANCOVA, adjusted means of OEA of Visual, Auditory and Kinaesthetic Students group were 60.893, 61.913, and 61.764 respectively.

The F value for the significance of difference between adjusted mean OEA scores of these three groups was (F = 1.083) which was not significant at a=0.05 level (P value= 0.967) which was greater than 0.05. So it can be said that there was no significant difference between adjusted means of OEA scores of Visual, Auditory and Kinaesthetic group.

Further, according to the Table- 6.20 the adjusted mean of OEA scores of Visual, Auditory and Kinaesthetic learners group were 60.893, 61.913, and 61.764 respectively. It means that all Instructional Programmes VIP, AIP, and KIP were equally effective when CASE as a covariate.

### 6.2.3.11. Effectiveness of the VIP, AIP, and KIP on OEA of Visual, Auditory and Kinaesthetic Students with Respect to SH

To study the effectiveness of the VIP, AIP, and KIP on OEA of Visual, Auditory and Kinaesthetic Students, three groups of the students were taken: Visual Students Group EG1, Auditory Students Group EG2, and Kinaesthetic Students Group EG3. EG1 received treatment by the VIP; EG2 received the AIP and, EG3 received the KIP. The data of these three groups were collected regarding their SH and OEA. The data were analyzed by ANCOVA.

Results are given the Table 6.21

**Table 6.21**

**Significance of Difference between Mean OEA scores of EG1, EG2, EG3 Considering SH as Co-variate**

| Group | Number | Mean of SH Scores | Mean of OEA Score | Adjusted Mean of OEA Scores |
|---|---|---|---|---|
| EG1 | 20 | 110.09 | 60.90 | 60.822 |
| EG2 | 18 | 109.30 | 62.06 | 62.045 |
| EG3 | 18 | 111.04 | 61.78 | 62.010 |

**Analysis of Co-variance of OEA scores**

| Analysis of co-variance of achievement scores Source of Variance | Sum of Squares | df | Mean Square | F value | Sig. level |
|---|---|---|---|---|---|
| Group | 55.876 | 2 | 55.876 | 2.044 | 0.486 |
| Error | 1081.593 | 62 | 60.046 | | |
| Total | 1117.469 | 76 | | | |

Observation of the Table 6.21 shows that Visual, Auditory Kinaesthetic Students group consist 20, 18 and 18 participants respectively. Mean SH scores of these three groups were 110.09, 109.30 and 111.04 respectively. After controlling the effect of SH by ANCOVA adjusted means of OEA of Visual, Auditory and Kinaesthetic Students group were 60.822, 62.045, and 62.010 respectively.

The F value for the significance of difference between adjusted mean OEA scores of these three groups was (F= 2.044) which was not significant at a=0.05 level (P value= 0.486) which is greater than 0.05. So it can be said that there was no significant difference between adjusted means of OEA scores of Visual, Auditory and Kinaesthetic group.

Further, according to the Table 6.21 the adjusted mean of OEA scores of Visual, Auditory and Kinaesthetic learners group were 60.822, 62.045, and 62.010 respectively. It means that all Instructional Programmes VIP, AIP, and KIP were equally effective when SH as a covariate.

### 6.2.3.12. Effectiveness of the VIP, AIP, and KIP on OEA of Visual, Auditory and Kinaesthetic Students with Respect to ASC

To study the effect of the VIP, AIP, and KIP on OEA of visual, auditory and kinaesthetic Students, three groups of the students were taken: Visual Students Group EG1, Auditory Students Group EG2, and Kinaesthetic Students Group EG3. EG1 received treatment by the VIP; EG2 received treatment by the AIP and, EG3 received treatment by the KIP. The data of these three groups were collected regarding their ASC and OEA. The data were analyzed by ANCOVA. Results are given the Table 6.22.

**Table 6.22**

**Significance of Difference between Mean OEA Scores of EG1, EG2, EG3 Considering ASC as Co-variate**

| Group | Number | Mean of CASE scores | Mean of OEA score | Adjusted mean of OEA. scores |
|---|---|---|---|---|
| EG1 | 20 | 113.49 | 60.90 | 60.944 |
| EG2 | 18 | 118.40 | 62.06 | 62.588 |
| EG3 | 18 | 115.76 | 61.78 | 61.652 |

**Analysis of Covariance of OEA Scores**

| Analysis of co-variance of achievement scores Source of Variance | Sum of Squares | df | Mean Square | F value | Sig. level |
|---|---|---|---|---|---|
| Group | 48.072 | 2 | 48.072 | 1.435 | 0.224 |
| Error | 1058.266 | 58 | 15.005 | | |
| Total | 109302.00 | 60 | | | |

Observation of the Table 6.22 shows that Visual, Auditory Kinaesthetic Students group consist 20, 18 and 18 participants respectively. Mean CASE scores of these three groups were 113.49, 118.40 and 115.76 respectively. After controlling the effect of ASC by ANCOVA adjusted means of OEA of Visual, Auditory and Kinaesthetic Students group were 60.944 62.588, and 61.652 respectively.

The F value for the significance of difference between adjusted mean OEA scores of these three groups was (F= 1.435) which was not significant at 0.05 level (P Value= 0.224) which is greater than 0.05. So it can be said that there was no significant difference between adjusted means of OEA scores of Visual, Auditory and Kinaesthetic group. Further, according to the Table 6.18 the adjusted mean of OEA scores of Visual, Auditory and Kinaesthetic Students group were 60.944 62.588, and 61.652 respectively. It means that all Instructional Programmes VIP, AIP, and KIP were equally effective when ASC as a covariates. According to the above results, it can be concluded that the VIP, AIP, and KIP were equally effective on EG1, EG2, and EG3 considering CASE, SH, and ASC as covariates.

At the end of the intervention, the researcher sought to investigate the level of the participants' satisfaction with the LSBIP experience. The researcher found that it would be encouraging and respectful to the experimental groups if their opinions about the learning experience were taken into account (ethical considerations). Moreover, since in this study, the researcher did not opt for a questionnaire to investigate the students' attitudes towards the treatment (this was not among the objectives of the study), these satisfaction scales were used to to check if the intervention afforded in the experiment has met the expectations and the preoccupations of the participants and consequently recommendations will be built upon.

Starting with the VIP students' satisfaction scale, it consisted of 10 items through which the visual experimental group (EG1) expressed their overall satisfaction with the VIP experience. The overall mean score of student satisfaction was (M= 4.66, SD= .84). All items were high, ranging from (4.2 to 4.5). Students were most satisfied with the VIP which contributed to their language learning (M= 4.19)**,** the integration of teaching methods and activities for supporting learning (M= 4.35), and the reduction of feeling of boring and tension in the classroom (M=4.24), the enjoyment of the learning experience (M= 4.21), and the students' overall satisfaction with the VIP experience (M= 4.50).

The results of auditory student satisfaction (EG2) with the AIP were as follow; the overall mean score of student satisfaction was (M= 4.26, SD= .80). All items were high, ranging from (4.2 to 4.5). Students were most satisfied with the AIP which contributed to their language learning (M= 4.12), the integration of teaching methods and activities for supporting learning (M= 4.36), and the reduction of feeling of boring and tension in the classroom (M= 4.16), the enjoyment of the learning experience (M= 4.16), and the students' overall satisfaction with the AIP experience (M= 4.20).

Finally, the results of kinaesthetic student satisfaction on using the KIP were as follow: the overall Mean score of student satisfaction was (M= 4.25, SD= .78). All items were high, ranging from (4.14 to 4.5). Students were most satisfied with the KIP which contributed to their language learning (M= 4.14), the integration of teaching methods and activities for supporting learning (M= 4.20), and the reduction of feeling of boring and tension in the classroom (M= 4.22), the enjoyment of the learning experience (M= 4.34), and the students' overall satisfaction with the KIP experience (M= 4.21).

Based on the results obtained from the VIP satisfaction scale, the AIP satisfaction scale, and the KIP satisfaction scale, the majority of the participants (the experimental groups: EG1, EG2, EG3) showed their high satisfaction about the LSBIP intervention implemented in the current study.

**6.3. Discussions**

In the past, the role of education in general and language instruction in particular was limited to successful transmission of information and skills to learners (Moradkhan & Mirtaheri, 2013). Most of teachers assume that they know what the students need to learn and believe that with an adequate level of motivation all learners could learn (Yamauchi, 2008). However, these beliefs were questioned in the 1970s and scholars began to propose other hypotheses to describe the language learning process (Moradkhan & Mirtaheri, 2013). These

scholars claimed that learners may approach the learning process differently depending on their preferences and styles and that for many learners the mode of instruction does make a difference (Levin et al., 1974 cited in Larsen-Freeman & Long, 1991). Subsequent studies (e.g., McDonough, 1981) supported the notion that learners responded differently to instructional methods. With this realization an effort was made to improve language teaching methodology by considering the inter-learner variability (Moradkhan & Mirtaheri, 2013). This concept is now represented in 'styles and strategies-based instruction' (Cohen & Dörnyei, 2002; McDonough, 1999). The styles and strategies-based instruction highlights the need for individualization by helping students become aware of their own preferences, styles, strengths, and weaknesses. Today, thanks to a respectable stockpile of SLA research, there is a greater recognition of our need to gain a deeper understanding of our students, their learning differences, learning styles, learning difficulties and their predisposition to certain types of tasks to achieve their goals successfully (Pawlak, 2012). Moreover, there is a great deal of evidence that a mismatch between students' learning styles and teacher's instructional strategies and style may have a negative impact on classroom learning (Felder & Henriques, 1995; Mulalic, Mohd Shah & Ahmad, 2009; Oxford et al., 1991). EFL students at Mohamed Lamine Debaghine Sétif 2 are no exception to this rule; they are perhaps facing even more difficulties due to the mismatch between teaching strategies, styles and learning styles (as it was found in the exploratory phase).

When it comes to teaching methodology, lots of methods and approaches appear to reflect different theories and principles. However, it is almost difficult to compare different methodologies (Fazalur, 2011). Every instructional method has its own characteristics, strengths, and limitations. The concern therefore is not about fugure out which teaching methodology is the best to opt for, or with substituting one for another, the concern is about the merits of diversity, which seeks to enrich education rather than constrain it, through a

search for an optimum way of doing diverse teaching (Richards, 2015). Pashler et al.'s (2008) recent review of the learning styles literature; state that there is widespread belief among educators and the general public alike that individuals learn better when they are presented instruction in the modality that capitalizes on their learning style preference. Specifically, they focused on the meshing hypothesis (mentioned in the theoretical background, p.1) that proposes that individuals with a visual learning style preference will learn more when information is presented to them in a written format, and conversely, those with an auditory learning style preference will learn more when instruction is presented to them in a listening format, and those with a kinaesthetic learning style preference will learn more when instruction is presented to them via experience.

However, Pashler et al.,'s (2008) review of the literature led them to conclude that there is little empirical evidence to support a direct relationship between learning style preferences and differential learning outcomes based on different modes of instruction (Rogowsky, 2014). They further ende up with the conclusion that the definitive study had not been conducted, and therefore, they prescribed a detailed roadmap for the experimental methodology that would be needed to address these important issues empirically as well as explicit examples of the patterns of data that would either support or refute the meshing hypothesis.

The framework of this study was consistent with the meshing hypothesis principal. As it was mentioned earlier, this study was undertaken to assess, via a pretest-posttest using a quasi-experimental design, the effectiveness of LSBIP on OEA of first year EFL students at Mohamed Lamine Debaghine Sétif 2 University. In this part, the research questions and their corresponding null hypotheses were brought up and discussions of the findings based on the results were presented.

To answer the research question 1 "Is there a match or mismatch between the teachers' teaching strategies, styles and the students' learning styles?", four data collection tools

(observation checklist, the FGD, the semi-structured interviews and the questionnaires) were used in the exploratory phase of this study as it was discussed in chapter four, in order to investigate the extent of matching or mismatching, if any, between students' learning styles and teachers' teaching strategies and styles in the OE classes through a triangular approach. A general classroom observation checklist was used to record the events, the activities and to evaluate the teachers' performances in the OE classes. The results of the classroom observations, the teachers' FGD and semi structured interviews with both teachers and students were compared with the obtained results from the PLSPQ and PTSPQ.

This section consists of a discussion of the data results obtained through the exploratory phase. The results showed that most teachers use a lecture-style forum, presenting information by talking to their students. It seems that only auditory students tend to benefit most from traditional teaching techniques. A conflict between teaching staretegies, styles and learning styles was obvious. Felder and Henriques (1995, p. 28) hold that " matching teaching styles to learning styles can significantly enhance academic achievement, student attitudes, and specifically in foreign language instruction, however, when there is a mismatch both the student and the faculty suffer".

In the present study, the mismatch between the learning styles and the teaching strategies ans styles was apparent. The first place where the mismatch occured was in the ways most teachers teach their students. From the results of the FGD and the semi-structured interview, most teachers had a preference for teacher-centered instruction. In this method, the teacher is seen as the holder of all knowledge, and the characteristic of teacher-centered approach is lecture. This type of lecturing is described as an "uninterrupted verbal presentation by an instructor" (Lightbown & Spada, 1999). From the observation, it was noticed that giving lectures was the most accepted and frequent teaching method. Teachers came to class and started to lecture. They talked about the subject usually at the front of the

class with the students listening attentively. There was little student involvement and the teacher strongly favored auditory teaching style. As for the results obtained from the questionnaires (PLSPQ, PTSPQ) revealed that there was no statistically significant relationship between students learning styles and teachers teaching styles through the Chi-square analysis ( where the P value was .220 for visual style, P= .474 for auditory style, P= .141 for kinaesthetic style, P= .429 for tactile style, P= .123 for group style and , P= .304 for individual style) where the studetns had preference to kinaesthetic, tactile and group learning tenenciesc, however, teachers had preference towards auditory and individual styles.

Students from the same classroom tend to learn differently; where visual students had a preference for visual learning style who thinks in pictures rather than in words. They learn better visually than auditorily. They are the learners who need to see the picture first before they learn the details. When a visual material is used to present information, it can improve their comprehension. A picture is more effective than words alone for them. Another type of student that the teacher did not pay special attention to is kinaesthetic students. These students like to be actively involved in what they are learning. They enjoy acting out what they are learning, interviewing others, playing games and simulations. They enjoy action-packed learning experiences. However, the teacher-centered method has little student involvement. The essence of this kind of teaching and its purpose are for a steady transmission of information from the teacher to the students. Thus, the teacher-centered method does not work for the kinaesthetic students. This method does not match their best and fastest method of learning. Obviously, the learning styles of many students do not conform to the traditional teaching style of most teachers as explained above.

Generally speaking, teachers in a teacher-centered environment focus more on content than on student processing. The teacher-centered classrooms do not place students at the center of classroom organization and disrespect their learning needs, strategies, and styles. In

teacher-centered classrooms, students cannot be observed working individually or in pairs and small groups on distinct tasks and projects. Problems occur when teaching styles conflict with students' learning styles, which resulting in limited learning or no learning. Another explanation may be rooted in the learning style of the teachers themselves. Teachers by the virtue of their learning experience have developed certain learning styles which gradually become their preferred teaching styles. This assumption is consistent with Mulalic et al.'s (2009) claim that teachers have their own teaching preferences that are influenced by their learning preferences.

The results of the first research question were not promising because they showed that EFL teachers did not have a clear picture of their teaching strategies and their responses to the FGD and the semi-structured interview do confirm what had been observed in their classes. This can be justified by the fact that the majority of teachers teach the way they learn (Stitt-Gohdes, 2001). Since numorous instructors have experienced an academic success in learning situations that were instructor-centred and depended heavily on lecture, it is reasonable that their preferred style of teaching would be to rehash what worked with them. These teachers are field independent, that is, they are more content oriented and prefer to use more formal teaching methods, favouring less student involvement and more structured class activities (Hayes & Allinson, 1997; Pithers, 2001). One possible reason teachers are led to teach the way they learn is that they might be not skilled in adult learning theory and have little education about and understanding of adult learning principles (Caudron, 2000). Classroom teachers who are skilled in adult learning principles and have experience with theories about student-centered learning and constructivism are more likely to adopt student-centered instruction (Stitt-Gohdes, 1999), even if it is not the way they learned or prefer to learn. These teachers have broad views of how teaching can occur and strong beliefs about the need to engage learners in the learning process. They are aware of the changing demographics of

classrooms and the influence of tailored instruction on students' ways of learning (Stitt-Gohdes, 2003). They are more likely to substitute self-directed learning opportunities and interactive learning environments for the traditional lecture and make use of varied resources to create personally meaningful educational experiences (Glenn, 2000). This emphasized the importance of increasing teachers' awareness of their students' learning styles and teaching instructional strategies and the outcomes that result out of their matching. If they do so, they can manage their classes better and can adapt their lessons to students' preferences to increase the quality of their teaching (Zhang, 2008) and consequently, the learning outcomes can be achieved (Coffield et al., 2004) as it was found in the current study.

Before answering the remaining research questions and thus reject or sustain their research null hypotheses, the researcher had to check the reliability and validity of the research instruments mainly the OEAT which served as a pretest and a posttest of this study, and the validity of the LSBIP. As it was discussed in chapter four (OEAT) and chapter five (LSBIP), many procedures were conducted for that purpose. Once the reliability and validity of these two research tools were obtained, the researcher conducted systematically the quasi-experimental research more particularly the non-equivalent pretest posttest control group design. The obtained results of the OEAT scores of the experimental groups (EG1, EG2, and EG3) and the control group (CG4) were analyzed using the Independent Sample T-test to analyze the results of the pretest scores and the Analysis of Covariance (ANCOVA) was used to analyze the posttest results considering the CASE, SH, and ASC as covariates.

The T-test was used to check the equivalency (there were no systematic differences between the two groups, ie. they were similar) between the experimental groups (EG1, EG2, and EG3) and the control group (Sub-CG4) with regard to the pre OAET. The significance values indicated no statistical significant differences at 0.05 (P= .697, P= .926, P= .515). This may be interpreted in the light of the fact that the two groups (experimental

and control groups) had the same level (intermediate level) according to the placement test results. Thus, it was concluded that participants in each group were equal with regard to their pre OEAT.

Results from research question 2 worked towards rejecting or sustaining the first three null hypotheses through analyzing statistically the scores between the adjusted mean of post OEAT of the experimental group (EG1), taught through the VIP, and the sub control group (CG4) taught through the Traditional Teaching Method (LM) considering CASE, SH, and ASC as covariates, revealed statistical significant difference through ANCOVA between EG1 and Sub CG4 (P= .013, P= .001, P= .004) respectively, which were significant at (Sig= 0.05). Moreover, the Partial Eta Squared results (.478, .790, .954) revealed a strong relationship between the experiment (groups) and the posttest. Hence, the VIP was effective when CASE, SH, and ASC as covariates. Consequently the first three null hypotheses were rejected and their alternative hypotheses were accepted. The high scores of the three experimental groups in comparison to those of the control group indicated that the effectiveness of the VIP (using Demonstration method, Drama technique, Video technique, Mind Map activity, Highlighter activity) did develop the Visual Students' OEA. This means that the VIP was worthwhile, and more effective than using the traditional teaching. All this made the researcher reached the first interpretation which indicated that any progress among the participants was the result of the suggested treatment (here is the VIP). Selecting the appropriate instructional strategies for visual students and the appropriate order of the corresponding class activities gave the participants an opportunity to play a very important role in the teaching learning process. The (20) visual students (EG1) thus got better scores in the post OEAT.

In the VIP, the researcher (the teacher) used Drama technique which might improve the OEA of EG1. The researcher through drama technique emphasized the students' practice in speaking, which makes students confident and brave to act out and use English in

communication. This claim is supported by the findings of the following researchers: Vitz (1984), Makita (1995), Dougill (1987), Dudin (1994), Gill (2007), and Ulas (2008). These empirical studies provided evidence in favour of the the experimental groups who implementd drama technique. It was proved that drama technique is highly effective for freeing students from their inhibitions and they could apply the conversations into their daily use. This again was consistent with Maley and Duff (2001) stating that drama can stimulate the students to learn to communicate in different situations with natural communication and meaningful context. According to Davies (1990), using drama technique makes students feel more relaxed and minimize their tension. The students have a chance to rehearse their roles, their language use and they can practice listening skill at the same time. Contrary to these results, AL-Jabali (1996) who studied the effect of drama technique on oral speaking skills in English, found that there were no statistically significant differences between the experimental group and the control group at (a= 0.05). He mentioned that these reults could be due to the short time span which was not enough to feel the real progress (4 weeks).

When using Demonstration method, it was noticed that the students' became active participants; they interact in groups while learning new vocabulary and expressions. The application of demonstration method in teaching oral language enabled the students to explore their ideas with their own words and to remember the information in long term memory (Ogologo & Wagbara, 2013). This is in line with the finding of Price and Brooks (2012) who claimed that demonstrations improve students' performance on practice assignments, as well as enhance student's understanding of concepts.

Using the video technique in accordance with the previous teaching strategies could positively affect the obtained results. Videos technique was heavily used in the VIP. By providing visual students with these videos, the researcher noticed that students were enjoying their learning, having fun, they paid great attention to the teacher's explanation, and they were

motivated. This could be due to the frequent use of educational videos that represented the teaching points in authentic environment. These findings are supported by a six-week study by Branigan (2005) on the use videos as a teaching strategy found that students in the classes which included the educational videos outperformed better than the control groups in test scores, writing assignments, in variety and creativity of problem-solving skills, and in their engagement in class discussion. Video is widely accepted as more powerful and more comprehensible than other media for second and foreign language students (Brinton & Gaskill, 2009; MacWilliam, 2004 cited in Keihaniyan, 2013).

Moreover, the teacher used the mind map activity to help the students visualize, externalise concepts and understand the connections between different ideas and concepts. Mind maps are profoundly effective visual aids that enable students to group together different ideas and enable teachers to present ideas visually and assess their students' conceptual improvement and understanding (Nasution, 2013). Studies like Boley (2008); Wang, (2007); Yang and Chen, (2010) have shown that the use of mind mapping improves results, enhances simulation learning and makes a significant contribution to a positive learning experience. In addition to the previous teaching startegies, highlighting was heavily used in the VIP. By highlighting the new vovabulary for the visual students can facilitate long term retention (Dunlosky et al., 2013).

Moreover, the results from the VIP students' satisfaction scale confirmed the importance of shifting from traditional teaching methods to more effective teaching paradigms such as the VIP instructions which involved students in the learning processes. From The VIP Users' Satisfaction Scale (the overall mean score of participants satisfaction was M= 4.66, SD= .84, all items were very high ranging from 4.2 to 4.5), it was apparent that visual expermental students EG1 were highly satisfied with the overall VIP experience.

Results of the second research question are in line with those of Maclsaac et al., (2001); Maneekul's (2002); Ha (2005); Brady (2013), and Sultana (2015) study results who found that using the visual teaching strategies with visual learners improve their academic achievement. During the VIP implementation, the researcher observed that the students were more motivated and more confident to express themselves orally. They could memorize new vocabulary and understand the grammar with fewer explanations, and the learning had become more meaningful for them due to the contextualization of the content, bringing the real world to the classroom especially with demonstrations, educational videos and drama.

Results from reseach question 3 worked towards rejecting or sustaining the second three null hypotheses through analyzing statistically the scores between the adjusted mean of OEA of (EG2), taught through the AIP, and sub control group (CG4) taught through the Traditional Teaching Method considering CASE, SH, and ASC as covariates revealed statistical significant difference through ANCOVA between EG2 and Sub CG4 (P=.015, P= .027, P=.024**)** which were significant at (Sig= 0.05) respectively. Moreover, the Partial Eta Squared results (.753, .710, .676) revealed a strong relationship between the experiment (groups) and the posttest. Consequently, the second three null hypothsese were rejected and their alternative hypotheses were accepted. Hence, the AIP was effective when CASE, SH, and ASC as covariates. These results can be justified by the effectiveness of the instructional strategies, methods, techniques ( Lecture Method, Group Discussion Method, Tape recording Technique, Verbal games activity and Brainstorming) used in AIP to teach the Auditory students (EG2). All this made the researcher reached the second interpretation which indicated that any progress among the participants was the result of the suggested treatment (here is the AIP). Selecting the appropriate instructional strategies for auditory students and the appropriate order of the corresponding class activities gave the participants an opportunity

to play a very important role in the teaching learning process. The (18) auditory students (EG2) thus got better scores in the post OEAT.

Discussing the language functions and their exponents could help the auditory students understand the teaching points. A few of the investigators were in favour of the view that discussion is important to learning because it helps students' process information rather than simply receive it. Group discussion method provides an opportunity for students to become more actively engaged in learning and for teacher to monitor students' progress (Ornstein & Lasley, 2000). During the activity work, the students learn the materials from each other and share what they have known, their ideas and experiences to others. Moreover, discussion technique proved to be an appropriate technique in teaching speaking and this has been supported by relevant researches done by Gall and Gall (1990 as cited in Killen, 2009) who found out that discussion was an effective technique of facilitating students' communication skills. Kusmaryati (2009) also encountered that discussion method was effective in improving the English speaking ability. This method could be applied in teaching English, because it has improved the ability of students' speaking ability. By applying this method, the students were given a big opportunity to express their own ideas and it could arouse their motivation to speak in the classroom. Raheem (2011) further disclosed that discussion method was better than basis the conventional lecture technique in improving students' achievement and retention in social studies. Discussion technique promoted students for sharing of ideas, development of social skills of talking and listening, clarification of ideas and promotion of team work.

Verbal games can prvide auditory students with listening and speaking experience. Games are motivating and energizing experiences for students to enhancethe speaking abilities in an enjoyable and comfortable way thanks to the creation of a great climate inside the classroom (Mora & Lopera, 2001). When implementing verbal games through the AIP,

the researcher noticed that auditory students were encouraged to communicate orally and to gain confidence in speaking. Moreover, during the process of implementation, it was noticed that students overcame their fear of making mistakes and perceived speaking as a natural process when they were playing. The majority of students could express and communicate orally without the pressure of time or consistent assessment.

Taped authentic materials might be considered as an effective tool for students when recieving extensive listening input. According to Harmer (1998) , FL teachers can support their classes with effective input carrying out extensive listening through a well chosen and appropriate tapes in different levels , genres and topics. FL teachers when dealing with the intensive listening according to Harmer (1998), would prefer to implement audio tapes as their favourite material in their classes since it provides students with the chance to listen to a variety of voices with authentic accents, different topics with different genres, as well as it gives the student a significant source of language input (Harmer, 2001). Taped authentic materials leads to a good practice of listening and has several benefits in classroom (Doff, 1995). This benefit is supported by Harmer when he quoted “Taped material allows students to hear a variety of different voices apart from just their own teachers; it gives them an opportunity to meet a range of characters and offers them a wide variety of situations and voices” (Harmer, 2001 , p. 229).

Brainstorming was explained as a teaching technique which show how active the students when they work as a group. Brainstorming implies that “ use of the brain to deal with issues and solve dynamic problems and the brainstorming session points to provide solutions to problems” (Jarwan, 2005, p. 243). Wang's (2009) experiment indicated that the input of lexical chunks produced an important effect in developing the students' fluency and accuracy. He suggested brainstorming help students to provide proper lexical items in speaking to activate their background knowledge and recite them before coming to class. He believed that

the provision of lexical chunks would enable students to have the language to draw upon to express their views, thus helping them develop communicative efficiency in speaking.

Moreover, the results from the AIP Users' Satisfaction Scale (the overall mean score of participants satisfaction was M= 4.26, SD= .80 and all items were very high raning from 4.2 to 4.5). Hence, it was apparent that auditory experimental students (EG2) were highly satisfied with the overall AIP experience. These results can be justified by the effectiveness of the instructional strategies, methods, techniques ( Lecture Method, Group Discussion Method, Tape recording Technique, verbal games activity and Brainstorming) used in AIP to teach the Auditory students. All this made the researcher reach the second interpretation which indicated that any progress among the subjects (EG2) was the result of the suggested treatment (here is the AIP). Selecting the appropriate instructional strategies for auditory students and the appropriate order of the corresponding class activities gave the subjects an opportunity to play a very important role in the teaching learning process. The (18) auditory students (EG2) thus got better scores in the post OEAT.

Results from the research question 3 are in line with those of Gilakjani (2012); McCarter (2008 ); and Leopold's (2012) study results who found that auditory learners respond well to discussions and oral brainstorming, using auditory teaching strategies involves the students in the learning process makes the students feel more motivated and more confident to express themselves orally. It could help them to overcome their shyness and fear to express themselves freely and stimulates their critical thinking through brainstorming activities.

Results from reseach question 4 worked towards rejecting or sustaining the third three null hypotheses through analyzing statistically the scores between the adjusted mean of OEA of EG3, taught through the KIP, and Sub control group CG4 taught through the Traditional Method (LM) considering CASE, SH, and ASC as covariates revealed statistical significant

difference through ANCOVA between EG3 and Sub CG4 (P=. 008, P=.001, P=.002) which were significant at (Sig=0.05) respectively. Moreover, the Partial Eta Squared results (.885, .820, .890) revealed a strong relationship between the experiment (groups) and the posttest. Hence, the KIP is effective when CASE, SH, and ASC as covariates and consequently the third three null hypothsese were rejected and their three alternative hypotheses were accepted. These results can be justified by the effectiveness of the instructional strategies, methods, techniques (role play, group work activity, body games, cut and paste activity, and puzzles) used in KIP to teach the Kinaesthetic students. All this made the researcher reach the third interpretation which indicated that any progress among the participants (EG3) was the result of the suggested treatment (KIP). Selecting the appropriate instructional strategies for kinaesthetic students and the appropriate order of the corresponding class activities gave the participants an opportunity to play a very important role in the teaching learning process. The (18) kinaesthetic students thus got better scores in the post OEAT.

The KIP revealed that implementing role-play activities with EG3 developed students' speaking skills. Such a task is more appealing to the students because they find it funny to play someone else's role. The majority of the students declaired that they felt their speaking skills increased. The teacher observed that when conducting the research lessons almost all of the students were really involved in the learning activities. Also, working in pairs and groups was rewarding to the participants, because they could overcome their anxiety and shyness of speaking in front of classmates especially with whom they did not have a close relationship. Altogether, role-play seems to be an efficient speaking exercise. What the students told the teacher after finishing the last research lesson was that such a type of activities provided them with many benifits. Students enjoyed their lesson and got more motivation, interest and confidence through their learning. In role-play techniques, students take a new identity and learn to use a FL for every day interaction. This is consistent with the results of previous

studies showing that role-play is an effective teaching strategy for enhancing student vocabulary achievement in specific and in learning English language in general (Toumpaniari, et al., 2015; Fernandez et al.,1992; Umbel, 1992; and Allman, 2005; Sadeghi & Sharifi, 2013; Nair et al., 2014). The reason for the great development in OEA of the EG3 was that the role-play teaching strategy is far more pleasant and engaging than the traditional method (LM), which is conducive to highly motivated students and a more creative learning environment (Vincent & Shepherd, 1998; Sasaki, 1998; Clemens,1998; Huang & Shan, 2008; Liu & Ding, 2009; and Aliakbari & Jamalvandi, 2010) Altun (2015), Afdillah (2015).

Moreover, through the implementation of body games with the kinaesthetic students (EG3), the process of learning became spontaneous and enjoyable. This can be supported by Obee (1999) and Koshy (2009) who claim that body games make the lesson more fun and enjoyable and not too rigid, hence, learners lose their anxiety and start to feel at ease being in the classroom with their friends, engage in social interaction and learning English in specific its vocabulary. Moreover, it also motivates the learners to learn and getinvolved in the English classroom. Motivation, as suggested by so many scholars is a crucial factor to an effective learning. In addition, through the use of games teachers are capable to take advantage of all the characteristics of individual learners and put them into appropriate use which will result in higher mastery of the FL (Koshy, 2009).

Through using the group work activity, the researcher observed a large increase in student talk time which allowed communication and importantly, cooperation among the kinaesthetic students. It was actually more student-centred and effective in getting every student involved in the activities. Many factors were also noticed like students' willingness to communicate in FL, ability to intercat and work in teams, enthusiasm as well as students' motivation in the group work activities. This is backed up by Webb (2009, p.3) who argues that "cognitive conflict leads to higher levels of reasoning and learning". When a student

notices a conflict between her understanding and what she hears from other group members through interaction, this forces her to reconsider her concepts and restructure her ideas to conform to the group. More recent studies also state that group work activities have positive effect on overall academic achievement (Meteetham, 2001; Gomleksize, 2007; Al-Sheedi, 2009; Hendry et al., 2005; Brown (2008); Gomleksize, 2007; Tuan & Neomy, 2007; Wichadee, 2007; Li et al., 2010; Nihalani et al., 2010; Arumugam et al., 2013). Moreover, group work helped to reduce students' anxiety to speak up in front of the class. Hence, the best time to overcome the speaking problems is through encouraging and implementing group work practice in EFL classrooms (Hendry et al., 2005). This finding resembled the idea of Harmer (1985) who stresses that group work is an attractive idea to increase the amount of students' talking time. The implementation of speaking activities through group work practices can help students to effectively intercat in the group as the kinaesthetic students will have confidence to overcome their anxiety and stress in speaking activities (Webb, 2009). Moreover, the study findings demonstrate high kinaesthetic students' satisfaction with the the KIP learning experience which confirmed the importance of shifting from traditional teaching methods to more effective teaching paradigms such as the learning style based instructions which involved students in the learning processes.

When using puzzles, a non-threatening learning environment was created which could encourage students to interact between each other and with the teacher as well. Through puzzles, classroom interaction, teamwork, and cooperation and active participation were encouraged (Richards, 2001) . This is emphasized by Merrick (2010) who asserts that using puzzles as a teaching strategy has shown to be able to create a healthy educational environment that enhanced speaking skills enhancing speaking skills results from practicing the various activities and techniques which are used to develop speaking oral proficiency. Moreover, puzzles helped in the acquisition and learning of new words as well as increase

students' familiarity with them in terms of meaning. Through mplementing puzzles as a teaching strategy, teachers could ulter the classroom environment, add excitement to the learning environment, and create a naturalistic setting for language learning (Merrick, 2010).

Moreover, the results from the KIP students' satisfaction scale confirmed the importance of shifting from traditional teaching methods to more effective teaching paradigms such as the KIP instructions which involved students in the learning processes. From The KIP Users' Satisfaction Scale (the overall mean score of participants satisfaction was (M= 4.25, SD= .78, all items were very high ranging from 4.14 to 4.42), it was apparent that kinaesthetic expermental students EG1 were highly satisfied with the overall KIP experience. During the KIP implementation, the researcher observed that the students were more involved and more enthusiastic towards the learning activites. Learning via experience was rewaeding for EG3 due to the teaching strategies used in the KIP.

The results from the research questions 2, 3, 4 with their nine null hypotheses succeeded to provide statistically significant empirical evidence supporting the meshing hypothesis. The idea is that instruction should be provided in the mode that matches the student's learning style. For example, if the student is a ''visual student,'' information should, when possible, be presented in visual format. The claim is that presentation should mesh with the student's own meshing hypothesis, and most accounts of how instruction should be optimized assume the meshing hypothesis: For example, they speak of (a) matching teaching to the way in which each learner starts to focus on, processing, absorbing, and retaining new and difficult information (Dunn & Dunn's framework; International Learning Styles Network, 2008), (b) the learner's preferred modes of perception and processing (Kolb's, 1984, 1985, framework), or (c) ''the fit between learners learning style and the kind of learning experience they face'' ( The Hay Group, n.d., p. 11).

The posttest mean scores of the students' English speaking abilities in the experimental groups (EG1, EG2, EG3) who received the VIP, AIP , and KIP respectively were significantly higher than those of the sub control groups (CG4). Characteristics of the activities may have encouraged interaction among the students in the language classroom. This could afford opportunity for language practice. The teacher arranged for language functions such as *making suggestions, *axplanations, advice and instructions, *complaints, apologies, and excuses, *giving and responding to good and bad news. These types of activities can afford students experience using the language for real communication. This idea was consistent with Johnson and Morrow (1981) where they proposed that the learner should know the purpose of speaking, what to speak, with whom, and where to speak, and how to use appropriate language. In this study, the contents of the language through the teaching strategies activities were carefully selected to suit, in addition to the students' learning styles, the Programme's teaching points and instructional objectives and to suit, the students' language level, to create challenges for the students to gain experience.

The findings of this study are consistent with the results of Beck (2010) and Wilson, (2011) with their correlational study about academic achievement and matched styles. This result amplified the earlier report that agreement between teaching strategies and learning styles has a positive impact on the academic achievement of the students (Damrongpanit & Reungtragul, 2013; Tulbure, 2012). However, one cannot underestimate the body of research that contradicts this meshing hypothesis (Akdemir & Koszalka, 2008; Massa & Mayer, 2006; Fardon's, 2013). They deny that matching students' learning styles with teachers' instructional strategies could have an effect on the students' learning performance and achievement. That's why further researches on this area are highly recommended. This is presented in the following chapter

All in all, the present study results sustained the “meshing hypothesis” which advocates that matching teaching strategies with learning style preferences could enhance academic achievement. However, Further studies should be applied on greater numbers of students coming from various profiles in order to find out the consistent differences among these categories of students. The results of such studies might be useful for many researchers have found that the identical teaching strategies and learning style will improve learning, attitudes, motivation, and behavior (Eady & Lockyer, 2013; Jones, 1997; Littlewood et al., 1996; Willing, 1988, as cited in Naimie et al., 2010) both university researchers and teachers who aim at revaluating the learning differences in order to improve the students’ academic achievement.

The LSBIP could provide another approach for teaching and learning that changes the roles of instructors from front-of-the-class to a more cooperative and collaborative contribution to the teaching process (Du et al., 2014). The findings of this study revealed that LSBIP was effective in increasing students' foreign language oral skills and satisfaction. The current study showed that students prefer to be in the center of the educational process. They are satisfied with the idea of changing the traditional practices to a more autonomous learning that fulfills their needs and incorporate new technology in classroom. There is clear evidence that student engagement is derived from the way teaching is carried out. Finally the results of the present study can contribute to add and bridge the gap in knowledge concerning this area of research.

**Conclusion**

In this chapter, the findings of this study were presented in line with the discussions. Through conducting the quasi-experimental research and more precisely the non-equivalent pretest/posttest control group design, it was possible to test either by sustaining or rejecting the research null hypotheses on the effectiveness of LSBIP on studenst’ OEA using T-test and

ANCOVA statistical analysis when CASE, SH, and ASC were the covariates. According to the results, the VIP (Visual Instructional Programme), the AIP (Auditory Instructional Programme), and the KIP (Kinaesthetic Instructional Programme) were effective instructional programmes in developing the students' OEA. Moreover, the three instructional programmes were aqually effective considering CASE, SH, and ASC as covariates. Therefore, the next chapter provides the conclusions, implications, limitations, delimitations and the recommendations of this study in the light of the results obtained.

## Chapter Seven : Brief Review, Conclusions, Implications, and Recommendations

# Chapter Seven

## Brief Review, Conclusions, Implications, and Recommendations

### Introduction

In the current study, some circumstances inhibited the control over the variables and produced serious limitations affecting the outcomes and results of the study. Further, there were some limited resources and connections, which also influenced the data and subsequent findings. The following paragraphs tackle a brief discussion of the results obtained through the study. Recommendations for further researches are also enlisted. Educational implications of the present study are also given in this chapter. The limitations in both research design and data are discussed.

### 7.1. Brief Review of the Study

The present study was conducted to examine the effectiveness of LSBIP on OEA of first year students of English at Mohammed Lamine Debaghine Setif 2 University. To that end, the the learning styles of the students had first to be explored by making use of VAK inventory which was developed by Victoria Chislett and Alan Chapman (2005). Based on the VAK results, three experimental groups were selected based on the high ratio of learning style of the students of each group; visual students group (EG1), auditory students group (EG2) and kinaesthetic students group (EG3) and one control group used as general students group (CG4). Hence, three LSBIPs; were developed: Visual Instructional Programme (VIP) for EG1, Auditory Instructional Programme (AIP) for EG2, and Kinaesthetic Instructional Programme (KIP) for EG3.

The LSBIP was developed by selecting four units under the topic of "How To…." from the BBC Learning English Programme. Then, an instructional programme was implemented with each experimental group; visual students group (EG1) by visual instructional programme

VIP. This instructional programme was developed on the basis of the characteristics and traits of visual students. The teaching strategies most suitable for visual students for better learning outcomes were introduced in this programme. The Different teaching strategies used for teaching visual students were; **(**1) Demonstration Method, (2) Use of Highlighter Activity, (3) Drama Technique, (4) Demonstration Method, and (5) Mind Map.

Auditory student group (EG2) was taught by auditory instructional programme AIP. In this programme teaching lesson plans were developed to teach auditory students. This instructional programme was developed again according to the characteristics and straits of auditory students. The strategies most suitable for auditory students for better learning outcomes were introduced in this programme. The Different strategies were used for auditory student teaching were; (1) Lecture method, (2) Group discussion method, (3) Tape recording technique, (4) Brain storming activity and (5) Verbal games activity.

Kinaesthetic auditory group (EG3) was taught by kinaesthetic instructional programme KIP. In this programme teaching plans were given to teach kinaesthetic students. This instructional programme was developed based on the characteristics and straits of kinaesthetic students. The strategies most suitable for kinaesthetic student for better learning achievement were introduced in this programme. The Different strategies were used for kinaesthetic student teaching were (1) Cut and Paste Task Activity, (2) Body Games Activity, (3) Role Play, (4) Group Work Activity and (5) Puzzles.

The general student group (CG4) was taught the same four units through traditional teaching method (LM) by its own teacher. Each experimental group was taught the instructional programme through different teaching strategies that suit and accommodate the preferred learning style of that group.

In this study, a non-equivalent pretest/posttest control group desigh (a type from quasi-experimental research design) was opted for to test the effectiveness of the learning (LSBIP)

on students' OEA. The variables Self Efficacy, Self Concept and Study Habits, were measured as covariates using the CASES, ASCS, and SHI scales respectively. These covariates of both the experimental groups and the general group were measured as it was the requirement of this quasi- experimental research. The total 15 weeks were spent for the experiment. Before the parent study, a pilot study was conducted for many reasons: to test the feasibility of the study and to test the reliability and validity of the instruments used to collect the required data (chapter four). Then, the intervention was proceded through implementing the three instructional programmes. After the implementation, the researcher had taken post-test of all the participants of the experimental and general control group. Nine null hypotheses and their alternatives were formulated in the present study. Students' achievement scores on the OE pre/post-test were obtained and analyzed for drawing out the conclusions. A t-test was used to check the equivalency between the experimental group (three experimental groups) and the control group (three sub-groups) with regard to their achievement in OEAT. The ANCOVA (statistical method) was used to analyze data. The P-value was calculated for testing the hypotheses and the Partial Eta Squared was obtained to measure the effect size of the experimental variables and the covariates.

### 7.2. Conclusions of the Study

The present study was carried out to examine the effectiveness of LSBIP on studnts' OEA. The conclusions are presented here regarding the experiments conducted in the study. The conclusions are given with reference to covariate frame which was discussed earlier.

- **When College Academic Self Efficacy as a Covariate**

1. The Visual Instructional Programme is effective for teaching of OE to the Visual Students.
2. The Auditory Instructional Programme is effective for teaching of OE to the Auditory Students

3. The Kinaesthetic Instructional Programme is effective for teaching of OE to the Kinaesthetic Students.
4. All three Instructional Programme: VIP, AIP, KIP were equally effective for teaching OE to Visual, Auditory and Kinaesthetic studsents respectively.
5. The Visual Instructional Programme is more effective for teaching of OE to the Visual Students as compared to teaching to sub group of Visual Students of control group through traditional teaching method.
6. The Auditory Instructional Programme is more effective for teaching of OE to the Auditory Students as compared to teaching to sub group of Auditory Students of control group through traditional teaching method.
7. The Kinaesthetic Instructional Programme is more effective for teaching of OE to the Kinaesthetic Students as compared to teaching to sub group of Kinaesthetic Students of control group through traditional teaching method.

- **When Study Habit as a Covariate**

1. The Visual Instructional Programme (VIP) is effective for teaching of OE to the Visual Students.
2. The Auditory Instructional Programme (AIP) is effective for teaching of OE to the Auditory Students.
3. The Kinaesthetic Instructional Programme (KIP) is effective for teaching of OE to the Kinaesthetic Students.
4. All three Instructional Programme: VIP, AIP, KIP were equally effective for teaching of OE to Visual, Auditory and Kinaesthetic students respectively
5. The Visual Instructional Programme is more effective for teaching of OE to the Visual Students as compared to teaching to sub group of Visual Students of control group through traditional teaching method.

6. The Auditory Instructional Programme is more effective for teaching of OE to the Auditory Students as compared to teaching to sub group of Auditory Students of control group through traditional teaching method.
7. The Kinaesthetic Instructional Programme is more effective for teaching of OE to the Kinaesthetic Students, as compared to teaching to sub group of Kinaesthetic Students of control group through traditional teaching method.

- **When Academic Self Concept as a covariate**

1. The Visual Instructional Programme (VIP) is effective for teaching of OE to the Visual Students.

2. The Auditory Instructional Programme (AIP) is effective for teaching of OE to the Auditory Students.

3. The Kinaesthetic Instructional Programme (KIP) is effective for teaching of OE to the Kinaesthetic Students.

4. All three Instructional Programme: VIP, AIP, KIP were equally effective for teaching OE to Visual, Auditory and Kinaesthetic Students respectively.

5. The Visual Instructional Programme is more effective for teaching of OE to the Visual Students as compared to teaching to sub group of Visual Students of control group taught through traditional teaching method.

6. The Auditory Instructional Programme is more effective for teaching of OE to the Auditory Students as compared to teaching to sub group of Auditory Students of control group through traditional teaching method.

7. The Kinaesthetic Instructional Programme is more effective for teaching of OE to the Kinaesthetic Students as compared to teaching to sub group of Kinaesthetic Students of control group taught through traditional teaching method.

### 7.3. Additional Outputs of the Study

Along with the results of the study, there are other outputs or products of the present study. The additional outputs of the present study are presented here very briefly.

- **Learning Style Based Instructional Programme**

In the present study, the researcher developed students' LSBIP on first year OE units. Researcher developed LSBIP on the base of different learning styles like Visual, Auditory and Kinaesthetic, the details of these LSBIP are given below:

**1/ Visual Instructional Programme**

The VIP Programme involves the teaching plan to for visual students. This instructional programme was developed on the basis of the characteristics and traits of visual students. VIP is developed out of OE units under the topic of "How To..."; *Discuss, *Instructions, explanations and advice, *Complaints, aplologies and excuses, *Good news, bad news. The teaching strategies most suitable for visual student for better learning outcomes are introduced in this programme. The Different strategies used for visual students teaching were; (1) Demonstration method, (2) Use of highlighter activity, (3) Drama technique, (4) Video technique, (5) Mind Map.

**2/ Auditory Instructional Programme**

In the AIP programme, the teaching plan was given to teach auditory students. This instructional programme was developed based on the characteristics and straits of auditory students. AIP is developed out of four units of OE under the topic of "How To…"; *Discuss, *Instructions, explanations and advice, *Complaint, aplologies and excuses, *Good news, bad news. The strategies most suitable for auditory students for better learning outcomes are introduced in this programme. The Different strategies were used for auditory learner teaching like; (1) Lecture method, (2) Group discussion method, (3) Tape recording technique, (4) Brainstorming activity, (5) Verbal game activity.

**3/ Kinaesthetic Instructional Programme**

In the KIP programme, the teaching plan was given to teach kinaesthetic students. This instructional programme was developed based on the characteristics and straits of kinaesthetic studentrs. KIP was developed out of four units of OE under the topic of "How To.."; *Discuss, *Instructions, explanations and advice, *Complaint, aplologies and excuses, *Good news, bad news. The strategies most suitable for kinaesthetic student for better learning outcomes were introduced in this programme. The Different teaching strategies were used for kinaesthetic student like; (1) Cut and Paste task activity, (2) Games activity (3) Role play and (4) Puzzles, (5) Group work activity.

It is worth mentioning here that there were some unexpected positive outcomes of the study. Through the implementation of LSBIP, it was noticed some changes in the participants learning behavior. Some of the particiapnts developed their social skills especially the kinaesthetic students. Other students who were very shy at the beguining they ended up by overcoming their shyness and intimidation.

**7.4. Educational Implication of the Study**

On the basis of the findings of the study, the following educational implications were drawn:

- VIP is effective on students OEA while considering Self Efficacy, Self Cocept, and Study Habit as covariates. So, teachers should use visual instructional programme for teaching the content to visual students. The teacher should use visual instructional strategies and visual representation of the course material.
- AIP is effective on students OEA while considering Self Efficacy, Self Cocept, and Study Habit as covariates. So, teachers should use auditory programme for teaching the content to auditory students. The teacher should use auditory instructional strategies and auditory representation of the course material.

- KIP is effective on students OEA while considering Self Efficacy, Self Cocept, and Study Habit as covariates. So, teachers should use kinaesthetic programme for teaching the content to kinestethic students. The teacher should use kinaesthetic instructional strategies and kinaesthetic representation of the course material.
- The result of the present study indicated that experimental instructional programmes VIP, AIP and KIP were equally effective on Students OEA while considering Self Efficacy, Self Concept, and Study Habit as covariates. These instructional programmes were helpful for increasing students' oral expression achievement. These programmes are useful for teachers to classroom instruction.
- It is important for teachers to identify and understand their students' preferred learning styles, and respond to different learning styles by accommodating some teaching strategies that could help promote learning. The first step towards incorporating and benefiting from this research is to realize the effect of learning styles on students' learning in the EFL classroom.
- Raising teachers' awareness of the preferred teaching and learning styles through the use of a learning style questionnaire or an assessment tool that should be administered once the students start the course. Teachers and students should familiarize themselves with the different learning styles by addressing their strengths and limitations, likes and dislikes in relation to how they learn best.
- The identification of the learning styles would help teachers and students select and implement more effective instructional methods and material (Gilakjani, 2012). This does not necessarily mean to imply extensive individualized instruction for every student but rather providing strategies and learning experiences to help students stretch their learning styles (Terry, 2002). This further entitles instructors to provide challenging however feasible activities that go beyond the comfort zone of the students.

- The more the students are provided with different strategies and learning experiences, the more they get tools to use in different and various contexts. Since an EFL classroom is supposed to be a heterogeneous one that involves a diverse population of students with regard to background, gender and age, teachers cannot simply aplly one particular teaching method to address each of these variables but in light of the investigations in the field, teachers would find it better to alter their teaching to meet the distinctive learning styles of the students (Oxford, 2001).

## 7.5. Limitations of the Study

- **Limitations in Design**

Although the researcher attempted to conduct this experimental research in the desired conditions, numerous limitations remained in the research design of this study, as a convenience sampling was used as a means of selecting the participants (sample). Since the researcher did not opt for a random selection of subjects or in other words was not able to select a random assignments of the groups, there may be differences between the observed sample and the total population since this sampling technique is likely to be biased and should not be taken as representative of the population (Mackey & Gass, 2005; Ellison et al., (2009).

1. In this study, the researcher considered three covariates; students self Efficacy, Study Habits, and Students Self Concept. However, one must also take into consideration other variables which could have an effect on students' achievement other than these three co-variates such as socio-economic status, student motivation, family support and involvement.

2. Finally maturation could have had a potential effect on the study, as students were continually growing and changing. personal events occurring at home, university, the community, and at national or even global levels may have affected students' efforts or interest in academic achievement, thus altering the collected data and, therefore, the findings of the study (Ary et al., 2006). Although the study participants were all enrolled in first year,

there certainly was some variation in age and, therefore, developmental levels. Even children of similar ages differ in their rate of physical, psychological, and intellectual development, thus introducing a variable outside the researcher's control (Felder & Brent, 2005; Trochta, 2008). Likewise, there is a lack of consensus concerning the nature of learning style development, with some saying these characteristics are fixed, others indicating they are stable, but not fixed, and still others who assert they are fluid, constantly changing as individuals mature and are exposed to various influences (Alaka, 2011; Charlesworth, 2008).

- **Limitations in Data**

In addition to limitations in design, there were also several limitations influencing the accuracy and usefulness of the data collected.

1/ There are a number of different learning styles theories and so many learning styles described but, in the present study only three learning styles Auditory, Visual and Kinaesthetic were considered.

2/ For the objectives of this study, it was not feasible to make equal groups with respect to the covariates; Self Efficacy, Study Habits and self-concept of the students. So these groups were made statistically balanced and equal, by using statistical technique ANCOVA.

3/ In this study, the researcher sought to use the teacher made test rather than ready made test as a research tool to measure and evaluate the students' oral expression achievement. For, unfortunately, it was not possible to find a standard test that could measure all the language functions taught during the LSBIP.

4/ Results cannot be generalized.

**7.6. Delimitations of the Study**

The study is limited to measuring the effectiveness of LSBIP in developing the first year students' OEA. This investigation was divided according to the following delimitations: Time: The investigation was developed from December 2015 to June 2016. Place: The study

took place at the Foreign Language Department of University of Sétif 2. Scope: It was to identify the learning styles of the students in order to select the experimental and control groups of the experiment. Model: The study was conducted under the quasi-experimental research design. The domains treated in the present study were the basic oral language sub-skills agreed upon by scholars and jury members. The instructional time of the LSBIP devoted for the experimental groups lasted for fifteeen weeks, three meetings a week, ninety minutes a meeting.

### 7.7. Recommendations

Based on both the results and findings of the current study and on the previous stated literature review concerning the learning styles, the following recommendations can be developed. This section deals with some recommendations for learning styles theories in the field of education. It concludes recommendations for the Ministry of Higher Education and Ministry of Education and for future research.

- **Recommendations for Future Research**

While the limitations of the current study influenced the results, they also provided important insight into both the content and procedural issues requiring consideration in further research.

1/ Research examining particular aspects of learning and teaching styles might too advantage the field by including more noteworthy understanding of the different perspectives included. One area of investigation could explore the possibility that students' learning style preferences may alter as they develop or in different subject zones (Glenn, 2009; Hall & Moseley, 2005). Variables affecting teachers' instructional practices and directions might too also be the center of future inquiry, providing knowledge within the role of such things as individual knowledge, involvement and experience, time imperatives, convenience, and subject matter (Hall & Mosley, 2005).

2/ A qualitative approach such as a case study may benefit this field of knowledge by affording the researcher an insider's view of the day-to-day interactions between students and teachers and the interplay of learning style preferences, instructional accommodations, and student achievement in environments where students may either be thriving or experience academic failure (Cox, 2008; Leedy & Ormrod, 2010; Lauria, 2010). A research approach such as a multicase study would provide the type of detailed and thorough investigation needed to understand the daily practices of effective teachers and would also empower the researcher to observe student reactions to these strategies as well as any ancillary impact that could result from such educating practices (Ary et al, 2006; Leedy & Ormrod, 2010).

3/ Teachers' instructional practices could be influenced by many factors. These factors can also be the focus of future inquiry, in order to provide a deeper understanding of the role of such things as personal knowledge and experience, time constraints, convenience, personality and subject matter (Hativa, 2012).

4/ Another recommendation for future research includeses longitudinal investigations and further analyses undertaken with diffrent subgroups of students. Researchers may go in search of the influence of gender and cultural variables on both learning style preferences and academic achievement. In addition, studies examining the role of learning style preferences for students with and without identified learning needs could provide valuable insight for educators.

5/ In the present study, for many reasons as previously stated, the learning style inventory used was based on visual, auditory and kinaesthetic students. Future researchers can also use a learning style inventory based on concrete, reflective, active, abstract, sensing, and verbal learners.

6/ An additional recommendation is that further research is undertaken regarding the learning styles of university students. The current study utilized the VAK questionnaire. An

important consideration regarding the VAK was detailed by Fleming (2006) who mentioned that younger people in schools veer towards kinaesthetic learning styles followed by the auditory learning styles, thus it is highly recommended that future research in determining students' learning styles utilises other measures such as Dunns' inventory or the VARK inventory to continue tracking the expected learning style development of students of English.

7/ A very important area in learning styles that can be explored is the relationship or the correlation between learning styles of students and teaching styles of teachers. More precisely, to investigate the match and mismatch between these two variables and to what extent this might have an effect on learning and teaching processes and outcomes.

- **Recommendation for Learning Styles Theories**

To identify students' different learning styles, a range of learning styles categories may be used and distributed with accordance to the number of the categories in each theory. For example, in the VARK theory students can be classified into more than four learning style categories. It is a recommendation, prompted by the current study, that reducing the number of these categories could facilitate the theory to be more easily implemented in the field of education (Detlaff, 2009).

- **Recommendation for Ministry of Higher Education**

Based on the objectives and results of the current study, the researcher suggested the following:

1. Give professional preparation for teachers in order to provide them sufficient skills to identify student learning styles.

2. Courses in teachers' education programmes should be included to train and prepare teachers use appropriate learning tools that help in teaching of all students regardless of differences in learning styles.

3. Organize national conferences and workshops to increase teachers' awareness within Algerian context about learning styles and how they may affect the academic achievement of students.

4. Encourage faculty members to examine the learning styles of students in all stages of education, translate learning styles measurements and questionnaires into the Arabic language for younger learners and examine the instruments' reliability and validity in an Algerian context.

- **Recommendation for Ministry of Education, Educators and Teachers**

1. Teachers, textbook authors and curriculum designers should admit the theories associated with learning styles and prepare and develop materials to students according to their learning styles and grade levels.

2. Teachers should encourage students to learn about and be aware of their learning styles and prepare course material by focusing on the use of the learning style their students prefer.

3. Teachers in their classrooms should classify students into different groups according to their learning styles. They could then administer different types of input and activites would match these learning styles and which help and lead them to fully comprehend concepts that are taught.

4. School counselors should be aware of the learning styles instruments and research results to a greater degree than the other educational staff in a given school. They are responsible for identifying reasons behind the difficulties that students face in school and provide justificatinos for some students' failure and boredom.

5. It is recommended that the Ministry of Education should provide teachers and curriculum developers with in-service training regarding learning styles theories and

instructional strategies in all educational areas (e.g., mathematics, languages) and at different stages across the school system (e.g., primary, secondary).

6. It is also recommended that course design should be flexible enough to reach a variety of learning styles. One such example is described by Bates and Leary (2001) which provides a four tier delivery approach whereby the student progresses sequentially through each level based upon their learning needs. The students should be properly guided and given incentives to select individual learning styles that are appropriate and applicable in their environment for them to achieve their personal academic objective. The students should adopt a suitable learning style that would be beneficial to them (De Vita, 2001).

7. This study does not try to argue that teachers should strive for completely individualized instruction; that would be an impractical goal, or not feasible especially given the extremely large class sizes in which teachers teach. It does suggest, however, that educators at all levels can and should adapt their teaching to better meet the learning style preferences of the majority of their students.

8. Educators should recognize the responsibility of the students in the enhancement of learning (Sims & Sims, 1995). Students should have the opportunity to assess their own learning preferences and should be encouraged to diversify those preferences (Reis, 1987, p. 123 as cited in Hong & Milgram, 2000).

9. A discussion with teachers followed by assessment of learning preferences could help students understand their own likely approach to learning situations and use or modify the learning approach when conditions and preferences do not match. Because teachers are unable to accommodate each student's learning preferences due to many and diverse requirements of students and the limited physical resources, students themselves may be able to achieve a better match of learning setting and personal learning preferences if they

are both aware of their preferences and are willing to extend their learning style repertoire and build an integrated learning style (Hong & Milgram, 2008, p. 123).

10. From the above discussion it seems clear that one goal of instruction is possibly to help students identify and assess their individual learning styles. Another goal should be allowing students to sample unfamiliar teaching and learning styles. Indeed, a teacher who can "purposefully exhibit a wide range of teaching styles is potentially able to accomplish more than a teacher whose repertoire is relatively limited" (Smith & Renzulli, 1984, p. 49).

11. Teachers should talk to students about their learning styles; create an open dialog in which they can explain why and how the teachers' teaching strategies may be mismatched with their learning styles and this could affect their entire educational experience. Discussing learning strengths, weaknesses, and educational needs with the students themselves may be the best way to improve the teaching and the learning processes (Tobias, 1990).

12. Instructors may feel burdened by the above recommendations and ask: "How can we do all that and still get through the syllabus?". Felder (1993) offers some very practical advice as follows: put most of the material usually written on the board into handouts , go through the handouts quickly in class, pausing occasionally to allow time for thinking and formulating questions and use the considerable class time saved for activities.

**Conclusion**

Through the current investigation, the stated reseach questions were answered and the corresponding null hypotheses were rejected. The results have clearly stated the effectiveness of the LSBIP in developing students' OEA considering CASE, SH, and ASC as covariates. In this chapter, the findings of the present study were presented. Discussions of the results obtained through the study were also given. Then a few recommendations for further researches, Learning Styles Theories, Ministry of Education, Ministry of Higher Education,

Educators and Teachers in the area of present study were introduced. Educational implications of the present study are also given. In spite of the positive outcomes of the study, a set of limitations related to the research design, and data were found and stated.

## General Conclusion

This study was conducted to examine the effectiveness of LSBIP on developing students' OEA. It has also examined the students leaning styles through the VAK Inventory. The present study was conducted through three main phases. The first phase represented the problem identification in OE classrooms using classroom observations, FGD, semi structured interviews, the PLSPQ and the PTSPQ. The second phase was a small scale pilot study. This phase was of paramount importance for testing the research instruments, testing the validity of LSBIP and the feasibility of the parent study. The third phase was the quasi-experimental study in which the non-equivalent pretest/posttest control group design was conducted to examine the effectiveness of VIP, AIP, and KIP on developing OEA. The VIP was developed by implementing teaching strategies for visual students (EG1) (demonstration method, drama technique, video technique, highlighter activity, and Mind map). The AIP was constructed through using teaching strategies for auditory students (EG2) (Lecture method, discussion method, brainstorming, verbal games, and tape recording technique). The KIP was developed by implementing teaching strategies for kinaesthetic students (EG3) (role play, group work activity, cut and paste activity, body games, and puzzles). The subjects were 460 first year undergraduate students divided administratively into twelve groups. For the requirements of this study, a sample of four groups (94) was selected purposefully. In the non-equivalent pretests/posttest control group design, A4 represented the EG1, A7 represented EG2, A1 represented EG3, and A2 represented CG4. Three covariates were considered, measured and controlled in this study; the CASE, the SH and the ASC. These covariates were measured using CASES, SHI, and ASCS respectively. A Pre/post OEAT was used to measure students' achievement before and after this quasi-experimental study. The quantitative data analysis took several stages following the research null hypotheses, the research designs, and the used

instruments. The data obtained were analyzed quantitatively using the SPSS to test their reliability and to generate descriptive statistics in the form of means and standard deviations. The data obtained from the pretest were analysed statistically using the independent T-test to compare the scores on the achievement test to see for statistical significance differences between EG1, EG2, EG3 and CG4. The results were compared at $p \leq .05$. The results of the first phase (exploratory phase) revealed the mismatch between the teachers' teaching strategies and styles and students' learning styles. These primary results paved the way for this sudy and established the rationale to be conducted to investigate the effect of LSBIP on students' OEA. The results of the pilot study confirmed the feasibility of the study. The pre OEAT results of the quasi-experimental study were analysed by the Independent Sample T-test. The results revealed no statistical significant differences between the adjusted mean scores of the experimental groups (EG1, EG2, and EG3) and the control group (CG4). This demonstrated the equivalency of the groups before the intervention. The post OEAT results were analysed by the ANCOVA considering CASE, SH, and ASC as Covariates. The results between the adjusted mean scores of the experimental groups (EG1, EG2, and EG3) and the control group (CG4) revealed a statistical significant difference. Accordingly, the LSBIP proved its effectiveness on students' OAE. At the end of the study, a few recommendations for future research were suggested.

## References


Abidin, M. J., Rezaee, A. A, Abdullah, H. N., & Singh, K. B. (2011). Learning styles and overall academic achievement in a specific educational system. International Journal of Humanities and Social Science, 1, (10), 143-152.

Adelsberger, H. H., Pawlowski, J. M., & Sampson, D. (2008). Handbook on information technologies for education and training (2nd Ed.). Heidelberg: Springer-Verlag.

Adhikari, M. (2012). Mixed Ability of the Learners: Challenge for ELT Teachers. Retrieved from https://neltachoutari.wordpress.com/.

Afdillah, N, M. (2015). The Effectiveness Of Role Play in Teaching Speaking. Master dissertation, Department of English Education, Faculty of Tarbiyah and Teachers' Training, Hidayatullah State Islamic University, Jakarta. http://repository.uinjkt.ac.id /dspace/handle/123456789/26710 date retrieved on 20-5- 2015.

Aggarwal, V.R. (1983), A study of reading ability in relation to certain cognitive and non cognitive factors. Asian Journal of Psychological Education, 11(3), 41-44.

Akdemir, O., & Koszalka, T. A. (2008). Investigating the relationships among instructional strategies and learning styles in online environments. Computers and Education, 50, 1451-1461. http://dx.doi.org/10.1016/j.compedu.2007.01.004

Alaka, A. M. (2011). Learning styles: What difference do the differences make?. Charleston Law Review, 5(2), 133-172.

Alaka, A. M. (2011). Learning styles: What difference do the differencesmake?. Charleston Law Review, 5(2), 133-172. Retrieved from http:// www.charlestonlawreview.org/.

Alao, A, Kobiowu, S, & Adebowale, F. (2010). Fundamentals of Educational and Counselling Psychology Par K. A. Alao,S. V. Kobiowu,O. F. Adebowale

Al-Arishi & Yaha A. (1994) . "Role-play, real- play, and surreal-play in the ESOL classroom", ELT Journal 48, 4: 337-345.

Alemi, M. (2010). Educational Games as a Vehicle toTeaching Vocabulary.MJAL.Modern journal of appliedlinguistics,2 (6).

Alfaki. I. M. (2015). Vocabulary input in English language teaching: Assessing the vocabulary load in Spine Five. International Journal of English Language and Linguistics Research, (3)1, 1-14.

Aliakbari, M. & Jamalvandi, B. (2011). Iranian High-School Girls Perception and Evaluation of Male and Female English Teachers. International Proceedings of Economics Development and Research, 17. 86-92. Available Online at: www.ipedr.com.

Aliakbari, M., & Jamalvandi, B. (2010). The Impact of 'Role Play' on Fostering EFL Learners' Speaking Ability: A Task-Based Approach, Pan-Pacific Association of Applied Linguistics 14 (1), 15-29.

Al-Jabali, M.A. 1996. The Role of Using Role Play and Pictures in Developing the Speaking Skills of Tenth- Grades in Irbid District M.A Thesis Yarmouk University, Jordan-Irbid.

Aljojo, N., Adams, C., Alkhouli, A., Fitch, T., & Saifuddin, H. (2009, October). A study of the reliability and validity of the Felder – Soloman index of learning styles in Arabic. Paper presented at the Eight European Conference on e-Learning, Bari, Itali.

Allan, D. (1995) Oxford Placement Test. Oxford: Oxford University Press.

Allen, E. E. (1995). Active Learning and Teaching: Improving Postsecondary Library Instruction. Reference Librarian , 51-52, 89-103.

Allen, K., Sheve, J., & Nieter, V. (2011). Understanding Learning Styles: Making a Difference for Diverse Learners. Shell Education.

Allman, B. (2005). Vocabulary size and accuracy of monolingual and bilingual preschool children. In Proceedings of the 4th International Symposium on Bilingualism (Vol. 5). Cascadilla Press.

Al-Sheedi, M. (2009). Teachers' beliefs about using group work in Basic Education. In S. Borg (Ed.), Researching English Language and Teacher Development in Oman. Ministry of Education, Sultanate of Oman.

Al-Tamimi & Shuib. 2009. Motivation and Attituded towards learning English. Hadramout: Hadramout University

Altun, M. (2015, April). Using Role-Play Activities to Develop Speaking Skills: A Case Study In The Language Classroom. paper given at a conference, held on April 26-27, 2015 in Ishik University, Erbil, Iraq, In Book of Proceedings. p. 354.

Alvinia, P., & Ebrahimpour, S. (2012). On the correlation beteen emotional intelligence and learning styles: the case of Iranian academic learners. Theory and Practice. Higher Education, 41, 221-238.

Amory, D. (2012). Essential Knowledge for Personal Coaches. Lulu Com.

Anastas, J. W. (2012). Research Design for Social Work and the Human Services. Columbia University Press.

Anastas, J.W. (2012). Teaching in Social Work: An Educator's Guide to Theory and Practice. Georgia : Pearson.

Anderson, G. (1990). Fundamentals of educational research. London: The Falmer Press

Anderson, J. R., Reder, L. M., & Simon, H. A. (1997). Situative versus cognitive perspectives: Form versus substance. Educational Researcher, 26(1), 18-21.

Anderson, K. M. (2007), Differentiated instruction to include all students, Preventing School Failure, 51 (3), 49-54.

Armstrong, S., & Mahmud, A. (2008): Experiential Learning and the Acquisition of Managerial Tacit Knowledge. Academy of Management Journal, 7(2), pp. 189-208.

Armstrong, T. (2009). Multiple intelligences in the classroom, 3rd edition. Alexandria, VA: Association for Supervision and Curriculum Development.

Arora, R., & Mahankale, R . (2012). Marketing Resaerch. PHI Learning Pvt. Ltd..

Arthurs, J. B. (2007). A juggling act in the classroom: Managing different learning styles. Teaching and Learning in Nursing, 2, 2-7.

Arumugam, N., Rafik-Galea, S., Mello, G. D., & Dass, L. C. (2013). Cultural influences on group learning in an ESL classroom. Review of European Studies, 5(2), 81-89. http://dx.doi.org/10.5539/res.v5n2p81v.

Ary, D, Jacobs, L. C., Christine K., & Walker, D. (2013). Introduction to Research in Education. Cengage Learning

Ary, D, Jacobs, L.C., Irvine, S.K., Walker. D. (2018). Introduction to Research in Education. Cengage Learning.

Ary, D., Jacobs, L. C., Razavieh, A., & Soresen, C. (2006). Introduction to Research in Education. 7th ed. Canada: Thompson Wadsworth.

Atkin.A. M. (2006). What is learning style? http;//www.ncsu.edu/fyc/current/curriculum /worksheets/l_ style .pdf.

Atman, N., Inceoglu, M., & Aslan, G. (2009). Learning styles diagnosis based on learner behaviors in web based learning. *Lecture Notes in Computer Science, 5593,* 900-910

Babbie, E. (1990). Survey Research Methods. Belmont, California: Wadsworth Publishing

Bachman, L. (1990). Fundamental considerations in language testing. Oxford, UK: Oxford University Press

Bachman, L. F. (2002). Some reflections on task-based language performance assessment. Language Testing, 19(4): 453-476.

Bachman, L. F., & Palmer, A. (1996). Language Testing in Practice. Oxford: Oxford University Press.

Bacon, D. (2004). An examination of two learning style measures and their association with business learning. *Journal of Education for Business*, *79*(4), 205 -208.

Baker & Westrup. (2003). The English language teachers' handbook.London:Continuum.

Baker, J. D., & Cooke, J. E. (1988), Beyond career choice: the role of learning style analysis in residency training, Medical Education, 22 (6), 527-532.

Baker, M. (2001). "Selecting a Research Methodology", The Marketing Review, Vol. 1, No. 3, pp. 373-397.

Baleghizadeh, S., & Ashoori, A. (2011). The Impact of Two Instructional Techniques on EFL Learners' Vocabulary Knowledge: Flash Cards versus Word Lists. MEXTESOL Journal, 35(2), 70-82.

Bandura A. (1997). Self-Efficacy: The Exercise of Control. New York, NY: Freeman.

Bandura, A. (1977). Social learning theory. New York, NY: General Learning Press.

Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1996). Social cognitive theory of human development. In T. Husen & T. N. Postlethwaite (Eds.), International encyclopedia of education (2nd ed., pp. 5513-5518). Oxford: Pergamon Press.

Barbe, W. B., & Milone. M. N. (1981). "What We Know About Modality Strengths," Educational Leadership, Feb., pp. 378-380.

Barbe, W. B., Swassing, R. H., & Milone, M. N. (1979). Teaching Through Modality Strengths: Concepts and Practices, Zaner-Bloser, Columbus.

Barnes, B . (1997). The power of classroom TV: A marketing and advocacy document for the use of classroom television professionals. NETA Center for Instructional communications. October 1997. Available: http://www.scetv.org/k12/classroom%20tv .htm.

Barrie, B., Bennett C. R., & Stevahn, L. (1991). Cooperative Learning: Where Heart Meets Mind. Toronto, ON: Educational Connections.

Bastable, S. B. (2014). Nurse as educator: Principles of teaching and learning for nursing practise (4th ed). Burlington, MA: Jones & Barttlett Learning.

Bates, B. & Leary, J. (2001). Supporting a range of learning styles using a taxonomy-based design framework approach. Proceedings of the Annual Conference of Australian Society for Computers in Learning and Tertiary Education. Retrieved on November 8,2004from http://www.ascilit e.org.au/conferences/melbourne01/pdf/papers/ batesb .pdf

Baum, S., Viens, J., & Slatin, B. (2005). Multiple Intelligence in the Elementary Classroom: a Teacher's Toolkit. Teachers College Press, 1234 Amsterdam Avenue, New York, NY 10027.

Baumgartner, J. (2005). Key factors to successful brainstorming. http://www.jpb.com /creative /keyfactors.php

Bayne, R. (2004). Psychological Types at Work. London: Thomson.

Beck, C. R. (2001). Matching teaching strategies to learning style preferences. The Teacher Educator, 37 (1), 1-15.

Beck, I. L., McKeown, M. G., & Kucan, L. (2002). Bringing words to life: Robust vocabulary instruction. New York: The Guilford Press.

Beck, I., & McKeown, M. (2010). Conditions of vocabulary acquisition. In R. Barr, M. L. Kamil, P. Mosenthal, & P. D. Pearson (Eds.), Handbook of reading Research (Vol. 2, pp. 789-814). New York: Longman.

Bell, J. (2007). Evaluation of learing styles and instructional methods in the NROTC naval operations and seamanship course. Institute for Learning Style Journal, 1, 52-61.

Bell, L., & Griffin, P. (2007). Designing social justice education courses. In A. Maurianne., L. Bell., & P. Griffin. (eds). Teaching for diversity and social Justice (2nd ed.) (pp. 67-88). New York, NY: Taylor & Francis Group.

Belle, G. V. (2002). Statistical rules of thumb. New York: John Wiley.

Bentham, S. ( 2002). Psychology and Education. Routledge Modular Psychology Series.

Berg, K. E., & Latin, R. W. (2004). Essentials of researchmethods in health, physical education, exercise science, and recreation (2 ed.). Baltimore: Lippincott Williams & Wilkins.

Bergen County special Services Technical school. (2006). Auditory-Visual-Tactile Learning Styles. http://www.bergen.org/ETTC/courses/LearningStyles/Vis-Aud-Tac.html.

Bernstein, H. (2010). Class Dynamics of Agrarian Change. Kumarian Press

Bernstein, J. (2010). Unique properties of the Mtr4p-poly (A) complex suggest a role in substrate targeting. Biochemistry 49(49):10357-70

Bhatti, R., & Bart, M. (2013). On the Effect of Learning Style on Scholastic Achievement Current Issues in Education Vol. 16 No. 2

Blakely. N. P., & Tomlin, H. A. (2008). Adult Education: Issues and Developments. Nova Publishers.

Blaxter, L., Hughes, C. and Tight, M. (1996) `Living Lifelong Education: the Experiences of Some Working Class Women', Adults Learning 7(7): 169-171.Journal of College Science Teaching. Learning Styles and Multiple Intelligences in Students

Boers, F., J. Eyckmans, J. Kappel, H. Stengers & M. Demecheleer. (2006). Formulaic sequences and perceived oral proficiency: Putting a lexical approach to the test. Language Teaching Research 10, 245-261.

Boley, D. A. (2008). Use of Premade Mind Maps to Enhance Simulation Learning. Nurse Educator Vol. 33, No. 5, pp. 220-223

Bong, M., & Skaalvik, E. (2003). Academic self-concept and self-efficacy: How different are they really? Educational Psychology Review, 15(1), 1-40.

Bopp, R. E. & Smith, L. C. (2011). Reference and information services: An introduction. 4th Edition. Libraries unlimited.

Bosman, R., & van Winden, F. (2002). Emotional hazard in a power-to-take experiment. Economic Journal, 112, 147–169.

Bouteliaten, A. (2010). The Effectiveness of UsingCrossword Puzzles as a Teaching Strategy to EnhanceStudents' Knowledge of Vocabulary. The Case of 1st Year Students, University of Constantine. Unpublished Master Dissertation, Mentouri University-Constantine.

Bouton, M. (2007). Learning and behavior. Sunderland, Mass.: Sinauer Associates, Publishers.

Bouton, M. E. (2007). Learning and behavior: A contemporary synthesis. Sunderland, MA: Sinauer Associates, Inc.

Bowman, B., Burkart, G., & Robson, B., (1989). TEFL/ TESL: Teaching English as a Second Language. USA: Centre of Applied Linguistics.

Brady, C. L. (2013). Understanding learning styles: Providing the optimal learning experience. International Journal of Childbirth Education, 28(2), 16 -19.

Branigan, C., & Frederickson, B. L., (2005). Positive emotions broaden the scope of attention and thought-action repertoires. Cognition and Emotion, 19, 313-332.

Brennan, J., & Williams, R. (2004). Collecting and using student feedback A guide to good practiceLearning and Teaching Support Network .

Brinkmann, A. (2003). Graphical Knowledge Display: Mind Mapping and Concept Mapping as Efficient Tools in Mathematics Education. Mathematics Education Review, 16, 35-48.

Brody, N. (1992). Intelligence. (2nd ed)San Diego Academic Press

Brown, D. (2001). Teaching by Principles. An Interactive Approach to Language Pedagogy. New York: Longman.

Brown, G., & Yule, G. (1983). Teaching the spoken language. Cambridge: Cambridge University Press.

Brown, H. D. (2004). Language assessment: Principles and classroom practices. White Plains, NY: Pearson Education

Brown, H. D. (1994) Teaching by principles: An interactive approach to language. NY: Longman.

Brown, H. D. (1994). Language assessment: Principles and classroom practices. White Plains, NY: Longman.

Brown, J. S. (2008). Forward: Creating a culture of learning. In T. Iiyoshi & M. S. V. Kumar (Eds.), Opening up education: The collective advancement of education through open technology, open content, and open knowledge (pp. xi–xvii). Cambridge, MA: MIT Press.

Bruner, J. (1973). Going Beyond the Information Given. New York: Norton.

Budden, J. (2004). Role play, British Council (http://www.teachenglish.org. uk/think/articles/role-play) (date of access: 1 April 2013).

Burger, J. M. (2000). Personality (5th ed.). Belmont: Wadsworth.

Burger, J., Kolss, M., Pont, J., Kawecki, T.W. (2008). Learning ability and longevity: a symmetrical evolutionary trade-off in Drosophila. Evolution 62, 1294–1598.

Burger. M. J., Webber, F. C., & Klinck, B. (2007). Intelligent Leadership: Constructs for Thinking Education Leaders. Springer Science & Business Media.

Burke**,** A. (1994). Ready to Learn: Using Play to Build Literacy Skills in Young Learners. Pembroke Publishers Limited.

Burns, N., & Grove, S.K. (2005). The practice of nursing research: Conduct, critique and utilization. 5th ed. Elsevier; St. Louis, MO: 2005.

Burns, N.,& Grove, S. K. (2007). Understanding nursing research. building an evidence–based practice. 4th Edition. St Louis: Saunders Elsevier.

Burns, S., & Grove, K. (2010). Understanding Nursing Research - eBook: Building an Evidence-Based Practice. Elsevier Health Sciences.

Bygate, M. (1987). Speaking. New York: Oxford University Press.

Byrne, D. (1986). Donn, Teaching Oral English. London and New York: Longman.

Byrne, D. (1995). Games: Teaching Oral English. Harlow: Longman Group UK Limited, 101-103.

Byrnes, S. (2010). Assimilative domain proficiency and performance in chemistry coursework (Doctoral dissertation). Available from ProQuest Dissertation and Theses databases. (UMI No.3397866).

Çakıroğlu, Ü. (2014). Analyzing the Effect of Learning Styles and Study Habits of Distance Learners on Learning Performances: A Case of an Introductory Programming Course. International Review Of Research In Open & Distance Learning, 15(4), 161-184.

Campbell, D. T., & Stanley, J. C. (1963). Experimental and quasi-experimental designs for research. Chicago, IL: Rand McNally.

Carless, D. (2009). Revisiting the TBLT versus PPP debate: Voices from Hong Kong. Asian Journal of English Language Teaching, 19(1), 49-66.

Caudron, S. (2000). Learners Speak Out. What Actual Learners Actually Think of Actual Training,‖ Training and Development, vol. 54, no. 4, pp. 52- 57,

Cavanagh, S. J., & Coffin, D. A. (1994), Matching instructional preference and teaching styles: a review of the literature, Nurse Education Today, 14 (2), 106-110.

Chambers, E., & Gregory, M. (2006). Teaching and Learning English Literature. SAGE.

Chandra, S.S., & Sharma, R. K.. (2004). Research in Education Atlantic Publishers & Dist

Charles & Soltis, J. F. ( 2010). Perspectives on learning Teachers College Press.

Charles R., & Beck (2010) Matching teaching strategies to learning style preferences. Pages 1-15 | Published online:

Charlesworth, Z. M. (2008). Learning styles across cultures: Suggestions for educators. Education + Training, 50(2), 115-127.

Chastain, K. (1988). Developing second language skills: Theory and practice. USA: Harcourt Javanovich Pres.

Chemers, M., Hu, L. T., & Garcia, B. F. (2001). Academic self-efficacy and first-year college student performance and adjustment. Journal of Educational Psychology, 93(1), 55-64.

Chen, P. S., & Tsai, S. J. (2008). A comparison of the learning styles among different nursing programs in Taiwan: Implications for nursing education. Nurse Education Today, 28, 70-76.

Chen, S. Y., Magoulas, G. D., & Macredie, R. D. (2004). Cognitive styles and users' responses to structured information representation. *International Journal of Digital Libraries, 4,* 93-107.

Chermahinii. A, & Ghanbari, M. (2013). Learning styles and academic performance of students in English as a second language class in Iran. Bulgarian Journal of Science and Education Policy (BJSEP), Volume 7, Number 2.

Chuah Chong-Cheng. (1988). Sinar Cendekia. Malaysia, Penang: Universiti Sains Malaysia (USM).

Chumney, E.C.G. (2006). Methods and Designs for Outcomes Research. ASHP

Clark, S. C. (1995). Piaget's Theory and its value for teachers. John Wiley & Sons, Inc

Claxton, C.S., & Murrell, P. H.(1987). Learning styles: Implications for Improving Educational Practice. ASHE-ERIC Higher Education Report No. 4, Washington, DC: George Washington University.

Coffield, F., Moseley, D., Hall, E., & Ecclestone, K. (2004). Learning styles and pedagogy in post-16 learning: A systematic and critical review. London, England: Learning & Skills Research Centre. Retrieved from http://lerenleren .nu/bronnen/Learning %20 styles %20by %20Coffield%20e.

Cohen, A. D. (1990). Language learning: Insights for learners, teachers, and researchers. Boston: Heinle & Heinle.

Cohen, A. D. (1998). Strategies in learning and using a second language. New York, NY: Longman.

Cohen, A. D., & Dörnyei, Z. (2002). Focus on the language learner: Motivation, styles, and strategies. In N. Schmitt (Ed.), An introduction to applied linguistics (pp. 170-190). London: Arnold.

Cohen, A. D., & Weaver, S. J. (2006). Styles and strategies-based instruction: A teachers' guide. MN: Center for Advanced Research on Language Acquisition, University of Minnesota.

Cohen, J. (1988). Statistical Power Analysis for the Behavioral Sciences. Hillsdale, NJ: Lawrence Erlbaum Associates.

Cokley, K. (2000). An investigation of academic self-concept and its relationship to academic achievement in African American college students. Journal of Black Psychology, 26(2), 148-164.

Collins, J., Stead, S., & Woolfrey. S. (2004). Rethinking teaching strategies for Intensive French. The Canadian Modern Language Review 60.3, 355-372.

Collins, T. G. (2005). English Class on the Air: Mobile Language Learning with Cell Phones, proceedings of the Fifth IEEE International Conference on Advanced Learning Technologies (ICALT'05).

Connelly, L. M. (2008). Pilot studies. Medsurg Nursing, 17, 411-412.

Cook, V. (2000). Second language learning and language teaching. Beijing: Foreign Language Teaching and Research Press.

Coombe, J; Davidson, C & ,.PO'Sullivan. B. (2012). The Cambridge Guide to Second Language Assessment. Cambridge University Press.

Cooper, D. R., & S. Schindler, P. (2008). Business Research Methods (10th ed.). Boston: Mcgraw.Hill International Edition.

Cotton, J. (1995). The Theory of Learning. Cogan Page.

Cox, S. G. (2008). Differentiated instruction in the elementary classroom. Education Digest: Essential Readings Condensed for Quick Review, 73(9), 52-54. Retrieved from http://www.eddigest.com/sub.

Creswell, J. W. (2011). Mapping the developing landscape of mixed methods research. In A. Tashakkori & C. Teddlie (Eds.), SAGE handbook of mixed methods in social and behavioral research (2nd ed., pp. 45–68). Thousand Oaks, CA: Sage.

Criado, R. A. (2013). Critical Review of the Presentation-Practice-Production Model (ppp) in Foreign Language Teaching.In R. Monroy (Ed.), Homenaje a Francisco Gutierrez (pp.97- 115). Murcia: Edit.um.

Cross, D. (1991). A Practical Handbook of Language Teaching. London: Cassel.

Cross, K. P., & Steadman, M. H. (1996). Classroom Research: Implementing the Scholarship of Teaching. San Francisco: Jossey-Bass,

Crystal, D. (2008). A Dictionary of linguistics and phonetics. (6th edition.) Blackwell Publishing Ltd.

Curry, L. (1983). An organization of learning style theory and constructs. In L. Curry (Ed.), Learning style in continuing medical education (pp. 115-123). Halifax: Dalhouse University.

Curry, L. (1987). Integrating concepts of cognitive or learning style: a review with attention to psychometric standards. The Curry Report. The Learning Styles Network, Center for the Study of Learning and Teaching Styles. Jamaica, New York: St. Johns University.

Dakowska, M. (2005). Teaching English as a foreign language: A guide for professionals. Warszawa: Wydawnictwo Naukowe PWN.

Damavandi, J. A. (2011). Academic Achievement of Students with Different Learning Styles. International Journal of Psychological Studies Vol. 3, No. 2 . Retrieved from http://dx.doi.org/10.5539/ijps.v3n2p186.

Damrongpanit, S., & Reungtragul, A. (2013). Matching of learning styles and teaching styles: advantage and disadvantage on ninth-grade students' academic achievements. Educ. Res. 8(20): 37-1947.

Danish, K., & Awan, A. (2009). Learning styles learners and their career choice. *Professional Med Journal*, 16 (2), 162- 168.

Davies, A. (1999) Assessing Academic English: testing English proficiency 1950–2005 – the IELTS solution, Studies in Language Testing 23, Cambridge: UCLES, Cambridge University Press.

Davies, P. (1990). The use of drama in English language teaching. TESL Canada Journal, 8(1), 87-99. Retrieved from www.teslcanadajournal. ca/index.php/tesl/article /view File/581/412

Davis, D. (2011). The Adult Learner's Companion: A Guide for the Adult College Student. Cengage Learning.

Davis, B. J. (2009). Tools for Teaching. John Wiley & Sons.

De Bello, T. (1990). Comparison of eleven major learning styles models: variables, appropriate populations, validity of instrumentation, and the research behind them. *Reading & Writing Quarterly*, 6(3), 203-222.

De Vaus, D. (1993). Survey in social research. London, UK: UCL Press. DeFord.

De Vita, G. (2001). Learning styles, culture and inclusive instruction in the multicultural classroom: A business and management perspective. Innovations in Education and Teaching International, 38(2), 165-174.

DeCapua, A., & Wintergerst, A. (2005). Assessing and validating a learning styles instrument. System. 33: 1-16.

DeCapua, A., & Wintergerst, A.C. (2001). Exploring the learning styles of Russian-speaking ESL students. The CATESOL Journal, 13(1), 23-46.

Demirbas, O. O., & Demirkan, H. (2007). Learning Styles of Design Students and the Relationship of Academic Performance and Gender in Design Education. Learning and Instructions, 17, pp. 345-359.

Denscombe, M. (2007). The good research guide for small-scale social research projects.

Dettlaff, A. J. (2009). Module 3: Understanding Learning Styles: Outline [Lecture notes]. Retrievedfrom http://s ocialwork.uw. edu/sites/default/files/sswfiles/ fiel ded/ FITP/ Module3_Adult%20Learning%209-11.pdf

Devine, A. (2015). Literacy for Visual Learners: Teaching Children with Learning Differences to Read, Write, Communicate and CreateJessica Kingsley Publishers.

Dicks, J., & LeBlanc, B. (2005). Le centre des jeunes et fondements pédagogiques. Retrieved April 2015 from http://www.unbf.ca/L2/Resources/drama.htm

Doff, A. (1995). Teach English – A training course for teachers. Cambridge: Cambridge University Press.

Dolson, D. (1994). Assessing students in bilingual contexts: Provisional guidelines. Sacramento, CA: California Department of Education. ( ERIC Document Reproduction Service No. ED 373 581).

Donato, R. (1994). Collective scaffolding in second language learning. In J. P. Lantolf & G. Appel (eds.), Vygotskian approaches to second language research. Norwood, NJ: Ablex, 33-56.

Donoghue, D., &, Collins, E. (2005). A Guide for Beginning Elementary Teachers: Getting Hired and Staying Inspired. Libraries Unlimited.

Doolittle, P. E. (1997). "Vygotsky's zone of proximal development as a theoretical foundation for cooperation learning" and is published in Journal on Excellence in College Teaching, 8 (1), 83-103

Dörnyei, Z. (2005). The psychology of language learner: Individual differences in second language acquisition . NJ : Lawrenc

Dougill, J. (1987). Drama Activities for Language Learning. London: Macmillan.

Doyran, F. (2000). The effects of perceiving teacher non-verbal behaviours, teacher behaviours and preferred learning styles on english proficiency. (Doctoral Dissertation). Middle East Technical University, Ankara, Turkey.

Dudin, N. (1994). The Effect of Using Drama in Teaching EFLON Development of Oral Skills of Tenth Grade Student in Jordan. M.A thesis, University of Jordan. Amman, Jordan.

Dummett, P. (1994). "Simulations and realistic tasks", Modern English Teacher 3(1), 41-43.

Dumont, H., Istance, D., & Benavides, F. (2010). Nature of learning: using research to inspire practice. Paris, Organisation for Economic Co-operation and Development.

Dunegan, L. (2008). An investigation of multiple intelligences: developing an indicator of learning styles for vocational education and traditional students (Doctoral

dissertation). Available from ProQuest Dissertation and theses databases. (UMI No:3297547).

Dunlosky, J. (2013). Improving Students' Learning with Effective Learning Techniques: Promising Directions from Cognitive and Educational Psychology. SAGE.

Dunlosky, J., Rawson, K. A., Marsh, E. J., Nathan, M. J., & Willingham, D. T. (2013). Improving students' learning and comprehension: promising directions from cognitive and educational psychology. Psychological Science in the Public Interest, 14, 4–58. doi:10.1177/1529100612453266

Dunn, K., & Dunn, R. (2008). Teaching to at-risk students' learning styles : Solutions based on international research. Insights on Learning Disabilities, 5(1), 89-101.

Dunn, M., & Dunn, L. M. (1981). Peabody Picture Vocabulary Test—Revised. Circle Pines, MN: AGS.

Dunn, R. & Rundle, S. A. (2000). An educator's guide to the learning individual. Rochester, NY: Performance Concepts International Limited.

Dunn, R. (1983). Learning style and its relationship to exceptionality at both ends of the spectrum. Exceptional Children, 4(6), 496-506.

Dunn, R. (1991). Do students from different cultures have learning styles? InterEd, 15, 12-16.

Dunn, R., Griggs, Olson, Gorman & Beasley (1995). A meta-analytical validation of the Dunn and Dunn learning styles model. Journal of Educational Research, 88 (6), pp. 353-361

Dunn, R. J., Beaudry, J., & Klavas, A. (1989). Survey of Reearch on Learning Styles. Educational leadership 46, 6; 50-58.

Dunn, R., & Dunn, K. (1987). Teaching Students Through Their Individual Learning Styles: A Practical Approach, Reston Publishing Division of Prentice-Hall Publishers, Reston, Va., 1978.

Dunn, R., & Dunn, K. (1986). The Dunn and Dunn learning style model of instruction. [Online] Available: http://www.unc.edu/depts/ncpts/publications/learnstyles.

Dunn, R., & Dunn, K. (1992a). Teaching elementary student through their individual learning styles. Boston: Allyn & Bacon.

Dunn, R., & Dunn, K. (1993). Teaching secondary students through their individual learning styles: Practical approaches for grades 7 - 12. Allyn & Bacon: Boston.

Dunn, R., & Griggs, S. (2000). Practical approaches to using learning styles in higher education. Westport, Connecticut: Bergin & Garvey.

Dunn, R., & K. Dunn. ( 2005). Thirty-five years of research on perceptual strengths. The Clearing House 78 (6): 273–76.

Dunn, R., Beaudry, J., & Klavas, A. (2000). Survey of research on learning styles. California Science Teachers Association, 11(1) 75-98.

Dunn, R., Dunn, K., & Price, G. (1981). Learning style: research vs. opinion. Phi Delta Kappan, 62(9), 645-646.

Dunn, R., J. Beaudry, and A. Klavas. (1989). Survey of research on learning styles. Educational Leadership March, 50-58.

Dunn, R., K. Dunn, K., G. E. Price, G.E. (2007). Productivity Environmental Proficiency Survey. Lawrence, KS: Price Systems, Inc.

Dunn, R.S. & Griggs, S.A. (1989). Learning styles: Quiet Revolution in American secondary schools. Clearing House, 65(1), 40-42

Durbin, G. (1996). Developing Museum Exhibitions for Lifelong Learning. Stationery Office. Educational Practice. ASHE-ERIC Higher Education Report No. 4, Washington, DC: George Washington University.

Eady, M. J., & Lockyer, L.( 2013). Tools for learning: technology and teaching strategies. Learning to Teach in the Primary School, Queensland University of Technology, Australia. pp. 71

Edelman, S., Reisfeld, D. & Yeshurun, Y. 1992 Learning to recognize faces from examples. In Proc. 2nd European Conf. ComputerVision, Lecture Notes in Computer Science, vol. 588 (ed. G. Sandini), pp. 787^791. Berlin: Springer.

Edelman, G. (1992). Bright, Air, Brilliant Fire: On the Matter of the Mind. Basic Books.

Edmonds, A., & Leclercq, P. (2014). How to assess L2 proficiency? An overview of proficiency assessment research. In P. Leclercq, A. Edmonds, and H. Hilton (eds.), Measuring L2 Proficiency: Perspectives from SLA (pp. 3-23). Bristol: Multilingual Matters.

Educational Testing Service. (2007). Developing an ESL Placement Test for Community College Students. Available www.ets.org/Media /Research/pdf/conf_achgap_ cc_you ng .pdf.

Ehrman, M., & Oxford, R. (1988). "Ants and grasshoppers, badgers and butterflies: Qualitative and quantitative exploration of adult language learning styles and strategies." Paper presented at the Symposium on Research Perspectives on Adult Language Learning and Acquisition. Columbus, Ohio: Ohio State University.

Ellis, R. (1989). Are classroom and naturalistic acquisition the same? A study of classroom acquisition of German word order rules. Studies in Second Language Acquisition.11, 305-29.

Ellis, R. (1992).Second Language Acquisition and Language Pedagogy.Bristol: Longdunn,

Ellis, R. (2003) Task-based language learning and teaching. Oxford: Oxford University Press.

Ellis, R. (2005). The study of second language acquisition. Shanghai: Shanghai Foreign Education Press.

Ellis, R. (2009). The differential effects of three types of task planning on the fluency, complexity, and accuracy in L2 oral production. Applied Linguistics 30.4, 474-509.

Ellis, R., & Barkhuizen, G. (2005). Analyzing Learner Language. Oxford: Oxford University Press.

Ellison, S. L., Farrant, T. J., & Barwick. V. (2009). Practical statistics for the analytical scientist: A bench guide. 2nd ed. Cambridge: Royal Society of Chemistry.

El-Shamy, S. (2001). Training Games: Everything You Need to Know about Using Games to Reinforce Learning. Verginia: Stylus Publishing, LLC.

Ertmer, P. A., & Newby, T. J. (2013). Behaviorism, Cognitivism, Constructivism: Comparing Critical Features From an Instructional Design Perspective" by P.A. Ertmer and T.J. Newby is reprinted from Performance Improvement Quarterly, 6(4), 1993, pp. 50–72.

Etmer, P., & Newby, T. (1993). Behaviorism, cognivism, contructivism: comparing critical features from an instructional design perspective, performance Improvement Quarterly, 6 (4): 50-72.

Ewald, J. (2005). Language-related episodes in an assessment context: A "small-group quiz". The Canadian Modern Language Review 61.4, 565-586.

Eysenck , M. W. ( 2004). Psychology: An International Perspective . Taylor & Francis.

Fardon, M. (2013). Relationships between students' learning style preference and exam achievement in differing forms of assessment during an advanced apprenticeship at a vocational Further Education College. Institute of Learning, Department of Education, University of Oxford. Retrieved from:

Farhady, H.(1981). Research design and statistics for applied linguistics. University of California, Los Angles.

Farks, R. D. (2003). Effects of traditional versus Learning Styles Instructional methods on middle school students. Published research paper, School of science and technology,

Brooklyn, New York. The Journal of Educational Research. Vol. 97 (No-1). pp. 42-50.

Fazalur, R. (2011). Impact of Discussion Method on Students Performance .International Journal of Business and Social Science Vol. 2 No. 7; Special Issue –April 84

Felder, R. (1993). Reaching the Second Tier: Learning and Teaching Styles in College Science Education. *J.* College Science Teaching, *23*(5), 286-290.

Felder, R. (1996). Mattters of style. ASEE Prism, 6(4), 18-23.

Felder, R. M. (1995). Learning styles. [Online] Available: http://www2.ncsu.edu/unity /lo ckers /users/f/felder/public/Learning styles.

Felder, R. M., & Brent, R. (2005). Understanding student differences. Journal of Engineering Education, 94 (1), 57-72.

Felder, R. M., & Henriques, E. R. (1995). Learning and teaching styles in foreign and second language acquisition. Foreign Language Annuals, 28(1), 21-31.

Felder, R. M., & Spurlin, J. E. (2005). Applications, reliability, and validity of the Index of Learning Styles. International Journal of Engineering Education, 21(1), 103-112.

Felder, R.M., & Silverman, L.K. (1988). "Learning and Teaching Styles in Engineering Education." Engineering Education 78: 674-681.

Felder, R.M., and Soloman. B. A. (2004). Index of Learning Styles. , accessed December 8, 2004.

Felix, B., & Mednick, F. (2008). Theories of and approaches to learning. OpenStax-CNX module: m15792. http://cnx.org/content/m13430/1.5/.

Ferla, J., Valcke, M., & Cai, Y. (2009). Academic self-efficacy and academic selfconcept: Reconsidering structural relationships. Learning & Individual Differences, 19(4), 499-505.

Fernandez, M. C., Pearson, B. Z., Umbel, V. M., Oller, D. K., & Molinet Molina, M. (1992). Bilingual receptive vocabulary in Hispanic preschool children. Hispanic Journal of the Behavioral Sciences, 14, 268-276.

Feuer, M. J., Towne, L., & Shavelson, R. J. (2002). Scientifi culture and educational research. Educational Researcher, 31 (8), 4–14.

Field, M., & Field, M. C. (2007). Home Schooling 101: the essential handbook. B&H Publishing Group Nashville, Tennessee.

Fiktorius, T. (2013). The use of mind-mapping technique in the EFL classroom. Pontianak: University of Tanjung Pura Publication.

Fink, A. (1995). How to Sample in Surveys. Vol. 6. London: Sage Publications.

Fitzpatrick, J. J., & Wallace, W. (2006) Encyclopedia of Nursing Research.Springer Publishing Company.

Flavell, J. H. (1979). Speculations about the nature and development of metacognition. In F. Weinert & R. Kluwe (Eds.), Metacognition, motivation, and understanding (pp. 21–29) Hillsdale, NJ: Erlbaum.

Flavell, J.H. (1992). Cognitive development (3rd ed,). Upper Saddle River, NJ: Prentice Hall.

Fleming, N. D. (2006). Teaching and learning styles VARK strategies. Christchurch, New Zealand:NeilDFleming.

Fleming, N.D. (2001). Teaching and learning styles: VARK strategies. Christchurch, New Zeland: N.D. Fleming.

Fogarty, R., & Stoehr, J. (1995). Integrating curricula with multiple intelligences. Teams, themes, and threads. K-college. Palatine, IL: IRI Skylight Publishing Inc. (Eric Document Reproduction Service ED No. 383 435).

Foley, G. (1999). Learning in social action: A contribution to understanding informal education, Global Perspectives on Adult Education and Training, New York: Zed Books.

Ford, N., & Chen, S. Y. (2001). Matching/ mismatching revisited: an empirical study of learning and teaching styles. British Journal of Educational Technology, 32 (1), 5-22.

Foreman, J. (2003). "Next Generation Educational Technology Versus the Lecture," Educause Review, July/August: 12-22.

Foster, P., & P. Skehan. (1996). The influence of planning on performance in task-based learning. Studies in Second Language Acquisition 18, 299-324.

Fox, J., & Bartholomae, S. (1999), Student learning style and educational outcomes: evidence from a family financial management course, Financial Services Review, 8, 235-251.

Franzoni, A. L., & Assar, S. (2009). Student Learning Styles Adaptation Method Based on Teaching Strategies and Electronic Media. Educational Technology & Society, 12 (4),

Gagné, R. M. (1985). The Conditions of Learning 4e, New York: Holt, Rinehart and Winston.

Gakhar, M. (2006). A study of academic achievement as determined by their preferred learning, thinking styles and study skills. Psycho Lingua. Vol.36, No.2, p.171.

Galasinski, D. (2000). The Language of Deception. A Discourse Analytic Study. Thousand Oaks: Sage.

Garbati, J. F., & Mady, J. C. (2015). Oral Skill Development in Second Languages: A Review in Search of Best Practices. Nipissing University, North Bay, Ontario, Canada ISSN 1799-2591 Theory and Practice in Language Studies, Vol. 5, No. 9, pp. 1763-1770, September 2015 DOI: http://dx.doi.org/10.17507/tpls.0509.01.

Garcia, P., Amandi, A., Schiaffino, S., & Campo, M. (2007). Evaluating Bayesian Networks' Precision for Detecting Students' Learning Styles. Computers & Education, 49, pp. 794-808.

Gardner, H. (2011). Frames of Mind: The Theory of Multiple Intelligences Paperback – March 29,

Gardner, H., & Hatch, T. (1989). Multiple intelligences go to school: Educational implications of the theory of multiple intelligences. *Educational Researcher,18*(8),4-9.

Garner, I. (2000). Problems and inconsistencies with Kolb's learning styles. Educational Psychology, 20(3), 341- 348.

Garner-O'Neale, L. D. (2013). An Investigation of the Learning styles and Study Habits of Chemistry Undergraduates in Barbados and their Effect as Predictors of Academic Achievement in Chemical Group Theory.Journal of Educational and Social Research, 3(2), 107.

Gast, D. L., & Ledford, J.R. (2014). Single Case Research Methodology: Applications in Special Education and Behavioral Sciences. Routledge.

Gay, L. R. (1992). Educational Research: Competencies for analysis and application (4th Ed.). New York: Macmillan Publishing Company. 217-22.

Gay, L., Mills. G., & Airasian, P. (2006). Educational research: Competencies for analysis and application (8th ed.). New York, NY: Prentice Hall.

Genesee, F. (1987). Learning through two languages: Studies of Immersion and bilingual education. Cambridge, MA: Newbury House.

Ghaderi, E. (2009). Study of learning styles on their roles in the academic Achievement of the students of Payame Noor University," Retrieved from http://tojde.andolu.edu.tr /tojd e34 /notes.

Ghorbani, A. (2013). Marketing in the Cyber Era: Strategies and Emerging Trends: Strategies and Emenging Trends. IGI Global.

Ghorbani, M. N. (2013). Reciprocal Teaching of Comprehension Strategies Improves EFL Learners' Writing Ability. Current Issues in Education Vol. 16 No. 1 ISSN 1099-839X.

Gibbons, P. (2002). Scaffolding language, scaffolding learning: Teaching second language learners in the mainstream classroom. Portsmouth, NH: Heinemann.

Gibbons, P. (2003). Mediating language learning: Teacher interactions with ESL students in a content-based classroom. TESOL Quarterly 37.2, 247-273.

Gibbons, P. (2007). Mediating academic language learning through classroom discourse. In J. Cummins & C. Davison (eds.), International handbook of English language teaching (pp. 701-718). New York: Springer.

Gilakjani, A. P. (2012) A study of factors affecting EFL learners' English pronunciation learning and the strategies for instruction. International Journal of Humanities and Social Science, 2 (3), 119- 128.

Gilakjani, A. P. (2012). A match or mismatch between learning styles of the learners and teaching styles of the teachers. I. J. Modern Education and Computer Science, 11, 51-60. https://doi.org/10.5815/ijmecs.2012.11.05.

Gill, C. (2007). Motivating English-language learners through drama techniques. In S. H. Saw, H. P. Lim, C. T. Chan, P. Vijayaratnam, S. John, & E. N. Ding, E. N. (Eds.), Special Issue on Teaching and Learning 2007, (pp. 43-51). Subang Jaya: INTI Publishing House.

Glasser, W. (1986). Control Theory in the Classroom. New York, NY: Harper and Row, Publishers.

Glenn, D. (2009). Matching teaching style to learning style may not help students. Retrieved from http://chronicle.com/article/Matching-Teaching-Style-to/49497/.

Glenn, J. M. (2000). Teaching the Net Generation,‖ Business Education Forum, vol. 54, no. 3, pp. 6-14,. 7

Gokalp, M. (2013). The Effect of Students' Learning Styles to Their Academic Success Creative Education 2013. Vol.4, No.10, 627-632 Published Online October in SciRes (http://www.scirp.org/journal/ce)

Gold, R, Y. (2002). & Role-Playing Games as Language Learning Tools. The Eurographics Association and Blackwell Publishing.

Goldenberg, C. (2008). Teaching English language learners: What the research does – and does not – say. American Educator [A1], 32(2), 8-44.

Goldstein, K. M., & Blackman, S. (1978). Cognitive Styles: Five Approaches and Relevant Research. New York: Wiley & Sons.

Gomleksize, M. N. (2007). Effectiveness of cooperative learning (jigsaw II) method in teaching English as a foreign language to engineering students (case of Firat University, Turkey). European Journal of Engineering Education, 32(5), 613-625. http://dx.doi.org/10.1080/03043790701433343.

Gough, P. B. & Tunmer, W. E. (1986). Decoding, reading, and reading disability. Remedial and Special Education, 7, pp. 6–10.

Graf, S. (2007) Adaptivity in Learning Management Systems Focussing on Learning Styles, PhD thesis, Vienna: Vienna University of Technology.

Graf, S. (2009). In-Depth Analysis of the Felder-Silverman Learning Style Dimensions. Journal of Research on Technology in Education, 40(1), xx–xxx.

Graf, S., Liu, T., Kinshuk., Chen, N., & Yang, S. (2009). Learning styles and cognitive traits – thrir relationship and its benefits in web-based educational systems. Computers in Human Behavior, 25(1), 1280-1289.

Grasha, A., & Yangarber-Hicks, N. (2000). Integrating teaching styles and learning styles with instructional technology. College Teaching, 48(1), 2-10.

Graves, M. (2008). Instruction on individual words: One size does not fit all. In A. E. Farstrup & S. J. Samuels (Eds.), What research has to say about vocabulary instruction (pp. 56–79). Newark, DE: International Reading Association.

Graves, M. F. (2006). The vocabulary book: Learning and instruction. New York: Teachers College Press.

Gravetter, F. J., & Forzano, L. B. (2015). Research methods for the behavioral sciences (5th ed.). Stamford, CT: Cengage Learning.

Gravetter, F. J., & Wallnau, L. B. (2005). Essentials of statistics for the behavioral sciences (5th ed.). Belmont, CA: Wadsworth/Thomson.

Gravetter, F. J., & Wallnau, L. B. (2013). Statistics for the Behavioral Sciences (9th ed.). Belmont, C A: Wadsworth Publishing. 15–29.

Gregorc, A. (1982). Gregorc Style Delineator. Mass.: Gabriel Systems.

Gregorc, A. (1984). Gregorc style delineator: development, technical and administrative manual. Columbia, Conn: Gregorc Associates Inc. Maynard, Massachusetts: Gabrial Systems, Incby Sawall (1986),

Gregorc, A. F. (1985). Inside styles: Beyond the basics. Columbia, CT: Gregorc Associates.

Griffiths, C. (2003). Language learning strategy use and proficiency: The relationship between patterns of reported language learning strategy (LLS) use by speakers of other languages (SOL) and proficiency with implications for the teaching/learning situation. Retrieved from http://researchspace.auckland.ac.nz/feedback.

Griggs, S. A., & Dunn, R. S. (1984). “Selected case studies of the learning styles preferences of gifted students”. Gifted Child Quarterly 28, 3: 115-119.

Guild, P. B., & Garger, S. (1985). Marching to different drummers. Alexandria, VA.: Association for Supervision and Curriculum Development.

Guilfoyle, N., & M. Mistry. (2012). How effective is role play in supporting speaking and listening for pupils with English as an additional language in the foundation stage? International Journal of Primary, Elementary and Early Years Education 41.1, 63-70.

Ha, K. (2005). Getting the Picture: Using Visual Learning Techniques to Foster Higher Order Thinking Skills and Encourage Connections in the Secondary Classroom," Language Arts Journal of Michigan: Vol. 21: Iss. 2, Article 10. Available at: https://doi .org/10.9707/2168-149X.1198.

Hafner, A. L. (1994). Making our assessments comprehensible to English learners. Paper presented at the annual CCSSO Large-Scale Assessment Conference, Albuquerque, NM.

Hall, E. & D. Moseley. (2005). "Is there a Role for Learning Styles in Personalized Education and Training." International Journal of Lifelong Education 24. 3 (243-255).

Hall, L. (1993). A critical exploration of learning style preferences and the mathematical achievement of chapter 1 middle school students: administrative and instructional implications (Doctoral dissertation). Available from ProQuest Dissertation and theses databases. (UMI No.9407244).

Harley, B., & Swain, M. (1984). An analysis of verb form and function in the speech of French immersion pupils. Working Papers in Bilingualism, 14, 31-46.

Harley, B., & Swain, M. (1984). The interlanguage of immersion students and its implication for second language teaching. In A. Davies, C. Criper, & A.P.R. Howatt (Eds.), Interlanguage (pp. 291-311). Edinburgh, Scotland: Edinburgh University Press.

Harley, B., Allen, P., Cummins, J., & Swain, M. (1990). The nature of language proficiency. In B. Harley, P. Allen, J. Cummins, & M. Swain (Eds.), The development of second language proficiency (pp. 7-25). Cambridge: Cambridge University Press.

Harmer, J. (1985). The Practice of English Language Teaching (4th ed.). Pearson Longman.

Harmer, J. (1998). Default settings: What models do for trainees. Paper presented at the Proceedings of the 11th Annual EA Education Conference. Melbourne: Melbourne Exhibition Centre.

Harmer, J. (2001). J. How to Teach English. Longman Press.

Harmer, J. (2001). The practice of English language teaching. London: Pearson Education Limited.

Harmer, J. (2007). The Practice of English Language Teaching. Fourth Edition. Pearson Longman.

Harmer, J. (2008). How to teach English. London: Person Longman

Harmer. (1991). The Practice of English Language Teaching. London: Longman Group UK Limited.

Harris, B. (1977) "The importance of natural translation." Working Papers on Bilingualism 12, 96-114.

Harris, D. 1974. Testing English as a Second Language. New York: Mc. Graw. Hill Book Company.

Hartley, J. (1998). “Learning and stadying a research perspective” London: routledge

Hativa, N. (2000) Disciplinary Differences in Teaching and Learning: Implications for Practice. San Francisco, CA: Jossey-Bass.

Hattie, J. A. C., Biggs, J., & Purdie, N. (1996). Effects of learning skills interventions on student learning: A meta-analysis. Review of Educational Research, 66(2), 99–136.

Havranek, G, (2002). When is corrective feedback most likely to succeed? International Journal of Educational Research, 37: 255–270.

Hayes, J., & Allinson, C. W. 1997. Learning Styles and Training and Development in Work Settings: Lessons from Educational Research,‖ Educational Psychology, vol. 17, no. 1-2, pp. 185-193.

He, A.W., & Young, R. (1998). Introduction: assessing second language speaking ability. In R.Young and A.W. He (eds.), Talking and Testing (pp. 1-26) Amsterdam: John Benjamins

Healey M,, & Jenkins, A. (2009). Developing Undergraduate Research and Inquiry. York: HE Academy; 2009. Available at: www.heacademy.ac.uk/assets/York/documents /resources/publications/ DevelopingUndergraduate_Final.pdf. Accessed 17 September 2009.

Hedge, T. (2000). Teaching and learning in the language classroom. Oxford: Oxford University Press.

Hendry, G. D., & Davy, H. P. (2005). Independent student study groups. Blackwell Publishing Ltd. Medical Education, 39, 672-679. http://dx.doi.org/10.1111/j.1365-2929.2005.02199.x

Henry, A. D. (2008). Social network analysis: An emergent method. In L. Kalof, A. Dan and T. Dietz, Essentials of Social Research, 138-140. Berkshire, UK: Open University Press/McGraw Hill Publishers.

Henry, P. (2008). Learning style and learner satisfaction in a course delivery context. World Academy of Science, Engineering and Technology, 38, 410-413.

Henry, T. G. (1990). Practical Sampling. Sage Publications.

Herbert, A., Stenfors, S. (2007): Choosing Experiential Methods for Management Education, in: Reynolds, M.; Vince, R. (Ed.), Handbook of Experiential Learning & Management Education. Oxford: Oxford Press

Herrmann, N. (1995). The creative brain. (2nd edition). USA: Quebecor Printing Book Group.

Herrmann, N. (1996). The whole brain business book. New York: McGraw-Hill.

Hertzog, M. A. (2008). Considerations in determining sample size for pilot studies. Research in Nursing & Health, 31,180-191.

Hess, D. E. (2009). Controversy in the classroom: The democratic power of discussion . New York: Routledge.

Hill, R. (1998). What sample size is "enough" in internet survey research? Interpersonal Computing and Technology: An Electronic Journal for the 21st Century, 6(3-4).

Hollett, V., & Sydes, J. (2009). Tech Talk : Student's Book Intermmediate Level. Oxford University Press.

Holman, D., Pavlica, K., & Thorpe, R. (1997). Rethinking Kolb's theory of experiential learning in management education. Management Learning, 28(2), 135-148.

Holosko, J. M., & Thyer, B. A. (2011). Pocket Glossary for Commonly Used Research Terms. SAGE.

Hong, E., & Milgram, M. R. (2000). Homework: Motivation and Learning Preference. Greenwood Publishing Group.

Honigsfeld, A., & Dunn, R. (2003). High school male and female learning style similarities and differences in diverse nations. The Journal of Educational Research, 96(4), 195-206.

Hornby, A. S. (1989). Oxford advanced learner's dictionary (4th ed.). London: Oxford University Press.

Houser, J. (2012). Nursing research: Reading, using, and creating evidence. Sudbury, MA: Jones & Bartlett Learning.http://www.eric.ed.gov/ERICDocs/data/ericdoc s2sql/ content _storage_01/0000019b/80/17/86/35.pdf.

Huang Y. & Shan J. (2008). "Role Play for ESL/EFL Children in the English Classroom." The Internet TESL Journal, Vol. XIV, No. 2, Retrieved on 27 February, 2015 from http://iteslj.org/Techniques/Huang-RolePlay.html.

Hughes, A. (1989). Testing for language teachers. Cambridge: Cambridge University Press

Hughes, A. (2002). Testing for language teachers. Cambridge, England: Cambridge University Press.

Hughes, A. (2003). Testing for Language Teachers. Cambridge University Press.

Hughes, R., & Reads, S. B. (2016). Teaching and Researching Speaking: Third Edition. Taylor & Francis.

Hung, H. (2015). Flipping the classroom for English language learners to foster active learning. Computer Assisted Language Learning, 28(1), 81-96. http://dx.doi .org/10. 1080/09588221.2014.967701

Hyde, P. (2007): Integrating Experiential Learning through Live Projects. In Reynolds, M.; Vince, R. (Eds.), the Handbook of Experiential Learning & Management Education. Oxford: Oxford University Press.

Hyland, K., & Shaw, P. (eds.) (2016). The Routledge Handbook of English for Academic Purposes. London: Routledge.

Hymes, D. (1972). On communicative competence. In J. B. Pride & J. Holmes (eds.), Sociolinguistics (pp. 53-73). Harmondsworth, England: Penguin Books. Retrieved April 2015from http://humanidades.uprrp .edu/smjeg/reserva/Estudios%20Hispanicos /espa 3246/ Prof%20Sunny%20Cabrera/ESPA%203246%2 0-%20On%20 Communicative% 20Competence %20p%2053-73.pdf

Hymes, D. (1974). Foundations of Sociolinguistics: An Ethnographic Approach. Philadelphia: U of Pennsylvania P.

Interiano, Z. (2013). The relationship between learning strategies and learning styles in the development of English students' oral proficiency in Reading and Conversation; Bachelor thesis, Universidad de El Salvador.

International Learning Styles Network. (2008). About learning styles. Retrieved August 6, 2009, from http://www.learningstyles.net/ index.php?option=com_content&task =view &id=20&Itemid=70 &lang=en

International Learning Styles Network. (2008). About learning styles. Retrieved August 6, 2009, from http://www.learningstyles.net/ index.php?option=com_content&task =view&id=20&Itemid=70 &lang=en

Irvine, J. J., & York, D. E. (1995). Learning styles and culturally diverse students: A literature review. In J.A. Banks & C.A.M. Banks (Eds.), Handbook of research on multicultural education. New York: Macmillan.

Isaac, S., & Michael, W. B. (1995). Handbook in research and evaluation. San Diego, CA: Educational and Industrial Testing Services.

Jaccard, J., & Turrisi, R. (2003). Interaction effects in Multiple Regression. SAGE Publication

Jack C. R. (2002). Methodology in Language Teaching: An Anthology of Current Practice Cambridge University Press.

Jackson, C, J. (2005). The neuropsychological model of learning and its application to business, education, training and clinical psychology Australia: Cymeon. Available

Jackson, J . C. (2006). Organization Development: The Human and Social Dynamics of Organizational Change. University Press of America.

Jackson, S. L. (2014). Research Methods: A Modular Approach. Cengage Learning.

Jackson, S.L. (2012). Research Methods and Statistics: A Critical Thinking Approach. Cengage Learning.

Jacoby, W. G. (1997). Statistical graphics for univariate and bivariate data. Thousand Oaks, CA: Sage.

Jaiharn, P. (2003). The Comparison in English Speaking Ability for Communication andMotivation in Learning English for Seven Grade Students by Using Dramatic Activitiesand Non-Dramatic Activities. Master Theses. Graduate School of Silapakorn University.

Jalota, S.S. (1972) Manual of group test of general mental ability (72) revised. Deptt. Of Psychology, University of Gorakhpur.

Jaramillo, J. (1996). Vygotsky's sociocultural theory and contributions to the development of constructivist curricula. Education 117(1), 133-140.

Jared, K. (2016). Handbook of Research on Global Issues in Next-Generation Teacher Education. IGI Global.

Jarwan, F. (2005). Teaching Thinking: Definition and applications. Amman: Dar Al-fkir. Jordan.

Jerry, T. R., & Lee, M. A. (2008). Physical Education for Children: Daily Lesson Plans Lslf Edition.

Jha, A. S. (2014). Social Research Methods. McGraw Hill Education (India) Pvt Ltd.

Johnson, G. (2013). Student Perceptions of the Flipped Classroom. Master Thesis. The University of British Columbia, Okanagan.

Johnson, K., & Morrow, K. (1981). Communication in the Classroom. Harlow: Longman.

Jonassen, D. H., & Grabowski, B. L. (1993). Handbook of individual differences, learning, and instruction. Hillsdale, NJ: Lawrence Erlbaum.A flexible interface design for web directories to accommodate different cognitive styles

Jones, N. B. (1997). Applying learning styles research to improve writing instruction," Paper presented at RELC Seminar on Learners and Language Learning, Singapore.

Jones, R. (2006). Strategies for Reading Comprehension: Selective Underlining. Retrieved 2008, April 14, from http://www.readingquest.org/strat/underline.html

Joniak, A. J., & Isaksen, S. G. (1988). The Gregorc style delineator: internal consistency and its relationship to Kirton's adaptive-innovative distinction. Educational and Psychological Measurement, 48, 1043–1049.

Julious, S. A. (2005). Sample size of 12 per group rule of thumb for a pilot study. Pharmaceutical Statistics, 4, 287-291.

Junko. (1998). Learning styles and error correction: How do learning styles affect students' perceptions towards error correction in a foreign language classroom? [Online] Available:

Kagan, (1988). Childhood derivatives in inhibition and lack of inhibition to the unfamiliar. Child Development, 59, 1580-1589.

Kao, S.-M., Carkin, G., & Hsu, L. F. (2011). Questioning techniques for promoting language learning with students of limited L2 oral proficiency in a drama-oriented language classroom. The Journal of Applied Theatre and Performance 16.4, 489-515.

Kaur, M., & Kaur, R. (2014). Effect of learning style and intelligence on achievement in biology International Journal of Multidisciplinary Research and Development; 1(7): 330-334

Kayes, D. (2005). Internal validity and reliability of Kolb's learning style inventory version 3 (1999). Journal of Business and Psychology, 20(2), 249- 257.

Kayes, D. C. (2007). Institutional barriers to experiential learning revisited. In Reynolds M & Vince R. (Ed.), The handbook of experiential learning & management education. Oxford: Oxford University Press.

Kazu, Đ. Y. (2009). Journal of Social Sciences 5(2): 85-94ISSN 1549-3652 Alireza JilardiDamavandi 2011Academic Achievement of Students with Different Learning Styles International Journal of Psychological Studies Vol. 3, No. 2; December

Kazu, İ. Y. (2009). The effect of learning styles on education and the teaching process. Journal of Social Sciences, 5 (2), 85-94. Retrieved from http://perweb.firat .edu.tr/ personel /yayinlar/fua_35/35_59283.pdf.

Keefe, J. W. (1979). Learning style: An overview. In J. W. Keefe (Ed.), Student learning styles: Diagnosing and prescribing programs (pp. 1-17). Reston, VA: National Association of Secondary School Principals.

Keengwe, J. (2016). Handbook of Research on Global Issues in Next-Generation Teacher Education IGI Global.

Keihaniyan, M. (2013). Multimedia and listening skills. International Journal of Advanced Research, 1(9), 608-617.

Kelly, G. 2000. How to teach pronunciation. Harlow: Pearson Education.

Kent, D. B. (2001). A Method for Oral Testing in University English Programs at Korean Universities The Internet TESL Journal, Vol. VII, No. 6, June http://teslj.org/

Kervin, L. (2006). Research for Educators. Cengage Learning Australia

Kevin, R. J., Cooper, M., & Bolick, M. C. (2015).Those Who Can, Teach Cengage Learning.

Khalandi, C., & Rashideh, Z. (2017). The Effect of NLP (Accelerated learning) on Iranian EFL Learner's Listening Comprehension. Theory and Practice in Language Studies, Vol. 7, No. 11, pp. 1139-1148,

Kilbourn, P. ( Let All the Children Come: A Handbook for Holistic Ministry to Children with Publications.

Killen, R. (1996). Effective teaching strategies: Lessons from research and practice. Wentworth Falls: Social science Press.

Killen, R. (2009). Effective teaching strategies: Lessons from research and practice (5th ed.). South Melbourne, Victoria: Cengage.

Kim, M. S. (2009). A PPP Approach & IELTS Writing. The English Connection, 34.

Knight, B. 1992. Assessing Speaking skills: a workshop for teacher development, ELT Journal Volume 46/3 July 1992, 294-302.

Knowles, M. S., Holton, E. F., & Swanson, R. A. (2005). The Adult Learner (6th ed.). Burlington, MA: Elsevier.

Knud, I. (2004) Adult Education and Adult Learning. Comprehensive: Roskilde University Press/Malabar, FL: Krieger Publishing

Koike, D. A., & Pearson, L. (2005). The effect of instruction and feedback in the development of pragmatic competence. System 33, 481-501.

Kolb, D. A. (1999). The Kolb Learning Style Inventory, Version 3. Boston: Hay Group.

Kolb, D. (1985). Learning style inventory. Boston: McBer.

Kolb, D. A. (1976). Management and learning processes. California Management Review, 18 (3), 21-31.

Kolb, D. A. (1984). Experiential learning: Experience as the source of learning and development (Vol. 1). Englewood Cliffs, NJ: Prentice-Hall.

Kolb, D. A. (1999). The Kolb Learning Style Inventory version 3. Boston, Hay Resources Direct.

Kolb, D. A. (2014). Experiential learning: Experience as the source of learning and development (2nd ed.). Upper Saddle River NJ: Pearson Education.

Kolb, D., Boyatzis, R., & Mainemelis, C. (2000). Experiential learning theory: previous research and new directions. In R, Sternberg., L, Zhang. (Eds). Perspective on thinking, learning and cognitive styles (pp. 193-210). Mahwah, NJ: Lawrence Erlbaum.

Koshy, V. (2009). Action Research for Improving Educational Practice: A step-by-step guide (2nd ed.). Thousand Oaks, California, USA: SAGE Publiscations.

Koul , L., & Song, A. (2009). Volume 37, Number 1 132-156. Minimum distance regression model checking with Berkson measurement errors

Kowalska, B. (1991). Let them talk in English. Warszawa: Wydawnictwo Szkolne i Pedagogiczne

Kowoser, E., & Berman, N. (1996), Comparison of paediatric resident and faculty learning styles: implications for medical education, American Journal of Medical Science, 312 (5), 214-218.

Krebt, D. M. (2017). The Effectiveness of Role Play Techniques in Teaching Speaking for EFL College Students. Journal of Language Teaching and Research, Vol. 8, No. 5, pp. 863-870, DOI: http://dx.doi.org/10.17507/jltr.0805.04.

Krueger, R. A., & Casey, M. A. (2000) Focus Groups:A Practical Guide for Applied Research. 3rd ed. Thousand Oaks, CA: Sage

Kulshreshtha, R. (1982). Academic Anxiety and Academic Achievement. Journal of Indian

Kumar, C. R. (1992). Research Methodology. New Delhi: APH Publishing Corporation.

Kurtus, S. (2001). Overcome the fear of speaking to group. Retrieved on January, 12, 2014 from http://www.school-for-champions.com/speaking/fear.htm.

Kurtz, J. (2011). Education is not something that you have. It is something that you are. English 36 (2), 41-50.

Kusmaryati, E. S. (2009). Improving English Speaking Ability Through Discussion Technique For Students Of Ma Nu Banat Kudus (Quasi Experiment Research). Kudus: University of Muria Kudus.

Kusmaryati, E. S. (2009). Improving English Speaking Ability Through Discussion Technique For Students Of Ma Nu Banat Kudus (Quasi Experiment Research). Kudus: University of Muria Kudus.

Kuśnierek, A. (2015). World Scientific News. 7 (2015) 73-111 EISSN 2392-2192.

Kutay, H. (2006). A Comparative Study about Learning Styles Preferences of two Cultures. Published Ph.D. (EDU) Dissertation, School of The Ohio State University. Retrieved fromhttp://www.ohiolink.edu/etd/send-pdf.cgi/Kutay%20Huban.pdf?acc_num=osu 1 14 3049 622

Kutnick, P., & Blatchford, P. (2013). Effective Group Work in Primary School Classrooms: The Spring Approach. Springer Science & Business Media.

Kwan, R., McNaught, C., Hong KongEnhancing. (2011). Learning Through Technology. Springer-Verlag Berlin Heidelberg

Lantolf, J., & Frawley, W. (1988). Proficiency: Understanding the construct. Studies in Second Language Acquisition, 10, 181–195.

Larsen-Freeman, D., & Long M. H. (1991). An Introduction to second language acquisition research . London: Longman

Lauria, J. (2010). Differentiation through learning- style responsive strategies. Kappa Delta Pi Record,47(1),24-29.

Lawrance, G. (1993). People Types and Tiger Stripes: A Practical Guide to Learning Styles, 3rd edition. Gainesville, FL: Center for Applications of Psychological Type.

Lawrence, A. ( 2008). Encyclopedia of Information Technology Curriculum Integration. IGI Global.

Lazear, D. (1991). Seven ways of teaching: The artistry of teaching with multiple intelligences. Palatine, IL: IRI Skylight Publishing Inc. (ERIC Document Reproduction Service No. ED 382 374) (highly recommended)

Lazear, D. (1992). Teaching for Multiple Intelligences. Fastback 342 Bloomington, IN: Phi Delta Kappan Educational Foundation. (ERIC Document Reproduction Service No. ED 356 227).

Leahey, T. H. (2000). Control: A history of behavioral psychology. The Journal of American History, 87(2), 686-687.

Leech, N. L., Barrett, K. C., & Morgan, G. A. (2005). SPSS for Intermediate Statistics: Use and Interpretation (2 nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.

Leedy, P. D. (1997). Practical research: Planning and design (6th ed.). Upper Saddle River, NJ: Prentice-Hall, Inc., p. 232-233.

Leedy, P. D., & Ormrod, J. E. (2010). Practical research: Planning and design (9th ed.). Upper SaddleRiver,NJ:PrenticeHall.

LeFever, M. ( 2011). Learning Styles. David C Cook.

Lent, R. W., Brown, S. D., & Gore, P. A. (1997). Discriminant and predictive validity of academic self-concept, academic self-efficacy, and mathematics-specific self-efficacy. Journal of Counseling Psychology, 44, 307-315.

Lent, R. W., Brown, S. D., & Larkin, K. C. (1984). Relation of self-efficacy expectations to academic achievement and persistence. Journal of Counseling Psychology, 31, 356-362.

Lent, R. W., Brown, S. D., Veerasamy, S., Talleyrand, R., Chai, C.-M., Davis, T, Chopra, S. B., & McPartland, E. B. (1998). Perceived supports and barriers to career choice. Paper presented at the meeting of the National Career Development Association, Chicago.

Leonard, D. C. (2002). Learning theories, A-Z. Westport, CT: Greenwood Press.

Leopold, L. (2012). Prewriting Tasks for Auditory, Visual, and Kinaesthetic Learners. TESL CANADA JOURNAL/REVUE TESL DU CANADA 99 VOL. 29, NO 2, SPRING 2012

Lesia, L. (2014). Cases on Instructional Technology in Gifted and Talented Education. IGI Global.

Lewis, A. (2011). The art of lecturing. West Roxbury, MA: B & R Samizdat Express.

Lewis, M. (1993). The Lexical Approach: The state of ELT and the way forward. Hove: Language Teaching Publications.

Lewis, M. (1995). Implications of a lexical view of language. Language Teacher -Kyoto-JALT, 19, 37-39.

Lewis, R. (2001). Classroom discipline and student responsibility: The students' view. Teaching and Teacher Education, 17, 307-319.

Li, J. Fox, R. F., & Almarza, D.J. (2010). Learning vocabulary via computer-assisted scaffolding for text processing. Computer Assisted Language Learning, 23 (3), 253-275.

Lightbown, P.M. and Spada, N. (1999) How languages are learned. Oxford, OUP.

Ling, L. (2008). Learning styles and training methods implications for management development programmes- an exploratory study (Doctoral dissertation). Available from Australian digital theses Dissertation and theses databases.

Linse, C. T. (2005). Practical English Language Teaching: Young Learners. New York: Mc-Graw Hill Companies, Inc,

Litchfield, R. C. (2009). Brainstorming Rules as Assigned Goals: Does Brainstorming Really Improve Idea Quantity? Motivation and Emotion, 33(1), 25-31.

Littlewood, W. (1996). Teaching Foreign and Second Language Learning: Language-Acquisition Research and Its Implications for the Classroom. Cambridge: Cambridge University Press.

Littlewood, W. (1999). Communicate Language Teaching. Cambridge: Cambridge University Press.

Liu, F., & Ding, Y. (2009). Role-play in English language teaching. Asian Social Science, 5, 140-143.

Livo, J. N. (2000). Celebrating the Earth: Stories, Experiences, and Activities Libraries Unlimited.

Livo, N. J. (2002). Storytelling: process and practice. Littleton, CO; Colorado Libraries Unlimited, Inc.

Lochtman, K. (2002). "Oral corrective feedback in the foreign language classroom: how it affects interaction in analytic foreign language teaching", International Journal of Educational Research, 3: 271-283.

Lombay, C. L. (2003). Using Technology in English as a Second Language Course to Accommodate Visual, Kinaesthetic, and Auditory Learners to Affect Students' Self-Efficacy About Learning the Language**.** Published D. Ed., Dissertation, Nova Southeastern University.

Lonka, K. (2012) Engaging Learning Environments for the Future. The Elizabeth W. Stone Lecture.

Louange, J. E. G. (2007). An Examination of the Relationships between Teaching and Learning Styles, and the Number Sense and Problem Solving Ability of Year 7 Students. Online Submission.

Lovelace, M. K. (2005). Meta-analysis of experimental research based on the Dunn and Dunn model. The Journal of Educational Research, 98, 176-183.

Lowenstien, A., & Bradshaw, M. (2004). Fuzzard's innovative teaching strategies in nursing (3rd ed.). Sudbury, MA: Jones and Bartlett Publishers.

Lunsford, T. R., & Lunsford, B. R. (1995). The research sample, part 1: Sampling. Journal of Prosthetics and Orthotics, 7(3), 105-112.

Lunt, E. H. (2000). The learning strategies of adult immigrant learners of English: Quantitative and qualitative perspectives. Unpublished doctoral dissertation, University of Melbourne, Australia.

Lyster, R. (2004) Differential effects of prompts and recasts in form-focused instruction, Studies in second language acquisition, 26/3, 399-432.

Lyster, R., & L. Ranta. (1997). Corrective feedback and learner uptake. Studies in Second Language Acquisition 20, 37-66.

Ma, X. (2003). Sense of Belonging to School: Can Schools Make a Difference? Journal of Educational Research, 96(6): 340-349.

Mackay, A. (2007). Motivation, ability, and confidence building in people. Jordan Hill, Oxford: Linacre.

MacKeracher, D. (2004). Making sense of adult learning," (2nd ed.).Canada: University of Toronto Press Incorporated, [16] B. McCarthy," Improving staff development through CBAM and 4MAT," Educ. Leadership, 1982, 40, pp. 20-25.

Mackey, A., & Gass, S.M. (2005). Second language research: Methodology and design. Mahwah, NJ: Lawrence Erlbaum

Maclsaac, M., Estey, N., MacDonald, S. R., & Case, E. (2001). Understanding Learning Styles. Published Article, Retrieved from: Canadian child Care Federation, Ottawa, Onratio

Magoulas, G. D., & Chen, S. Y. (2006). Advances in Web-based Education: Personalized Learning Environments. Idea Group Inc (IGI).

Makita, Y. (1995). The effectiveness of dramatic/role-playing activities. The Japanese Language Classroom. Retrieved from the World Wide Web: FHTTP:// journals2 .iranscience.net:800/mcel.pacificu.edu/mcel.pacificu.edu/aspas/papers/scholars/Mahita .htm.

Maley, A., & Duff, A. (2011). Drama Techniques in Language Learning. Cambridge: CambridgeUniversity.

Maneekul, J. (2002). Use of authentic material and tasks to enhance English Listening Skill for undergraduate students majoring in teaching English at Faculty of Education, Chiang Mai University. Unpublished master's thesis, Chiang Mai University.

Mariani, L. (2010). Communication strategies: Learning and teaching how to manage oral interaction. lulu.com.

Marriott, P. (2002) "A longitudinal study of undergraduate accounting students' learning style preferences at two UK universities" Accounting Education, II(1), 43-62.

Marshall, C. (1991). Teachers' learning style: How they affect student learning. The Clearing House, 64, 225-227.

Massa, L. J., & Mayer, R. E. (2006). Testing the ATI hypothesis: Should multimedia instruction accommodate verbalizer-visualizer cognitive style? Learning and Individual Differences, 16, 321-335.

Matal, M., Eugenia, R., & Cañas, T. (2009). Knowing about Learning Strategies and Learning Styles can be helpful to improve the learning of English as a Second Language. San Salvador: Universidad de El Salvador.

McCarter, M. K. (2008). The Effect of Auditory Stimulation on Learners with Different Learning Styles. Unpublished doctoral dissertation, Capella University (USA)

McDonough, S. (1981). Psychology in foreign language teaching. London: George Allen.

McDonough, S. (1999). Learner strategies. Language Teaching, 3(2), 1-18.

McKeown, M., & Beck, I. (2004). Direct and rich vocabulary instruction. In J. F. Baumann & E. J. Kame'enui (Eds.), Vocabulary Instruction: Research to practice (pp. 13-27). New York, NY: Guilford Press.

McMillan, D. W. (1996). Sense of community. Journal of Community Psychology, 24(4), 315–325.

McMillan, H. J. (1996). Educational Research Fundamentals for the Consumer. Virginia Commonwealth University.

McNamara, D. S. (2010). Strategies to read and learn: overcoming learning by consumption. Medical Education, 44, 340–346.

McNeill D. (2005). Gesture and thought. University of Chicago Press; Chicago: Linse, C. T. Practical English language teaching: Young learners. New York: McGraw-Hill.

McNeill, D. (2000). Language and Gesture. United Kingdom: Cambridge University Press.

Mednick,V. B.(2006).Theories of and Approaches to Learning. http://cnx.org/ content /m13286/1.1/ ‡http://creativecommons.org/licenses/

Megha, G, A. (2006). A study of academic achievement as determined by their preferred learning, thinking styles and study skills. Psycho Lingua. Vol.36, No.2, July, p.171.

Mehnert, U. (1998). The effects of different lengths of time for planning on second language performance. Studies in Second Language Acquisition, 20(1), 83–106.

Melor, A., & Chan, U. (2016). The L2 motivational self-system, L2 anxiety, and motivated

Melton. C. D. (1990). Bridging the cultural gap: a study of Chinese students' learning style preferences," RELC Journal 21 (1), pp. 29-54.

Merrick, K. E. (2010). An Empirical Evaluation of Puzzle-Based Learning as an Interest Approach for Teaching Introductory Computer Science .IEEE Transactions on Education, v53 n4 p677-680 . (Eric Document Reproduction Service No. EJ905553)

Meteetham, P. (2001). Case study of cooperative learning by using jigsaw technique with second-year English major students at Naresuan University (M.A. Thesis, Mahidol Univeristy).

Michael, W. (2004). Psychology: An International Perspective. Taylor & Francis

Michie, S., van Stralen, M. M., & West, R. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. Implementation Science : IS, 6, 42 . http://doi.org/10.1186/1748-5908-6-42.

Mikulecky, L., Lloyd, P., & Shenghui, C. H. (1996). Adult and ESL literacy learning self-efficacy questionnaire. Bloomington: Indiana University. (ERIC Documentation Reproduction Service No. ED394022).

Miles, M. B. (1973). Learning to Work in Group. New York: Teacher College Press, Columbia University.

Miller, P. (2001). Learning styles: the multimedia of the mind. Research Report. Retrieved from ERIC database. (ED. ED451140).

Mills, J. A. (1998). Control: A history of behavioral psychology! New York, NY: New YorkUniversityPress.

Mingyuan, Z. (2003). Language Learning Strategies and English Language proficiency: An investigation of Chinese ESL students at NUS, Singapore University Press, National University of Singapore.

Mishra, C. (2007). Teaching Styles. APH Publishing.

Mishra, K. R. (2013). Vygotskian Perspective of Teaching-Learning. Innovation: International Journal of Applied Research Volume-1, Issue-1, p. 21 www.ijar.publicationsupport.com Mishra et al. Page 21

Moayyeri, H. (2015). The Impact of Undergraduate Students' Learning Preferences (VARK Model) on Their Language Achievement ISSN 1798-4769 Journal of Language Teaching and Research, Vol. 6, No. 1, pp. 132-139, January 2015 http://dx. doi.org /10.17507/jltr.0601.16.

Moayyeri, H. (2015). The Impact of Undergraduate Students' Learning Preferences (VARK Model) on Their Language Achievement", Journal of Language Teaching and Research., vol. 6, no. 1,, pp.132-139.

Montgomery, D. (2005). Teaching gifted children with special educational needs. Routledge Royer, J.M ;The cognitive Revolution in Educational Psychology. Information Age Pub.

Mora, R. A., & Lopera, M. C. (2001). Games in the classroom: More than just having fun. HOW, A Colombian Journal for Teachers of English, 8, 75-82.

Moradkhan, D., & Mirtaheri, S. (2013). The Relationship between Iranian EFL learners' Perceptual Learning Styles and their Teachers' Teaching Styles. Islamic Azad University, Science & Research Branch, 1(4), 41-52.

Moran, S., Kornhaber, M., & Gardner, H. (2006). Orchestrating multiple intelligences. [Electronic version]. Educational Leadership, 64(1), 22-27.

Morgan, D. L. (1997). Focus groups as qualitative research. Newbury Park: Sage.

Moses N. I., & Ciaravino. A. E. (2007). Elsevier Health SciencesPsychosocial Conceptual Practice Models in Occupational Therapy: Building Adaptive Capability.

Mugglestone, P. (2006).New Opportunities Upper-Intermediate Teacher's Book. Longman.

Muijs, D., & Reynolds, D. (2011). Effective Teaching Evidence and Practice. London: SAGE Publishing Ltd. Ormrod, J. E. (2000). Educational Psychology: Developing Learners (3rd ed.). United States of America: Prentice-Hall, Inc.

Mulalic, A., Mohd Shah, P., & Ahmad, F. (2009). Perceptual learning style of ESL students. European Journal of Social Sciences , 7(3), 101-113. Retrieved from http:// www. eurojournals.com/ejss_7_3_10.pdf

Munns, G., Sawyer, W., & Cole, B. (2013). Exemplary Teachers of Students in Poverty. Routledge.

Murphy, R. J., Gray, S. A., Straja, S. R., & Bogert, M. C. (2004). Student learning preferences and teaching implications: educational methodologies. Journal of Dental Education, 68 (8), 859-866.

Naimie, Z., Siraj, S., Piaw, C. Y., Shagholi, R., & Abuzaid, R.A. (2010) Do you think your match is made in heaven? Teaching styles/ learning styles match and mismatch revisited. Procedia Social Behavioral Sciences, 2, 349-353.

Nair, S. M., Yusof, N. M., & Arumugam, L. (2014). The Effects of Using the Play Method to Enhance the Mastery of Vocabulary among Preschool Children. Procedia-Social and Behavioral Sciences, 116, 3976-3982.

Nasution, D. (2013). Essays on Auditor Independence. (Doctoral dissertation). Finland: Åbo Akademi University.

Naveed Sultana1 , Bibi Kubra (2015) Effect of Visual Style-Based Instruction on Learners' Academic Achievement at Elementary Level. Asian Journal of Management Sciences & Education Vol. 4(4)

Neil, S. (1999). Chomsky: Ideas and ideals. Cambridge: Cambridge University Press Newbury Park: Sage.

Neuman, S. B., & Dwyer, J. (2009). Missing in action: Vocabulary instruction in pre-K. The Reading Teacher, 62(5), 384–392.

New Brunswick Department of Education. (1996). A resource guide for educators of English second language learners. Retrieved April 2015 from http://www.gnb.ca/0000/ publications /curric /resourceesllearners.pdf.

New Brunswick Department of Education. (1996). A resource guide for educators of English second language learners. Retrieved April 2015 from http://www.gnb.ca/0000/ publications/curric/resourceesllearners.pdf.

Newton, X. A., Darling-Hammond, L., Haertel, E., & Thomas, E. (2011). Value-Added Modeling of Teacher Effectiveness: An Exploration of Stability across Models and Contexts. Education PolicyAnalysis Archives, 18(23), n23.

Nielsen T. A. (2012). Historical review of the styles literature. In: Sternberg R, Zhang L-f, Rayner S, editors. Handbook of Intellectual Styles: Preferences in Cognition, Learning and Thinking. New York: Springer; pp. 21–46.

Nihalani, P., Wilson, H., Thomas, G., & Robinson, D. (2010). What determines high-and low-performing groups? The superstar effect. Journal of Advanced Academics, 21(3), 500-529. http://dx.doi.org/10.1177/1932202X1002100306.

Nilson, L. B. (2010). Teaching at Its Best: A Research-Based Resource for College Instructors. John Wiley & Sons.

Northrup, T., & Pamela. (2007). Learning Objects for Instruction: Design and Evaluation: Design and Evaluation. Idea Group Inc (IGI).

Nouri, N. (2014). The Study of Learning Styles, Thinking Styles, and English Language Academic Self-efficacy among the Students of Islamic Azad University of Behbahan Considering Their Field of Study and Gender. Theory and Practice in Language Studies, Vol. 5, No. 8, pp. 1722-1729, http://dx.doi.org/10.17507/tpls.0508.25

Nunan, D. (1989). Designing tasks for the communicative classroom. Cambridge: Cambridge University Press.

Nunan, D. (2004). Task-Based Language Teaching. Cambridge University Press.

Nurnaili, E. (2009). Improving the Speaking Ability of the Second Year Students of SMPN 1 Salo Kabupaten Kampar Through Demonstration Method. Unpublished Thesis. Riau : English Education Study Program Language and Arts Department, Universitas Riau.

O'Brien, T. (1991). Construct validation of the Gregorc style delineator: an application of Lisrel 7. Educational and Psychological Measurement.,50, 631-636.. Reio and Wiswell (2006)

O'Neale, (2013). An Investigation of the Learning styles and Study Habits of Chemistry Undergraduates in Barbados and their Effect as Predictors of Academic Achievement in Chemical Group Theory Leah D Garner-O'Neale, PhD Journal of Educational and Social Research Vol. 3 (2) May. ISSN 2239-978X. Oaks, CA: Sage.

Ogbu, J. (1987). Social stratification in the United States. In P. Hockings (Ed.), Dimensions of social life: Essays in honor of David G. Mandelbaum (pp. 585–597). New York: Mouton De Gryter.

Ogden, W. R. (2003). Reaching all the students: The feedback lecture. Journal of Instructional Psychology, 30(1), 22-27.

Ogologo, G., & Wagbara, S. (2013). Effect of Demonstration Strategy on Senior Secondary School Students' Achievement in Separation Techniques in Chemistry in Obio. Journal Vocational Education and Technology, 1(1) 15-16

Oller, J. (1979). Language Tests at School. A Pragmatic Approach. London.

Omaggio, A. (1986). Teaching language in context: Proficiency oriented instruction. Boston, MA: Heinle and Heinle Publishers.

O'Malley, J. M., & Pierce, L. V. (1997). Authentic assessment for English language learners: Practical approaches for teachers. Reading, MA: Addison Wesley Longman.

Ormrod, J. E. (2012). Human learning. Pearson

Ornstein, A. C., & Lasley, T. J. (2000). Strategies for Effective Teaching. New York: McGraw-Hill.

Ortega, L. (1999). Planning and focus on form in L2 oral performance. Studies in Second Language Acquisition, 21, 109-148.

Owen, S. V., & Froman, R. D. (1988). Development of a college academic self-efficacy scale. Paper presented at the 1998 annual meeting of the National Council on Measurement in Education.

Oxford, R. L. (2001). Language learning styles and strategies. In Teaching English as A Second or Foreign Language. Boston: Heinle & Heinle Press.

Oxford, R. L. (2003). Language learning styles and strategies: An overview. Oxford, GALA 2003. Retrieved from http://web.ntpu.edu.tw/%7elanguage/workshop/read2.pdf.

Oxford, R., Ehrman, M., & Lavine, R. (1991). Style wars: Teacher-student style conflicts in the language classroom. In S. Magnan (Ed.), Challenges in the 1990's for college foreign language programs (PP.1-25). MA: Heinle & Heinle.

Papanikolaou, K. (2001). Instructional and Interface Design in an Adaptive Educational Hypermedia System, Human Computers Interaction, Patra.

Parkay, F. W., & Hass, G. (2000). Curriculum Planning, 7th Ed. Needham Heights, MA: Allyn and Bacon.

Pashler, H, McDaniel, M., Rohrer, D., & Bjork, R. (2008). Learning styles: Concepts and evidence. Psychological Science in the Public Interest. 9.3 103-119

Passey, D., & Tatnall, A. (2014). Key Competencies in ICT and Informatics: Implications and Issues for Educational Professionals and Management. Springer.

Pathak. R. P. (2008). Methodology of Educational Research Atlantic Publishers & Dist.

Patton, M. Q. (2002). Qualitative evaluation and research methods. (3rd ed.). Thousand.

Pawlak, M. (2012). New perspectives on individual differences in language learning and teaching . NY: Springer Heidelberg.

Peacock, M. (2001). Match or mismatch? Learning styles and teaching styles in EFL," International Journal of Applied Linguistics, 11 (1), 2001, pp. 1-20. Plains, NY: Longman.

Perez , D. K. (2012). The Co-Teaching Book of Lists. John Wiley & Sons.

Perez , K. (2013). The New Inclusion: Differentiated Strategies to Engage ALL Students. Teachers College Press.

Pica, T. (1985).The selective impact of instruction on second language acquisition. Applied Linguistics. 6: 214-22.

Pilot, D. F., Beck, C. T., & Hungler. B. P. (2001) Essentials of Nursing Research: Methods, Appraisal and Utilization. 5th Edition, Lippincott. Williams &Wilkins, Philadelphia.

Pithers, B. ( 2001). An Aspect of Vocational Teachers. Cognitive Style: Field Dependence-Field Independence, Australian and New Zealand Journal of Vocational Education Research, vol. 9, no. 2, pp. 47-60.

Pivec, M., & Dziabenko, O. (2010). Game-based Learning Framework for Collaborative Learning and Student E-teamwork. www.ementor.edu.pl/_xml/wydania/4/42.pdf

Platsidou, M., & Metallidou, P. (2009). Validity and Reliability Issues of Two Learning Style Inventories in a Greek Sample: Kolb's Learning Style Inventory and Felder & Soloman's Index of Learning Styles. International Journal of Teaching and Learning in Higher Education, 20(3), 324-335.

Polit, D. F., & Beck, C. T. (2009). Nursing research: Generating and assessing evidence for nursing practice (8th Edition). Philadelphia: Wolters Klower/Lippincott Williams & Wilkins.

Polit, D., & Beck, C. (2004). Study guide for Essentials of nursing research, appraising evidence for nursing practice. Philadelphia, Pa. [u.a.]: Wolters Kluwer/Lippincott Williams and Wilkins.

Polit, D., Beck, C., & Hungler, B. (2001). Essentials of nursing research. Philadelphia: Lippincott.

Polit ,D. F & Beck, C. T. ( 2008). Nursing Research: Generating and Assessing Evidence for Nursing Practice. Lippincott Williams & Wilkins.

Prashnig, B. (2004). Power of Diversity: New Ways of Learning and Teaching Through Learning Styles. David Bateman Ltd, New Zealand.

Price, D. S., & Brooks, D. W. (2012). Extensiveness and perceptions of lecture demonstrations in the high school chemistry classroom. Chemical Education Research and Practice, 13, 420-427.

Price, G., & Dunn, R. (1997). Learning style inventory manual. Lawrence. Kansas: Price Systems.Gregorc (1982)

Price, G.E. (1996). Productivity Environmental Preference Survey. An inventory for the identification of individual adult learning style preferences in a working or learning environment. PEPS Manual. Lawrence,KS: Price Systems, Inc.

Pritchard, A. (2013). Ways of Learning. Hoboken: Taylor and Francis.

Punch, K. F. (2009).Introduction to Research Methods in Education. London: Sage.

Pye, D., & Greenall, S. (1996). CAE Listening and Speaking Skills Student's Book. Cambridge University Press.

Raheem, A. (2011). Effects of Discussion Method on Secondary School Students' Achievement and Retention in Social Studies. Ekiti, Nigeria: University of Ado-Ekiti. European Journal of Educational Studies 3(2), pp: 293-301, published by Ozean Publication.

Rahimpour, M. (2001). Cognitive load and task complexity and L2 oral discourse. IELTI, Conference at Tehran University.

Rahimpour, M., Salimi, A. & Farrokhi, F. (2012). The effect of intensive and extensive focus on form on EFL learners' written accuracy. *Theory and Practice in Language Studies*, 2.11, 2277-2283.

Rai Foundation Colleges, (2006). Rai open course ware. www.rocw.raifoundation.org .bba.lecturenote. 17 April

Ramirez, J. D. (1992). Longitudinal study of structured English immersion strategy early-exit and late-exit transitional bilingual education programs for language minority children (Executive summary). Bilingual Research Journal 16 (1 & 2), 1-62.

Rathvon, N. (2004). Early reading assessment: A practitioner's handbook. New York: The Guilford Press.

Raymond, M. R. (2001). Job analysis and the specification of content for licensure and certification examinations. Applied Measurement in Education, 14, 369–415.

Rayner, S. (2000). Reconstructing style differences in thinking and learning : profiling learning performance. In R, Riding., & S. Rayner. (Eds.)International perspectives on individual differences: cognitive styles (pp. 115-177). Stamford, Connecticut: Ablex Publishing Corporation.

Rayneri, L. J., Gerber, B. L., & Wiley, L. P. (2006). The relationship between classroom environment and the learning style preferences of gifted middle school students and the impact on levels of performance. Gifted Child Quarterly, 50(2), 104-118.

Redford, A. M. (2015). The Handbook of Speech Production. John Wiley & Sons.

Reid, J. (1995). Learning styles in the ESL/EFL classroom. Boston, MA: Heinle & Heinle Publishers.

Reid, M. J. (1987(. The learning style preferences of ESL students. TESOL Quarterly. 21(1): 87-111.

Reio, T. G. J., & Wiswell, A. K. (2006). An examination of the factor structure and construct validity of the gregorc style delineator. Educational and Psychological Measurement, 66(3), 489.

Reynolds, J., Caley, L., & Mason, R. (2002) How do people learn? University of Cambridge Programme for Industry for CIPD Rogers, C. (1969) Freedom to Learn. Merrill: Columbus, Ohio.

Reynolds, K. D., & West, S.G. (1988). A multiplist strategy for strengthening nonequivalent control group designs. Evaluation Review, 11, 691- 714

Reynolds, M., & Vince, R. (2004) Critical Management Education and Action-Based Learning: Synergies and Contradictions. Academy of Management Learning and Education. 3 (4) 442 – 456.

Reynolds, R. T., Scott, J. M., & Nussbaum, R. M. (1980). A variable circular-plot method for estimating bird numbers. Condor 82: 309-313.

Reynolds, W. M. (1988). Measurement of academic self-concept in college students. Journal of Personality Assessment, 52(2), 223-240.

Reynolds, W. M., Ramirez, M. P., Magrina, A., & Allen, J. E. (1980). Initial development and validation of the academic self concept scale. Educational and Psychological Measurement, 40, 1013-1016.

Richards, C. J. (2001). Curriculum development in language teaching, CUP.UK: Cambridge university press.

Richards, J. C. (2001) Curriculum Development in Language Education. London : CUP.

Richards, J. C. (2006). Communicative Language Teaching Today. USA: Cambridge University press. [online] Available from: http://faculty.mu.edu.sa/public/uploads/1347871288.356924906420.

Richards, J. C. (2015). Key Issues in Language Teaching. Cambridge University Press.

Richards, J. C., & Rodgers, T. S. (2001). Approaches and methods in language teaching. London: Cambridge University Press.

Richards. J. C. (2002). Methodology in Language Teaching: An Anthology of Current Practice ambridge University Press.

Ridding, R., & Cheema, I. (1991). Cognitive Styles: An Overview and Integration. ducational Psychology, 11(3/4), 193 – 216.

Riding, R., & Rayner, S. (1998). Cognitive styles and learning strategies: Understanding style differences in learning and behaviour. London: David Fulton Publishers Ltd.

Ritchie, J. J., & Lewis, J. (2003). Qualitative Research Practice: A Guide for Social Science Students and Researchers. Sage.

Rivers, W. (1968). Teaching Foreign Language Skills. Chicago: University of Chicago Press.

Roberts, M. J., & Newton, E. J. (2001), Understanding Strategy Selection. International Journal of Human-Computer Studies, 54, 137 – 154.

Robinson, K. (2001). Out of our minds: Learning to be creative. Chichester, West Sussex: Capstone.

Rogers, K. M. A. (2009). A preliminary investigation and analysis of student learning style preferences in further and higher education. Journal of Further and Higher Education, 33 (1), 13-21.

Rogowsky, B. A. (2014). Matching Learning Style to Instructional Method: Effects on Comprehension Journal of Educational Psychology. http://dx.doi.org/10.1037/a0037478.

Ronald, C. M, Morgan, N, E., & Marchand, M. (2013). Guilford Press Understanding and Interpreting Educational Research.

Roskelly, H. (2003). Breaking (into) the circle: Group work for change in the English classroom. Portsmouth, NH: Heinemann.

Ross, S. (1992). Accommodative questions in oral proficiency interviews. Language Testing, 9(2), 173 – 185.

Rossi-Le, L. (1995). Learning styles and strategies in adult immigrant ESL students," in J. M. Reid (Ed.), Learning styles in the ESL/EFL classroom, New York: Heinle & Heinle Publishers, 118-125.

Rossiter, M. J., Derwing, T. M., Manimtim L. G., & Thomson. R. I. (2010). Oral fluency: The neglected component in the communicative language classroom. The Canadian Modern Language Review, 66(4), 583-606.

Rotfeld, H. (2007). Theory, data, interpretations, and more theory. The Journal of Consumer Affairs, 41(2), 376-380.

Royer, J. M., Mestre, J. P., & Dufresne, R. J. (2005). Introduction: Framing the transfer problem. In J. P. Mestre (Ed.), Transfer of learning. From a modern multidisciplinary perspective (pp. vii–xxvi). Greenwich, CT: Information Age.

Ruane, J. (2007) Essentials of Research Methods:essentials of research methods. A guide of social science research. Oxford Blackwell Publishing.

Rubin, J. (1987). Learner strategies: theoretical assumptions , research history and typology. In A. Wenden and J. Rubin (Eds.), Learner Strategies in Language Learning (pp. 15-30). Hertfordshire: Prentice Hall.

Ruhi, A. (2001).Toward operationalizing focus on form in EFL classroom setting. MA. thesis. Tabriz University.

Rundle, S., & Dunn, R. (2010). Learning styles: Online learning style assessments and community. Retrieved from http://www.learningstyles.net.

Russian, C. (2005). Preferred learning styles for respiratory care students at Texas State University - San Marcos. . The Internet Journal of Allied Health Sciences and Practice, 3(4).

Ryan, K., Cooper, J., & Bolick, C.M. (2015). Those who can, teach. Cengage Publishers (14e). Belmont, CA: Cengage Learning.

Ryner, S., 2000. Reconstructing style differences in thinking and learning: profiling learning performance. In: Riding, R., Rayner, S. (Eds.), International Perspectives on Individual Differences, Cognitive Styles, vol. 1. Ablex, Stanford, CT, pp. 115–177.

Sadeghi, K., & Sharifi, F. (2013). The Effect of Post-Teaching Activity Type on Vocabulary Learning of Elementary EFL Learners. English Language Teaching, 6 (11), pp. 65-76.

Sadler-Smith, E,. & Evans, C. (2006). Learning styles in education and training. Emerald Group Publishing

Sage, C. (1984). The Dunn and Dunn learning style: an analysis of its theoretical, practical, and foundations (Doctoral dissertation). Available from ProQuest Dissertation and theses databases. (UMI No.8503365).

Salaberri R, S., & Pérez, M. (2012). CLIL Lesson Planning. In Martínez Agudo, J. (Eds.), Teaching and Learning English trough Bilingual Education (chapter 4). Newcastle: Cambridge Scholars Publishing.

Salehi S. H. (2007). Nursing Students' Preferred Learning Styles. Journal of Medical Education Summer and Fall; 11 (3,4):85-89.

Sanderson, C. A. (2009). Social Psychology. John Wiley & Sons.

Sarasin, L. C. (1999). Learning style perspectives: Impact in the classroom. Madison,

Sasaki, M. (1998). Investigating EFL students' production of speech acts: A comparison of production questionnaires and role plays. Journal of Pragmatics, 30, 457-484. http://dx.doi.org/10.1016/S0378-2166(98)00013-7, date retrieved on 20-5- 2015.

Scarcella, R., & Oxford, R. (1992). The Tapestry of Language Learning: The Individual in the Communicative Classroom. Boston: Heinle & Heinle.

Schunk, D. H. (1991). Learning theories: An educational perspective. New York: Macmillan.

Schwartz, B., Wasserman, E. & Robbins, S. (2002). Psychology of learning and behavior. New York: W.W. Norton.

Scrivener, J. (2005). Learning teaching. Oxford: Macmillan Publishers Ltd.

Scrivener, J. (2011). Learning Teaching. Oxford, UK: Macmillan Publishers Limited.

Shaffer, D. R & Kipp, K. (2013). Developmental Psychology: Childhood & Adolescence: Childhood and Adolescence. Cengage Learning,

Shalini, W. (2005). Teaching Learning and Studying. Sarup & Sons.

Shaughnessy, M. F. (1998). An interview with Rita Dunn about learning styles. The Clearing House, 71 (3), 141-145.

Shaw, Marvin, E., & Costanzo, P. R. (1970). Theories of social psychology. 1st edition. New York: McGraw-Hill,Inc.

Shazia, S. (2014). Self – Concept, Learning Styles, Study Habits and Academic Achievement of Adolescentsq in Kashmir. Anchor Academic Publishing.

Shell Education.

Sherman, J. (2003). Using Authentic Video in the Language Classroom. UK: Cambridge University Press.

Sharivastava, A. (2002). A Study of Learning Styles of Secondary School Students with Scientific Attitude and their Achievement in Science. (Ph.D., Edu., Lucknow Uni.) Sixth Survey of Educational Research. Retrieved form http://www.dauni.ac.in.

Shuib, M., & Azizan, S. (2015). Learning Style Preferences among Male and Female ESL Students in Universitiy Sains Malaysia. The Journal of Educators. Online-JEO July ISSN 1547-500X Vol 13 Nomber.

Siegel C (2011). Implementing a research-based model of cooperative learning. J. Educ. Res., 98(6): 339-351.

Sievers, B. (2007). Pictures from Bellow the Surface of the University: The Social Photo-Matrix as a Method for Understanding Organizations in Depth. In Reynolds, M.; Vince, R. (Eds.), the Handbook of Experiential Learning & Management Education. Oxford: Oxford University Press.

Silver, H. F., Strong, R. W., & Perini, M. J. (1996). "Integrating learning styles and multiple intelligences." *Educational Leadership*, 55(1), 22-27.

Sims, R. and Sims, S. (1995), The Importance of Learning Styles: Understanding the Implications for Learning Course Design and Education, Greenwood Press, Westport, CT.

Sinagatullin M. (2009). Teaching Is More Than Pedagogical Practice: Thirty-Three Strategies for Dealing with contemporary students R&L Education

Singh, G. (2000). Using Drama in the English Classroom.The English Teacher. Lim; & Lynne: 72-75.

Singh, P. S., Kearns, J. M. , Diane J Litman, J. D., & Walker, M A. (2011). Reinforcement learning for spoken dialogue systems. In Nips, pages 956–962.

Singh,Y. K. (2008). Teaching practice: lesson planning. New Delhi: A P H publishing corporation.

Skehan, P. (1996). A framework for the implementation of task based instruction. Applied Linguistics 17(1): 38-62.

Skehan, P. (1996a) 'Second language acquisition research and task-based instruction.' In: Willis, J. and Willis, D. (1996), pp. 17-30.

Skehan, P. (1998). A cognitive approach to language learning. Oxford University Press, USA.

Skehan, P. (2003). Task-based instruction. Language Teaching, 36, 1–14.

Skinner, B. F. (1945). The operational analysis of psychological terms. Psychological Review, 52, 270–277, 291–294.

Skinner, B. F. (1974). About behaviorism. New York: Alfred A. Knopf.

Slavin, R. E. (2005). *Educational psychology: theory and practice*. Needham Heights, MA: Allyn and Bacon.

Smith, C. (2006). Sensory Learning Styles: Visual, Auditory and Kinesthetic learning style in Grappling. Retrieved from, http://www.berger.org/ettc/courses/learningstyles/vis-aud-tac.html.

Smith, J. E. ( 2001). Theories of Counseling and Psychotherapy: An Integrative Approach. SAGE Publications.

Smith, K. A. (2001). Cooperative learning: Lessons and insights from thirty years of championing a research-based innovative practice. Proceedings 41, ASEE/JEEE Frontiers in Education Conference, Rapid City, SD, 7 pp.

Smith, K. A. (2005). Cooperative Learning: Lessons and Insights from Thirty Years of Championing a Research-Based Innovative Practice. 41st ASEE/IEEE Frontiers in Education Conference ; 978-1-61284-469-5/11/

Smith, L. H. & Renzulli, J. S. (1984). “Learning styles preferences: A practical approach for classroom teachers”. Theory into practice 23: 44-50.

Smith, L. S., Reynolds, W. M. & Serlin, R. (1986). Nonintellectual correlates of academic achievement in college students. Unpublished manuscript.

Smith, M. K. (1999). 'The cognitive orientation to learning', the encyclopedia of informal education. [http://infed.org/mobi/the-cognitive-orientation-to-learning/. Retrieved: insert date].

Smith, R. C. (2003). Pedagogy for autonomy as (becoming-) appropriate methodology. In: D. Palfreyman & R. C. Smith (éds.). Learner autonomy across cultures: Language education perspectives. Basingstoke: Palgrave Macmillan.

Smith. J. (2003). Cut and Paste: Science. Teacher Created Resources

Snowling, M. J., & Hulme, C. (2005). The science of reading: A handbook. Oxford, UK: Blackwell Publishing Ltd.

Sonnheim, M., & Shlomit Lehman,S. (2010). The Andragogic Learning Center: A Field Study in Social Work Education. University Press of America.

Sood, P. (2006). Educational Choice in relation to Academic Stress, Achievement Motivation and Academic self-concept. Journal of Community Guidance and Research, 23(2), pp. 141-152

Soto-Hinman, I. (2011). Increasing academic oral-language development: Using English language learning shadowing in classrooms. Teaching Language Learning, 18(2), 21[A1]-23.

Spada, N. (2001). Interactions between type of instruction and type of language feature: A meta-analysis. Language Learning, 60, 263–308.

Spolsky, B. (1989). Conditions for Second Language Learning, 1989, Oxford University press.

Spratt, M., Pulverness, A., & Williams, M. (2005). The Teaching Knowledge test (TKT) course. University of Cambridge.

Sprenger, M. (2003). Differentiation through learning styles and memory. Thousand Oaks, CA: Corwin Press.

Stahl, S. A. (1999). Vocabulary development. Cambridge, MA: Brookline Books.

Standridge, M. (2002). Behaviorism. In M. Orey (Ed.), Emerging Perspectives on Learning, Teaching,andTechnology. http://epltt.coe.uga.edu/index.php?title=Behaviorism.

Sternberg, R. J. (1997, March). What does it mean to be smart? Educational Leadership, 20–24.

Stewart, D. W. & Shamdasani, P. N. (1990). Focus groups: Theory and practices. Applied social research methods series, Thousand Oaks, CA: Sage Publications, Inc.

Stewart, K. L., & Felicetti, L. A. (1992). Learning styles of marketing majors. ducational Research Quarterly, 15(2), 15-23.

Stitt-Gohdes, W. L. (1999). Teaching and learning styles: Implications for business teacher education. In P. A. Gallo Villee and M. G. Curran (Eds.), The 21st century: Meeting the challenges to business education (pp. 7–15). Reston, VA: National Business Education Association.

Stitt-Gohdes, W. L. (2001). Business Education Students. Preferred Learning Styles and Their Teachers. Preferred Instructional Styles: Do They Match?‖ Delta Pi Epsilon Journal, vol. 43, no. 3, pp. 137- 151,

Stitt-Gohdes, W. L. (2003). Student Teachers and Their Students: Do Their Instructional and Learning Preferences Match?‖ Business Education Forum, vol. 57, no. 4, pp. 22-27.

Stockard, J. M. ( 2001). Methods and Resources for Elementary and Middle-school Social Studies. Waveland Press.

Stout, D. E. (1991). Reliability and classifi cation stability, and response set bias of alternative forms of the learning style inventory (LSI-1985). Educational and Psychological Measurement, 51(2): 481-489.

Stout. (2004). Teaching Tips and Techniques. Design-A-Study.Studyingstyle, (2007). A guide to learning Style. http://studyingstyle.com/visual-lerners.html, 15 June,.

Studyingstyle, (2007). A guide to learning Style. http://studyingstyle.com/visual-lerners.html, 15 June,

Sultana, R. (2015). The Survey on Using Oral Corrective Feedback in ESL Classroom in Bangladeshi Context; ID: 13263006.

Surgenor, P. (2010). Instructional Process and Concepts in Theory and Practice: Improving the Teaching Process. Springer.

Surgenor, P. (2010). Teaching Toolkit How Students Learn 1. Dublin: University College Dublin. Available at: http://www.ucd.ie/t4cms/UCDTLT0016.pdf (Accessed: 6 April 2017).

Swain, M. (1985). Communicative competence: Some roles of comprehensible input and comprehensible output in its development. In S. Gass & C. Madden (Eds.), Input in second language acquisition (pp. 235–253). Rowley, MA: Newbury House.

Swain, M. (1988). Manipulating and complementing content teaching to maximize second language learning. TESL Canada Journal, 6, 68-83.

Swan, M. (2005). Practical English usage. Oxford: Oxford University Press.

Talak-Kiryk, A. (2010). "Using Games In A Foreign Language Classroom". MA TESOL Collection.

Tandon, R. V. (1971). Gender differences in learning style preferences of first year Medical students. Pak J Physiol, 7(2), 42-45.

Tang, S. F., & Logonnathan, L. ( 2015) . Taylor's 7th Teaching and Learning Conference 2014 Proceedings. Springer.

Tavil, M. Z. (2010). Integrating listening and speaking skills to facilitate English language learners' communicative competence. Procedia Social and Behavioral Sciences 765–770. Elsevier Ltd.

Taylor, F. (2013a). Self and identity in adolescent foreign language learning: A relationalcontext perspective. Bristol: Multilingual Matters.

Teijlingen E., & Hundley, V. (2001) “The importance of pilot studies”, Social Research Update 35, Department of Sociology, University of Surrey

Tennent. M. (2006). Psychology and adult learning. New York, NY: Taylor & Francls Group.

Tent, H. (2001). The Investigation of Oral Proficiency and Language Learning Strategies in a Migrant ESL Context, Melbourne Papers in Language Testing. Sidney: Macquarie University.

Terry, M. (2002). Translating learning style theory into developmental education practice: an article based on Gregorc’s cognitive learning styles. Journal of College Reading and Learning, 32(2), 154-176.

The Hay Group. (n.d.). One style doesn’t fit all: The different ways people learn and why it matters. Retrieved September 28, 2009, from http:// www.haygroup.com/tl/ Downloads/Why_People_ Learn.pdf

Thomas, J. B., Sussman, S.W. and Henderson, J. (2008). Understanding strategic learning: linking organizational learning, knowledge management, and sensemaking. Organization Science, 12, 331–345.

Thomas, R. K. (1997). Correcting some Pavlovian regarding "Pavlov's bell" and Pavlov's "mugging." American Journal of Psychology, 110, 115-125.

Thornbury, S. ( 1999). How to Teach Grammar. Harlow, Pearson Education.

Thornbury, S. (1998). Grammar, power and bottled water. IATEFL Newsletter, December 1997–January 1998, 19–20.

Thornbury, S. (1999). How to teach grammar. Harlow, England: Pearson Education.

Tobias, S. (1990). They’re not dumb, they’re different: Stalking the second tier.

Tomlinson, C. A. (2000), Differentiated instruction: Can it work?, The Education Digest, 25-31.

Tomlinson, C. A. (2001). How to differentiate instruction in mixed-ability classrooms (2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

Toumpaniari, K., Loyens, S., Mavilidi, M. F., & Paas, F. (2015). Preschool Children's Foreign Language Vocabulary Learning by Embodying Words Through Physical Activity and Gesturing. Educational Psychology Review, 1-12, http://link.springer.com/article/10.1007/s10648-015-9316-4. , date retrieved on 6-6-2015.

Treece, E. W., & Treece, J. W. (1982). Elements of research in nursing (3rd ed.). St. Louis, MO:Mosby.

Trochta, C. S. (2008). Learning differences or learning disorders? Meeting authentic needs of the three-to-six child. NAMTA Journal, 33(2), 42-54. Retrieved from EBSCOhost database.

Trowbridge, L. W., & Clark, L. H. (1990). Becoming a Secondary School Science Teacher (5th ed.). Columbus: Merill.

Tuan, T. A., & Neomy, S. (2007). Investigating group planning in preparation for oral presentations in an EFL class in Vietnam. Regional Language Centre Journal, 38(1), 104-124.

Tulbure, C. (2010). DeterminanĠi psihopedagogici ai reuúitei academice (Psychological and educational predictors of academic achievement). Cluj-Napoca: Presa Universitara Clujeana. Zhang, L. F. (2006). Does student-teacher thinking style match/mismatch matter in students' achievement? Educational Psychology, 26 (3), 395-409

Tulbure, C. (2012). Investigating the relationships between teaching strategies and learning styles in higher education. Acta Didactica Napocensia 5(1): 65-74

Tulbure, C. (2012). Learning styles, teaching strategies and academic achievement in higher education: A cross-sectional investigation. Procedia-Social and Behavioral Sciences, 33, 398-402. http://dx.doi.org/10.1016/j.sbspro.2012.01.151

Turner, E. O., & Coburn, C. E. (2012). Interventions to promote data use: An introduction. Teachers College Record, 114 (11).

Ulas, A. (2008). Effects of creative, educational drama activities on developing oral skills in primary school children. American Journal of Applied Sciences. 5(7), XX111(3), 12-16.

Umbel, V. M. (1992). Measuring bilingual children's receptive vocabularies. Child Development, 63, 1012-1020.

Ur, P. (1996). A course in language teaching.Cambridge: Cambridge University Press.

Ur,P. (2000). "A course in Language Teaching: Practice and Theory". Cambridge: Cambridge University Press.

Vaishnav, R. S. (2013). Learning style and academic achievement of secondary school students. Voice of Research, 1(4), 1–4. Retrieved from http://www.voiceofresearch .org/doc/mar-2013/Mar-2013_1.pdf

Van Zwanenberg, N., Wilkinson, L., & Anderson, A. (2000). Felder and Silverman's index of learning styles and Honey and Mumford's learning styles questionnaire: how do they compare and do they predict academic performance?. Educational Psychology, 20(3), 365- 380.

Vander Zanden, J. W., Crandell, T. L., & Crandell, C. H. (2007). Human development (8th ed.). Boston: McGraw-Hill.

Vaughn, L., & Baker, R. (2001), Teaching in the medical setting: balancing teaching styles, learning styles and teaching methods, Medical Teacher, 23 (6), 610-612.

Venkataraman. (1990). Style of Learning and Thinking (SOLAT). Administrator's Manual. New Delhi: Psycom Services. 1994; 33:111-118.

Verma, B. P., & Tiku, A. (1990). Effects of Socio-economic status and General Intelligence on Learning Styles of High School Students. Indian Education and Review. Vol.25 (1), 1990, pp.31-40.

Verma, B. P., & Sharma, J. P. (1987). A study of Academic Achievement in Relation to Learning Styles of Adolescents. Journal of the Institute of Educational Research. Vol. II (2), pp. 35-40.

Verma, B.P. (1992). Relationship between rural-urban residential background and learning style preferences. Journal of education and Psychology, 49 (3 & 4) 67-73

Verma, J. (1997). A study of learning style, achievement-motivation, anxiety, and other ecological correlates of high school students of Agra region. (Ph.D., Edu., Dayalbagh Edu. Insti, 1992). In M.B. Buch (ed.). Fifth Survey of Educational Research. (p.940). New Delhi: NCERT.

Vince, R. 1998. Behind and beyond Kolb's learning cycle. Journal of Management Education. 22(3): 304-319.

Vincent, A & Shepherd, J. (1998). 'Experiences in Teaching Middle East Politics via Internetbased Role-play Simulations' http://www.cse.unsw/edu.au/~jas/poli/jime.html.

Visser, Vreken, N., & McChlery, S. (2006). Teaching styles versus learning styles in the accounting sciences in the United Kingdom and South Africa: a comparative analysis. (Research Project, North-West University and Glasgow Caledonian University, 2006). Meditary Accountancy Research. Vol. No. 14 (No-2). pp.97-112.

Vitz, K. (1984). The effect of creative drama in English as Asecond language. Children's Teatre Review. 33 (2), 22-23.

Vogt, W. P. (2011). Dictionary of Statistics and Methodology: A Nontechnical Guide for the Social Sciences (2 nd ed.). Thousand Oaks, CA: Sage Publications.

Vyas, A. (2002). A Study of Learning Style, Mental Ability, Academic Performance and other Ecological Correlates of Undergraduate Adolescent girls of Rajasthan. Ph.D. Thesis in Education, Meerut: Ch. Charan Singh University.

Vyas, A. (2006). A Study of Learning Style, Mental Ability, Academic performance and other ecological correlates of under graduate Adolescent Girls of Rajasthan. (Ph.D., Edu., Ch. Charan Singh University, Meerut, 2002), Indian Educational Abstracts. Vol. 6 (No-2) July, p.41.

Wadhwa, S. ( 2005). Teaching Learning And Studying. Sarup & Sons.

Wahyudi. (2008). The effectiveness of mind mapping technique in improving students' writing skill. Bandung: FPBS UPI.

Waldheim, G. P. (1987). "Understanding How Students Understand," Engineering Education, vol. 77, no. 5, Feb. pp. 306-308.

Wallace, D. R. (2008). Comparative evaluation of World Wide WebBased and classroom teaching. Journal of Engineering Education, 86(3), 211-219.

Wandberg, R.., & Rohwer , J. (2002). Teaching to the Standards of Effective Practice: A Guide to Becoming a Successful Teacher. Allyn and Bacon.

Wang, C. X. - 2014 Handbook of Research on Education and Technology in a Changing Society IGI Global.

Wang, H. (2009). Personal types of physical students and their EFL. Sino-US English Teaching, 1, 73-76.

Wang, K. F. (2007). Applying Mind Map and "Concept Model" to the Teaching of Reading and Writing in Thinking Curriculum of Language. Bulletin of Chinese, 43, 263-296.

Wang, Y. & Chen, N. S. (2007). Online Synchronous Language Learning: SLMS over the Internet. Innovate: Journal of Online Education, 3(3),. Retrieved June 24, 2018 from https://www.learntechlib.org/p/104259/.

Waterman. S. S. (2104). Handbook on Differentiated Instruction for Middle & High Schools Routledge

Watson, J. B. & Rayner, R. (1920). Conditioned emotional responses. Journal of ExperimentalPsychology, 3, 1-14.

Webb, J. L. (2009). Pragmatisms (Plural) part I: Classical pragmatism and some implications for empirical inquiry. Journal of Economic Issues, 41(4), 1063-1087.

Weegar, M., & Pacis, D. (2012). A Comparison of Two Theories of Learning -- Behaviorism and Constructivism as applied to Face-to-Face and Online Learning. 1st ed. [ebook] San Diego, CA, USA: E-Leader Manila, pp.1-9. Available at: http://www.g-casa.com/conferences/manila/papers/Weegar.pdf

Wegman, T. (2014). Tips for Teaching Visual Learners. Michele McDonough updated

Weir, C. (1990). Communicative Language Testing. Hermel Hempstead: Prentice Hall.

Weir, C. (2005). Language testing and validation: an evidence-based approach. UK: Palgrave Macmillan.

Welsh, M. A., Dehler, G. E., & Murray, D. L. (2007). Learning about and through experience: Understanding the power of experience-based education. In M. Reynolds & R. Vince (Eds.), Handbook of experiential learning & management education, pp. 53-69. Oxford: Oxford University Press.

Welty, W. M. (1989). "Discussion Method Teaching: A Practical Guide" To Improve the Academy. 183. http://digitalcommons.unl.edu/podimproveacad/183

Werner. K. (2003). Learning Style Awareness and The Appropriate Prescription of Study Strategies to Improve Student Understanding of Work/Study Habits. Doctoral Dissertation, University of Alaska Anchorage,Alaska:United States

Wesley, A. (2008). The Effects of Interactive Reviews and Learning Style on Student Learning Outcomes at a Texas State University. Published Research Article, Library of North Texas (Digital Collection), .p.1. Retrieved form: http://digital.library.unt .edu/permalink/meta-dc-6141.

Westen, D. (2002). Psychology: brain, behavior, & culture.John Wiley, WI: Atwood Publishing.

Weyers, L. A. (2005). Do High School Academies Matter?: The Graduates' Perspective. University of Wisconsin—Madison.

White, S. (2017). Activities for English Language Learners Across the Curriculum. Shell Education.

Wichadee, S. A. (2007). Development of the Blended Learning Model Using Edmodo for Maximizing Students' Oral Proficiency and Motivation iJET – Vol. 12, No. 2.

Williams, J. E. (1993). The relationship of Test Anxiety and Self-concept to Patterns of High School Students' Achievement. Journal Mild Western– Educational Research, 6(2) pp. 7-12.

Williams, M. (1989). A developmental view of classroom observations. ELTJ. Vol.43/2.

Willis, D., & Willis, J. (1996). Task-Based Language Learning. Oxford: Blackwell Publishers.

Willis, J. (2006) Research- Based Strategies to Ignite Student Learning: Insights from a Neurologist and Classroom Teacher . Association for Supervision and Curriculum Development

Willis, J., & Willis, D. (1996). Challenge and change in language teaching. Oxford, UK: Macmillan Heinemann.

Wilson, M. L. (2011). "Students' Learning Style Preferences and Teachers' Instructional Strategies: Correlations between Matched Styles and Academic Achievement" *Doctoral Dissertations and Projects*. 468. http://digitalcommons.liberty.edu/doctoral/468

Wilson, W. D. (1980). The temporal structure of spoken language. understanding. Cognition, 8,l-71.

Wintergerst, A., DeCapua, A., & Itzen, R. (2001). The construct validity of one learning styles instrument. System, 29(2001), 385- 403.Sims & Sims, 2006

Witkin, H. A., & Goodenough, D. R. (1981). Cognitive styles: Essence and origins. New York: International Universities Press

Witkin, H.A., Moore, C.A., Oltman, P.K., Goodenough, D.R., Friedman, F., Owen, D.R., & Raskin, E. (1977). Role of the field-dependent and field-independent cognitive styles in academic evolution: A longitudinal study. Journal of Educational Psychology, 69(3), 197-211.

Witkin, H.A., Oltman, P., Raskin, E. & Karp, S. (1971) A Manual for The Group Embedded Figures Test. Palo Alto: Consulting Psychologists Press.

Wittes J., & Brittain E. (1990). The role of internal pilot studies in increasing the efficiency of clinical trials. Statistics in Medicine 9, 65–72.

Wong, L. (2014). Essential Study Skills. Cengage Learning.

Wood, K. C. (2008). Piaget's Stages. Retrieved April 25, 2009, from Department of Educational Psychology and Instrutional Technology, University of Georgia Web site:http://projects.coe.uga.edu/eplt/index.php?title=Piaget%27s_Stages#Educational_Implications

Woollard, J. (2010). Psychology for the Classroom: Behaviourism. Routeldge.

Woolley, G. (2010) Developing reading comprehension: combining visual and verbal cognitive processes. Australian Journal of Language and Literacy, 33(2), 108- 125.

Wrenn, C. G., Larsen, R. P., & Effectively, S. (1974). Studying effectively Available from http://books.google.com/books?hl=en&lr=&id=3YmaAAAAIAAJ&oi=fnd&pg=PA1&dq=C.+G+Wrenn,+1974&ots=YRUUXqFmDO&sig=Mr0om5Tk1MuzY6-Yv6n7jGo27Vg#v=onepage&q&f=false

Wright, A. (2006). The role of modeling and automatic reinforcement in the construction of the passive voice. The Analysis of Verbal Behavior. ;22:153–169. [PMC free article] [PubMed] MICHIE, S., VAN STRALEN, M.M. & WEST, R. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions.

Yamauchi, Y. (2008). Assessment of adult ESL learners' preferable learning styles: Implications for an effective language learning environment . Unpublished master's thesis. Marshall University Huntington, West Virginia. Retrieved from www.marshall.edu/ etd/masters/ yamauchi- kayoko2008-ma.pdf

Yang, B. (1996). How students with different learning styles collaborate in an online environment (Doctoral dissertation). Available from ProQuest Dissertation and theses databases. (UMI No:3259302).

Yang, J. C., Chen, C. H., & Jeng, M. C. (2010). Integrating video-capture virtual reality technology into a physically interactive learning environment for English learning. Computers & Education, 55(3), 1346–1356.

Yang, N.D. (1993). Beliefs about language learning and learning strategy use: A study of college students of English in Taiwan. In Papers from the tenth conference on English teaching and learning in the Republic of China, Taipei, Crane, pp. 193-219.

Yang, Y., & Chen, H. (2010). Using Mind Maps as a Strategy for Vocabulary Acquisition in Chinese Universities. In Computational Intelligence and Software Engineering (CiSE), 2010 International Conference on (pp. 1-3). IEEE.

Yates, D.( 2007). Memory Tips for Math, Memorization and Learning StylesLulu.com.

Yilmaz-Soylu, M. (2002). The Effect of Learning Styles on Achievement in Different Learning Environments. The Turkish Online Journal of Educational Technology – TOJET October 2009 ISSN: 1303-6521

Yordchim, S., & Gibbs, T. (2014). Satisfaction on English Language Learning with Online System. International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering, 8(8), 2522-2525.

Young, R., & He, W. (1998). Talking and testing: discourse approaches to the assessment of oral proficiency (Studies in bilingualism 14). Amsterdam: John Benjamins.

Yu, X. (2007). A survey on the relationship between learning beliefs and learning strategies. US–China Education Review, 4(1), 58-61.

Zhang, L. F. (2000b). Relationship between Thinking Styles Inventory and Study Process Questionnaire. Personality and Individual Differences, 29, 841–856.

Zhang, L. F. (2004). Thinking styles: University students' preferred teaching styles and their conceptions of effective lecturers. The Journal of Psychology, 138(3), 233–252.

Zhang, L. F. (2006). Does student-teacher thinking style match/mismatch matter in students' achievement? Educational Psychology, 26(3), pp. 395-409.

Zhang, L. F. (2007). From career personality types to preferences for lecturers' teaching styles: A new perspective on style match. Personality and Individual Differences, 43,1863–1874.

Zhang, L. F., & Sternberg, R. J., Rayner, S. (2012), Handbook of intellectual styles. Preferences in cognition, learning, and thinking, New York: Springer Publishing Company.

Zhang, L. J. (2008). Constructivist pedagogy in strategic reading instruction: Exploring pathways to learner development in the English as a second language (ESL) classrooms Instructional Science: An International Journal of the Learning Sciences, 36 (2) (2008), pp. 89-116.

Zhang, L. J. (2003). Research into Chinese EFL learner strategies: Methods, findings and instructional issues. RELC Journal, 34, 284-322.

Zhu , M. (2011). Information and management engineering. Springer.

Zimmerman, B. J., Bandura, A., & Martinez-Pons, M. (1992). Self-motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting. Educational Research Journal, 29, 663-676.

Zwiers, J. (2007). Teacher practices and perspectives for developing academic language. International Journal of Applied Linguistics 17.1, 93-116.

Zywno, M. (2003,). A contribution to validation of score meaning for Felder – Soloman's index of learning styles. paper presented at Proceeding of the 2003 ASEE annual Conference, American Society Engineering Education.

## الملخص

يطلق على التعليمات بناء على أساليب التعلم المفضلة لدى الطلبة أسلوب التعلم القائم على التعليمات. صُممت هذه الدراسة لدراسة فعالية برنامج التعليم القائم على أسلوب التعلم في القيام بالتعبير الشفوي لطلبة السنة الأولى في اللغة الإنجليزية بجامعة محمد لمين دباغين سطيف 2، الجزائر. وكان الهدف من هذه الدراسة هو: 1) دراسة أنماط التعلم المختلفة للطلبة، 2) دراسة مدى ملائمة أو عدم ملائمة أنماط التعلم لدى الطلبة وأساليب واستراتيجيات التدريس لدى الأساتذة و 3) إجراء المقارنة الإحصائية لنتائج التعليم التقليدي مع تلك لبرنامج تعليمي قائم على أسلوب التعلم. لقد كان تصميم الدراسة شبه تجريبي، وخاصةً التصميم غير المكافئ لمجموعة المراقبة قبل الاختبار وبعد الاختبار. تم اختيار عينة الدراسة (94) باستخدام قائمة أساليب التعلم لفحص أساليب التعلم الأساسية للمشاركين. وقد تم اختيار ثلاث مجموعات تجريبية على أساس النسبة العالية من أسلوب التعلم للمشاركين في القسم، مثل مجموعة الطلبة البصرية، مجموعة الطلبة السمعية ومجموعة الطلبة الحركية، فضلا عن مجموعة تمثل المجموعة العامة للطلبة. وعليه، تم تطوير ثلاثة برامج تعتمد على أسلوب التعلم: برنامج التعليم البصري، برنامج التعليم السمعي، وبرنامج التعليم الحركي. تم اختيار أربع وحدات متعلقة ببرنامج "How to" لتعلم الإنجليزية من إعداد BBC بناءً على نتائج اختبار الترتيب. تلقت المجموعات التجريبية التدريس من خلال استراتيجيات التدريس ذات الصلة، حيث تلقت مجموعة طلبة الفنون البصرية التعليم ببرنامج التعليم البصري، وتلقت مجموعة طلبة الفنون السمعية التعليم ببرنامج التعليم السمعي وتلقت مجموعة طلبة الفنون الحركية التعليم من خلال برنامج التعليم الحركي. وتم تدريس الوحدات الأربع نفسها للمجموعة العامة للطلبة من خلال طريقة التدريس التقليدية. المقاييس الموحدة: تم استخدام قائمة عادات الدراسة، ومقياس الفعالية الذاتية الأكاديمية للكلية، ومقياس التصميم الذاتي الأكاديمي، لقياس وجمع بيانات حول المتغيرات المشتركة: عادة الدراسة، الفعالية الذاتية الأكاديمية للكلية - والفعالية المدرسية، فضلا عن مفهوم الاستقلالية المدرسية، في كل من المجموعة التجريبية ومجموعة المراقبة. تم استخدام اختبار تعبير شفوي كاختبار قبلي وبعدي لهذه الدراسة. للتحقق من فرضيات البحث، تم تحليل البيانات التي تم جمعها كميا باستخدام العينة T من الاختبار المستقل وتحليل التباين على مستوى 0.05 من الأهمية. كشفت نتائج الاختبار القبلي أنه لا توجد فروق ذات دلالة إحصائية في أداء المجموعات التجريبية ومجموعة المراقبة. على الرغم من أن نتائج ما بعد الاختبار كشفت أن هناك فروق ذات دلالة إحصائية في العلامة المتوسطة للمجموعات التجريبية ومجموعة المراقبة، فقد تم الحصول على نتائج الطلبة بعد الاختبار وتحليلها لاستخلاص الاستنتاج. أشارت نتائج الدراسة إلى أن متوسط العلامات المعدلة للمجموعات التجريبية كان أعلى من المجموعة الضابطة. نتيجة لذلك، تدعم نتائج هذا التحقيق الإحصائي فرضيات البحث. لقد خلصنا إلى أن برنامج التدريس القائم على أسلوب التعلم كان له تأثير إيجابي على التعبير الشفوي للطلبة مع الأخذ بعين الاعتبار لعادة الدراسة والفعالية الذاتية الأكاديمية للكلية ومفهوم الاستقلالية المدرسية كمتغيرات مشتركة.

**Résumé :**

Les instructions basées sur les styles d'apprentissage préférés des étudiants sont appelées l'instruction basée sur le style d'apprentissage. Cette étude a été conçue pour examiner l'efficacité du programme d'enseignement basé sur le style d'apprentissage sur la réalisation de l'expression orale des étudiants de première année d'anglais de l'Université Mohamed Lamine Debaghine Sétif 2, Algérie. Les objectifs de cette étude étaient : 1) d'examiner les différents styles d'apprentissage des étudiants, 2) d'examiner l'adéquation ou l'inadéquation entre les styles d'apprentissage des étudiants et les styles et stratégies d'enseignement des enseignants et 3) de faire une comparaison statistique des résultats de l'enseignement traditionnel avec ceux du programme pédagogique fondé sur le style d'apprentissage. La conception de l'étude était quasi-expérimentale, en particulier la conception non équivalente du groupe témoin pré-test et post-test. L'échantillon de l'étude (94) a été sélectionné en utilisant un inventaire des styles d'apprentissage pour examiner les principaux styles d'apprentissage des participants. Trois groupes expérimentaux ont été sélectionnés en fonction du ratio élevé du style d'apprentissage des participants de la classe, comme le groupe des étudiants visuels, le groupe des étudiants auditifs et le groupe des étudiants kinesthésiques ainsi qu'un groupe représentant le groupe général des étudiants. En conséquence, trois programmes d'enseignement basés sur le style d'apprentissage ont été développés : le programme d'enseignement visuel, le programme d'enseignement auditif et le programme d'enseignement kinesthésique. Quatre unités liées au programme d'apprentissage de l'anglais "How to" de la BBC ont été sélectionnées en fonction des résultats du test de classement. Les groupes expérimentaux ont reçu l'enseignement par le biais des stratégies d'enseignement pertinentes, comme le groupe d'étudiants en arts visuels a reçu l'enseignement par le programme d'enseignement visuel, le groupe d'étudiants en arts auditifs par le programme d'enseignement auditif et le groupe d'étudiants en arts kinesthésiques par le biais du programme d'enseignement kinesthésique. Les quatre mêmes unités ont été enseignées au groupe général d'étudiants par le biais de la méthode d'enseignement traditionnelle. Les échelles normalisées : L'inventaire des habitudes d'étude, l'échelle d'auto-efficacité académique du collège, et l'échelle d'auto-conception académique ont été utilisés pour mesurer et recueillir des données sur les covariables : L'habitude d'étude, l'auto-efficacité scolaire au collège et l'auto-efficacité scolaire, ainsi que le concept d'autonomie scolaire, respectivement des groupes expérimentaux et du groupe témoin. Un test d'expression orale a été utilisé comme pré-test et post-test de cette étude. Afin de vérifier les hypothèses de recherche, les données recueillies ont été analysées quantitativement au moyen du test T de l'échantillon indépendant et de l'analyse de la covariance au niveau de signification 0,05. Les résultats du pré-test ont révélé qu'il n'y avait pas de différences statistiquement significatives dans les performances des groupes expérimentaux et du groupe témoin. Bien que les résultats du post-test aient révélé qu'il y avait des différences statistiquement significatives dans le score moyen du groupe expérimental et du groupe témoin. Les résultats des étudiants au post-test ont été obtenus et analysés pour en tirer la conclusion. Les résultats de l'étude ont indiqué que les scores moyens ajustés des groupes expérimentaux étaient plus élevés que ceux du groupe témoin. Par conséquent, les résultats de cette enquête appuient statistiquement les hypothèses de recherche. On a conclu que le programme d'enseignement basé sur le style d'apprentissage a eu un effet positif sur l'expression orale des étudiants tout en considérant l'habitude d'étude, l'auto-efficacité scolaire du collège et le concept d'autonomie scolaire comme covariables.

**Abstract**

The instructions based on students' preferred ways of learning styles are called learning style- based instruction. This study was designed to examine the effectiveness of Learning Style Based Instructional Programme on the Oral Expression Achievement of first year students of English at Mohammed Lamine Debaghine Sétif 2 University, Algeria. The objectives of this study were: 1) to examine the different learning styles of the students, 2) to examine the match or mismatch between students' learning styles and teachers' teaching styles and strategies and 3) to make statistical comparison of the results of the traditional instruction with that of the Learning Style Based Instructional Programme. The design of the study was quasi-experimental specifically the non-equivalent pre-test, post-test control group design. The sample of the study (94) was selected by using a learning style inventory to examine the major learning styles of the participants. Three experimental groups were selected based on the high ratio of the learning style of the participants of the class, like visual students group, auditory students group and kinaesthetic students group and one representing the general students group. Accordingly, three Learning Style Based Instructional Programmes were developed: the Visual Instructional Programme, the Auditory Instructional Programme, and the Kinaesthetic Instructional Programme. Four units related to the "How to" BBC Learning English Programme were selected according to the Placement Test results. The experimental groups were taught through the relevant instructional strategies like visual students group taught through the Visual Instructional Programme, auditory students group through the Auditory Instructional Programme and, kinaesthetic students group through the Kinaesthetic Instructional Programme. The general students group was taught the same four units through Traditional Teaching Method. The standardized scales: Study Habits Inventory, College Academic Self Efficacy Scale and Academic Self Concept Scale were used to measure and collect data about the covariates: Study Habit, College Academic Self Efficacy, and Academic Self Concept respectively of both the experimental groups and the control group. An Oral Expression Achievement Test was used as a pre-test and posttest of this study. In order to test the research hypotheses, the data collected were analyzed quantitatively through the Independent Sample T-test and the Analysis of Covariance at 0.05 level of significance. The P-value was calculated for testing the null hypotheses.The results of pre-test revealed that there were no statistical significant differences in the performance of the experimental groups and the control group. While the results of post-test revealed that there were statistical significant differences in the mean score of both experimental and control groups. Students' achievement scores on post-test were obtained and analyzed for drawing out the conclusion. The results of the study indicated that the adjusted mean scores of the experimental groups was higher than that of the control group. Hence, the results of this investigation statistically support the research hypotheses. It was concluded that the Learning Style Based Instructional Programme had positive effect on the students' Oral Expression Achievement while considering Study Habit, College Academic Self Efficacy, and Academic Self Concept as covariates.

**الملخص**

تسمى عمليات التعليم المستندة إلى أساليب التعلم المفضلة لدى الطلاب بتدريس الأسلوب القائم على التعلم. وقد صُممت هذه الدراسة من أجل فحص أثر التعلم المبني على أسلوب التدريس المبرمج على أداء التعبير الشفهي لطلبة السنة الأولى لغة انجليزية بـ: جامعة محمد لمين دباغين سطيف 2 ،الجزائر. حيث تمثلت أهداف هذه الدراسة فيما يلي: (1) اختبار مختلف أنماط التعلم لدى الطلاب، و (2) إجراء مقارنه إحصائية لنتائج التعليم التقليدي مع مناهج.وكان تصميم الدراسة شبه تجريبي ؛ لاسيما الاختبار المسبق غير المكافئ، وتصميم مجموعه المراقبة اللاحقة للاختبار. واختيرت عينه الدراسة (94) باستخدام قائمه جرد لأسلوب التعلم لاختبار أنماط التعلم الرئيسية للمشتركين.إذ تم اختيار ثلاث مجموعات تجريبية على أساس النسبة العالية لأسلوب تعلم الطلاب في القسم، مثل مجموعه الطلاب البصريين، ومجموعة الطلاب المستمعين، ومجموعه الطلاب الحركيين ومجموعه الطلاب بشكل عام.وقد طور الباحث ثلاث برامج تعليمية، مثل برنامج التعليم البصري ، وبرنامج التعليم السمعي، وبرنامج التعليم الحركي.وانقسم الطلاب إلى أربع مجموعات استنادا إلى الحصة التعليمية العالية لطلاب كل فئة. واختيرت أربع وحدات تحت عنوان "كيف" من هيئة الإذاعة البريطانية لتعلم اللغة الانجليزية استنادا إلى نتائج اختبار الترتيب.وقام الباحث بتدريس المجموعات التجريبية من خلال الاستراتيجيات التربوية الملائمة مثل مجموعة الطلاب البصرية التي يدرسها برنامج التعليم البصري ، ومجموعة الطلاب السمعية التي يدرسها البرنامج الاستماع ومجموعة الطلاب الحركية التي يدرسها البرنامج التعليمي الحركي. كما تم تدريس مجموعة الطلبة العامة نفس الوحدات من خلال طريقة التدريس التقليدية.واستخدم المقاييس الموحدة ؛ وجرد العادات الدراسية ، وجدول التقييم الذاتي للدراسات الجامعية ، ومقاييس التقييم الذاتي الأكاديمية لجمع البيانات عن المتغيرات المشتركة ؛ عادات الدراسة ، والكفاءة الذاتية الأكاديمية للكليات، والمفهوم الفردي الأكاديمي على التوالي، حيث تم القيام باختبار التعبير الشفهي (OEAT) كاختبار قبلي وبعدي لهذه الدراسة. من أجل القيام باختبار فرضيات البحث، تم تحليل البيانات المجمعة كميا من خلال اختبار ت للعينة المستقلة وتحليل التباين الطردي على مستوى الأهمية 0.05. وكشفت نتائج الاختبار الأولي أنه لا توجد فروق كبيرة من الناحية الإحصائية في أداء المجموعتين. بينما كشفت نتائج الاختبار اللاحق عن وجود اختلافات كبيرة من الناحية الإحصائية في الدرجة المتوسطة للمجموعة التجريبية ومجموعة المراقبة. وتم الحصول على نتائج الطلبة في مرحلة ما بعد الاختبار وتحليلها لاستخلاص النتيجة. حيث تم حساب القيمة F من أجل اختبار الفرضيات.وتشير نتائج الدراسة إلى أن متوسط درجة المجموعة التجريبية كان أكبر من المعدل الذي كانت عليه مجموعة المراقبة. وتقدم نتائج هذه الدراسة الاستقصائية الدعم الإحصائي للفرضيات البحثية. واستنتج أن هذا البرنامج كان له اثر إيجابي علي من الطلاب عند الأخذ بعين الاعتبار لـ: الحالة، وعادات الدراسة والمفهوم الفردي الأكاديمي كونها متغيرات مشتركة.