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THE EFFECT OF MULTIPLE-INSTRUCTIONAL TECHNIQUE AT SECONDARY LEVEL IN DISTRICT PESHAWAR, PAKISTAN

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Abstract

This paper deals with English Language Teaching in Peshawar at Secondary Levels which is a matter of concern because of the increasing dropout rate of students. It is a matter of serious debate for it is a main hindrance in the future of students. The paper in hand focuses on the importance of multiple-instructional approach in teaching as an effective source of obtaining the maximum output. The researcher is of the opinion that multiple-instructional approach is according to Gardner's theory of multiple intelligence; it is motivating, productive and effective. The outcomes of descriptive and inferential statistics show that the use of multiple-instructional technique at secondary level for teaching of English is highly effective. It provides with better results despite the difference of learning styles and intellects of students.

Key Words: Multiple-instructional, Technique

INTRODUCTION

English language, in our modern world, has become a lingua franca (Baugh, 2007) as it is spoken throughout the globe. Due to its rapidly growing significance, it has become a pivotal part of each field. According to Dylan Lyons (2017) there are around 7.5 billion people in the world out of which 1.5 billion speak English. Around 360 million people speak English language as

their first language and 94 million people in Pakistan speak English as their second language.

In addition to its greatly recognized importance as well as United States and Great Britain's influence on international politics, it has become a compulsory subject in many countries and so in Pakistanbecause of its prominent characteristic of being language of unification. Recognizing its exponential establishment as lingua franca, it has been considered as the language of progress of an individual (Shamim, 2011). In Pakistan, English Language has been viewed as a basic tool for development: both of an individual's and nations. It is known as the language of media, education, government and ruling class (Rahman, 2003). Researches have ensured that English is used in every corner of the world and people from different social, cultural, and ethnic backgrounds use it for interaction (Dewi, 2015; Mydans 2007; and Jackson and Stock well 1996). Moreover, with its recognition as an international language, it has been considered as the language of science and technology (Seargent and Erling 2011; Ammon 2001).

In this research English Language Teaching in Peshawar at Secondary Levels is a matter of concern because of the increasing dropout rate of students. It is a matter of serious debate for it is a main hindrance in the future of students. Despite realizing the importance of English as compulsory subject, the failure rate in the subject of English at secondary, intermediate and graduate level is alarming and it provides a solid evidence that the objectives of English language teaching are not achieved (Gillani, 2004). There are different methods of teaching like Grammar Translation Method (GTM), Communicative Language Techniques (CLT), and Audio-Visual Method, yet the dropout ratio is alarming and increasing day by day.Adil (2016) in his diagnostic research study including Swat, Mardan, Kohat and Peshawar of Khyber Pakhtunkhwa asserts that teachers do not follow the lesson plans; neglect the use of Direct Method of Teaching beneficial for improving speaking skills and entirely depend on Grammar Translation Method.

The researcher further suggested the multiple instructional techniques for effective English teaching according to different learning styles of students; strengthening the use of AV Aids and Direct Method; motivating the students, developing interaction between teacher and students; and classroom environment beneficial for the productive learning process. (Adil, 2015)

Multiple-Instructional Technique at Secondary Level

It is generally assumed that despite knowing the fact that students in a class have different intelligence levels, teachers tend to use one and fixed method of teaching, thus restricting the individual's growth. Ireson and Halam (2001) in their journal*Ability Grouping in Secondary schools: Effects on Pupils' Self-Concepts* depict that teachers need to realize that each child is an individual with different learning abilities and demands mixed- method of teaching. A mixed-ability class does not only consist of various range of

abilities but various learning preferences and therefore it demands diversified teaching techniques.

Multiple-Instructional Technique of teaching incorporates the adoption of a teaching method differently in different situations depending upon the demand and aptitude of learners and according to the content taught. A teacher needs to vary his teaching style, learning activities and assignments; one topic should be presented through various modes for example lecture, audio lingual, group work etc. (Davis, Barbara Gross,1993). It has been observed that teachers adhere to one method of teaching either GTM, Communicative Language Technique or Audio-Visual which effects the learning outcomes (Adil, 2015). Gardner's (1993) theory of multiple intelligence suggests that students need to be taught differently owing to their different needs.

The research in hand focuses on the importance of multiple-instructional approach in teaching as an effective source of obtaining the maximum output. The researcher is of the opinion that multiple-instructional approach is according to Gardner's theory of multiple intelligence; it is motivating, productive and effective.

Statement of the Problem

The researcher noticed that despite the effectiveness of multiple-instructional technique owing to multiple intelligence level of students, teachers use one fixed method of teaching in District Peshawar. In relation to different learning styles of students and Gardner's Theory of Multiple Intelligence (1983), researcher preferred multiple instructional technique beneficial for the effective learning process. For this purpose, the study of comparative analysis was incorporated constituting Government Girls Higher Secondary Schools of District Peshawar.

Research Objectives

The study aimed at achieving the following objectives:

1- To determine the effect of multiple-instructional technique at secondary level in District Peshawar.
2- To examine the comparative effectiveness of the Grammar Translation Method.

Research Questions

Q1- How does multiple-instructional technique effect the teaching of English at secondary level in District Peshawar?

Q2- How could the effectiveness of mixed-method approach be examined in relation to Grammar Translation Method?

Significance of the Study

This research will bring awareness in education department about the importance of multiple-instructional technique in teaching. It will help the teachers to adopt their teaching methods according to the situation, needs of students, level of students and content taught. It will motivate learners and solve the issue of dropout from schools. Moreover, it will be beneficial for future researchers as it will be helpful in data collection regarding the concerned topic.

Scope and Limitation of the Study

The study was conducted to bring about the effect of Multiple-Instructional Technique for which District Peshawar had been selected. The concerned study thrived to call for the need of bringing diversified teaching strategies in order to meet the needs of all the various intellects in the class. The study was restricted to Government Girls Higher Secondary School. Only one section of class Ninth was selected due to the school restriction as all the other sections were occupied and it was convenient for school administration. The class consisted of 67 students and it confined the unimpeded use of activities in the class. The time allocated for class was 35 minutes which became a hurdle in the successful completion of time-consuming tasks. Students' greater number of absentees on daily basis also formed intricacy.

Delimitation of the Study

This study was delimited to the comparative analysis of Multiple-Instructional Techniques with that of Grammar Translation Method; no other teaching method had been compared. For data collection, the researcher preferred Girls Higher Secondary School and exempted Boys Schools due to availability and more convenience of the source. SPSS 2.0 was used as statistical package and T-test was selected. No other statistical package was adopted.

Literature Review

Multiple Intelligence Enforcing Multiple Instruction

According to Fisher (2001) each child is born with different learning potentials and their learning limits are not predetermined. Haris and Snow (2004) in their article *Doing it for Themselves: Focus on Learning Strategies and Vocabulary Building* suggested that owing to multiple intelligence, teachers feel the need of bringing more diverse and flexible teaching style. Students should not only be given ownership in the content but also in the learning style. Mixed method of teaching respects each student as an individual. It fulfils the needs of every student and allows them to face success.

Fisher (2001) argued by saying that many students are unable to achieve success because they are instructed "to make a journey but they have no map".

Each child is different due to intellectual, emotional, financial, economic, social and religious background. According to Tomlinson (1994) it depends upon the teacher to differentiate his/her instruction accordingly.

Hallam and Toutounji (1996), Harlen and Malcolm (1997) stated their opinion that teacher's skills in the classroom are more pivotal than students' appropriate grouping. A teacher's attitude determines the successful learning process. They assured that the success does not consist of students' way of grouping rather it depends upon the teachers' skill and attitude in classroom.

Gardner's Theory of Multiple Intelligence

Howard Gardner was a Ph.D. Professor of Education at Harvard University. He proposed his renowned theory of multiple intelligence in his book *Frames of Mind* (1983). In his theory, he categorized human competencies into different levels. According to him each learner has multiple set of competencies and demonstrates his/her capabilities differently. (Gardner, 1983)

Business.com (2009) asserted that learners have their own strength, weaknesses and preferences which help them incorporate their skills and in solving their problems. Students who are not capable of giving their best in logical reasoning may do better in linguistic dimensions. Organizations and Institutes find in necessary to have multiple intelligence in their employees to incorporate well-balanced and progressive environment.

Human intelligence level was primarily assessed on the basis of logical mathematical and verbal linguistic capacity (Gardner & Hatch, 1989). Gardener advocated that human beings possess multiple competencies, and these are evident in different creative tasks, skills and problems(Gardner & Hatch, 1989). Gardner's theory of multiple intelligence initially encompassed six intelligence categories and eventually reached to nine in the list.

Verbal Linguistic Intellect

Learners in this category understand the relationship between words and their ideas. It helps in analyzing written and spoken words, their semantic and syntactical relationship, and explanations and interpretations (Gardner, 1983).

Logical Mathematical Intellect

This intelligence deals with analytical reasoning and problem-solving approach in tangible matters. Learners process mathematical calculations in this category(Gardner, 1983).

Musical Intellect

Learners in this category appreciate and understand sound patterns and rhythms. They comprehend the relationship of a sound to that of human feelings and emotions (Gardner, 1983).

Physical Kinesthetic

Learners in this intelligence level have control on and best use of their body movement like athletes, dancers, actors and sign language users (Gardner, 1983).

Spatial Visual Intellect

It implies the capacity to develop abstract into concrete; ideas into pictures and images. It assists in visualizing the ideas and expressing them in graphs understanding their effects (Gardner, 1983).

Interpersonal Intellect

Interpersonal intelligence consists of the capacity to understand the attitude and behavior of others in different situations. It asserts the understanding of the relationship of an individual to others (Gardner, 1983).

Intrapersonal Intelligence

It is one's ability to adopt change in behaviors at different situations. It encompasses one's relationship to one's own; changing thoughts, beliefs and behavior in accordance with situation (Gardner, 1983).

Naturalist Intellect

It is the capacity to understand nature and categories its objects; animals and plants according to their characteristic features and similar traits (Gardner, 1999).

Existential Intellect

Existential intelligence also known as cosmic and spiritual capacity involves deeper understanding of the things and concepts. It makes learner capable of going deep and digging out the intricate issue of human existence. It is manifested in those concern with the fundamental perceptions of life, death and subtle realities(Gardner, 1999).

To sum up, Gardner's theory of multiple intelligence is beneficial in lesson planning, curriculum development, classroom assessment and teaching techniques. It considers each learner with different intellectual characteristics and personality traits. This theory suggests differentteaching method for different intelligence groups and thus strengthens researcher's viewpoint of mixed method of teaching.

Learning Styles

Ellis (2005) indicated that learning style is a persistent way of a person through which he comprehends, understands, attains, conceptualizes and recall information. According to the researcher each learner adheres to different learning style which is influenced by cultural, educational and social background, intellectual growth and lifelong experiences of the earner.

Chikering and Gamson (1987) stated their perspective of various learning style by saying that multiple-instructional techniques is fundamental due to learners' being different in their learning preferences and talents. Various intellects in a class demand several teaching styles that work for them. Students are pushed forward to learn in an academically productive environment that requires devotion and consideration.

Positive learning is established only when teaching method is in accordance with learning style. McCarthy (1999) asserts that below mentioned are the four learning styles:

1. Learners with innovation are motivating and intend to make this world a better place. They interact with others and they have cooperative nature.
2. Learners with analytical capability emphasize intellectual growth and dive deep in order to understand the problems.
3. Learners with practical manifestation focus on problem-solving approach. They are straightforward in nature.
4. Learners with dynamic strength can synthesize information. They are active and full of fervor.

Teaching Method

The term teaching method refers to the classroom instructional policy, pedagogy principles and the particular way of imparting knowledge by a teacher. No one can neglect the importance of appropriate selection of teaching method according to the class environment, nature of the subject and learners' psychology and background knowledge. Each teaching method works in some specific environment and there are many factors affecting it like classroom environment, teachers' competency, students' sociolinguistic background accessibility of AV Aids and so on (Adil, 2015).

Following are some of the teaching methods which incorporate both advantages and disadvantages.

The Direct Method

This method makes the learner's capable of learning and using English language without interference of the mother language. This method revolves around the teacher centered approach and supports active participation and involvement by students in the learning process.Melta (2010) reviewed this method of teaching as a protest against the classical method of teaching known as Grammar Translation Method. Unlike GTM, Direct Method demanded skills and effort on the part of teacher; communication was

important than grammar which was taught indirectly. This method is regarded as the most effective method due to its stress on using the target language through communication and participation in natural settings (Binod, 2004).

Grammar Translation Method

In 19th century, Grammar translation method was viewed as the most preferable teaching method (Sherma, 2005). It was the oldest method adopted for teaching Greek and Latin; also known as Classical Method.This method had grammar as essential factor and the rules and regulations of grammar were given more focus then pronunciation and speaking. The texts were translated to native language and the use of target language was minimized in the classrooms. The class revolved around teacher and the students were passive learners when taught through GTM.

Audio-Lingual Method

Audio means 'listening' and visual means 'speaking'. This teaching method was based on the principal that language can be taught through interaction, so the grammar was not considered to be the primary factor in teaching of English. Larsen- Freeman (2008) reported that language is a set of habits that can be taught through repetition of specific pattern in order to make it natural and spontaneous. This method made teacher a motivator and facilitator for students. Language laboratories were set, and audio tapes were utilized in 1960s assuming the ALM as an effective teaching method (Zainuddin, 2011)

Reading Method

Reading Method was evolved as a revolt against direct method. It was founded by Dr Michael Waste who thought direct method not appropriate for India and Pakistan. His proposed method laid stress on reading foe better writing learning of a language.

Lecture Method

Lecture method is the most commonly used teaching method in our classrooms. It is also known as chalk and talk method because most of the part is played by chalk on the board involving no student. Teacher is the central authority and feels free while teaching. Nonpractical preparation is required on the part of teacher. Apart from its limited use of interactional technique, the method has got certain advantages which make it very attractive like its economical nature, time saving element and feasibility for teacher. Lecture method is made productive when combined with Audio-Visual aids.

Multiple-instructional Techniques

In order to assist students in thinking critically and solving problems effectively, teachers promote their abilities by using innovative and modern techniques that enable students to become more active participants in class. Following are some of the techniques utilized by teachers of English:

Brainstorming

The notion of brainstorming is developed and known by Alex faickneyObsorn in his book *Applied Imagination* published in 1953. Obsorn asserts that brainstorming is a technique which helps in maximizing creativity of a group by gathering all the perspectives spontaneously from its members (Kumbhar, 2018). In this technique students are familiarized with a problem and they share their ideas freely for its solution. This method focuses on quality, provides liberty of sharing thoughts without hesitation, accepts novel ideas and brings improvement for further discussion.

Group Discussion

Today's world appeals English Language Teaching to flourish learners' communicative skills because through this student can express their ideas in class (Kayi, 2006). Ur (1981) states that thinking out some situations and problems together through verbal exchange of thoughts is called 'discussion'. Moreover, this technique helps in developing responsibility for learning in students and brings leadership and social skills (Kidsvatter, 1996).

Role-Play

Role-play is a new technique adopted in classrooms in 21st century owing to the rapid change in education system. Nafi (2016) describes that role-play is regarded as a technique of learning with cooperative method. This technique works well when it has competitive and collaborative elements together. It includes various activities ranging from simple information on role cards to more complex role-playing. It embraces real life situations as well as fictional directions. Students work in groups and perform the role given by teacher or opted by the student himself. Students find role-play more interesting and useful for they suppose another persona (Nafi,2016). Students are given the role and characteristics of a fictitious character. While performing the role, learners comprehend the core essence of character, situation as well as the appropriate use of language.

Mind-Map

Mind-mapping was generated as an effective teaching tool for developing ideas through links in them in 1960s (Murley, 2007). It is a technique which states the process of associating different ideas and information through relationship hooks (Buzan&Buzan in Budd, 2003; Murley, 2007; Siriphanic and Laohawiriyano, 2010, Al-Jarf, 2011). It consists of the main idea and linked ideas connected together through relationship branches. It organizes sub-categories of the main idea as branches and thus becomes a visual tool for

creating ideas and organizing the map for mind in constructing ideas (Budd, 2003; Murley, 2007; Siriphanic&Laohwiriyano, 2010; Al-Jarf, 2011).

Self- Explanation Reading Training (SERT)

Comprehending the written text and diving deep into the challenging textbooks has become an essential skill to acquire in modern society (McNamara, 2004). Initially SERT was a technique known as self-explanation (Chi &Bassok, 1989). Self-explanation implies explaining of the meaning of the text in order to apprehend it entirely while reading. Student who question and explain the text either spontaneously or when encouraged to do so are observed to generate better intellectual modes (Chi &Bassok, 1989; Chi, de Leeuw, Chiu, &LaVancher, 1994; Magliano, Trabasso, &Graesser, 1999; Trabasso&Magliano, 1996). SERT does not comprise the translation or paraphrasing of the text rather it assures the apprehension of the fundamentals of the text. When comprehension becomes difficult, the process of inference serves as a key (A. Brown, 1982; Garnham, Oakhill, & Johnson-Laird, 1982; Long, Oppy, &Seely, 1994; Magliano, Millis, Miller, &Schleich, 1999; McNamara, 2001; McNamara, Kintsch, Songer, &Kintsch, 1996; McNamara &Kintsch, 1996; Oakhill, 1984; Oakhill &Yuill, 1996; Oakhill, Yuill, & Donaldson, 1990; Yuill, Oakhill, &Parkin, 1989). SERT includes inferences, elaboration (knowledge-based inference) and prediction from the text (McNamara, 2004).

The researcher in proposed study aimed at investigating the effectiveness of multiple-instructional techniques due to Gardner's multiple intelligence which strengthened researcher's idea of the concerned study. The above reviewed literature encompassed all the related publications that helped the concerned study. The researcher on the basis of significant amount of attention paid to multiple intelligence levels in class and different learning styles of individuals intended to compare the influence of multiple-instructional technique as compared to Grammar Translation Method used as the only method of teaching in classrooms.

Research Methodology

The study was comparative in nature. It was qualitative as it aimed at investigating the effectiveness of a phenomenon thus leading to qualitative study dimensions. In order to analyze the effectiveness of Multiple-Instructional Techniques as compared to Grammar Translation Method at Secondary Level in District Peshawar comparative analysis had been incorporated. For this purpose, pre- and post- test were conducted. Test was designed on the basis of literature (prose and poetry) and grammar section from the book. The test comprised subjective as well as objective questions. Pre-test was conducted in order to check the students' initial knowledge through content taught by GTM and post-test was conducted after multiple-instructional technique incorporated by the researcher herself in one-week teaching.

Population

All the government schools of District Peshawar have constituted the population for this research. Out of which Government Girls Higher Secondary School, Town Peshawar has been selected for the purpose of research. Class Ninth has been further chosen for attaining the desired result. All the class Ninth students of Government Girls Higher Secondary School in District Peshawar constituted the population of the study.

Sample and Sample Technique

Random sampling technique was adopted, and Government Girls Higher Secondary School University Town was selected for the study. The researcher through random sampling selected class Ninth. Class Ninth had three sections namely A, B and C with the average of sixty-five students in each section. Further section A was chosen for the concerned study as given by the school administration.

Data Collection

An independent self-made test was designed as pre- and post-test in order to achieve the data. The test was designed under the supervision of research supervisor and crosschecked by subject expert. For incorporation, the researcher visited the school and supervised pre- and post-test by herself.

Data Analysis and Interpretation

Descriptive Statistics

This study was incorporated in seven meetings in order to gather relevant data. After coordination with the teacher, it was observed that Grammar Translation Method was adopted as the only teaching method. As the researcher's objectives were to examine the effectiveness of Multiple-instructional Technique as compare to Grammar Translation Method, in the very first meeting pre-test was administered to class Ninth consisting of sixty-seven students in order to attain the basis understanding of students as well as to observe the effectiveness of GTM for later comparison with Multiple-instructional Technique. After pre-test administration, the same class was taught for five days through multiple instruction. At seventh meeting, post-test was executed in order to find out the improvement as well as to make sure the usefulness of the multiple-instructional technique adopted by researcher and following findings were attained:

	N	Minimum	Maximum	Mean	Std Deviation
Pre Test	67	5.00	48.00	20.6418	9.26005
Post Test	67	20.00	57.00	41.1045	10.15506
Valid N (Listwise)	67				

The above descriptive statistics displays the total number of students for pre- and post- test as (N) = 67. Minimum marks of pre-test are 5 while of post-test are 20 which depicts the improvement in learning outcomes. Likewise, maximum marks in pre- and post-test can be viewed as 48 and 57 respectively which also states the effectiveness of the multiple instruction obviously. Moreover, the mean variation from 20.6418 in pre-test to 41.1045 in post-test and standard deviation increasing from 9.26005 to 10.155067 successfully particularizes the efficacy of multiple-instructional technique as compare to Grammar Translation Method.

Inferential Statistics

Based on the findings from SPSS 2.0 on Paired Sample T-Test, there is a difference found in before and after results. Below are the tables:

Paired Samples Statistics		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre test	20.6418	67	9.26005	1.13130
	Post Test	41.1045	67	10.15506	1.24064

From the table above, as mean (20.6418), standard deviation (9.26005) and standard error mean (1.13130) of pre-test, when compared with the mean (41.1045), standard deviation (10.15506) and standard error mean (1.24064) of post-test are found to be less, it can be concluded that multiple-instructional technique is substantial in comparison to GTM.

Paired Samples Correlations		N	Correlation	Sig.
Pair 1	Pre Test & Post Test	67	.443	.000

From the above-mentioned table it can be observed that correlation between pre-test and post-test with total strength of 67 students is (.443) with sig (.000). It directs that there is positive correlation between both of them.

Paired Samples Test									
			Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre Test - Post Test	-20.46269	10.27254	1.25499	-22.96836	-17.95702	-16.305	66	.000

From the table above, it can be seen that there is significant difference between pretest and posttest variables with sig. (2-tailed) with P value$\leq$0.05 i.e., (0.000). It can be concluded that multiple-instructional technique can provide significant variance in teaching learning process in the classroom.

Findings

Through data analysis following measures were observed:

1. Mean of pre-test (20.6418) was less than mean of post-test (41.1045)
2. Standard Deviation of pre-test was 9.26005 while of post-test was 10.15506.
3. Standard error mean of pre- and post-test was found as 1.13130 and 1.24064 respectively.
4. Correlation between pre-test and post-test with total strength of 67 students is (.443) with sig (.000).

Discussion

On the basis of researcher's study and findings, it is observed that multiple-instructional technique needs to be adopted by teachers of Higher Secondary Schools in District Peshawar. The same idea was strengthened by Haris and Snow (2004) in their article *Doing it for Themselves: Focus on Learning Strategies and Vocabulary Building* where they suggested that owing to multiple intelligence, teachers feel the need of bringing more diverse and flexible teaching style. Mixed method of teaching fulfils the needs of every student and allows them to attain their learning objectives successfully. Likewise,Ireson and Halam (2001) in their journal *Ability Grouping in Secondary schools: Effects on Pupils' Self-Concepts* also emphasized that teachers need to apprehend each child as an individual with different learning abilities and adhere to mixed- method of teaching.

Conclusion

The outcomes of descriptive and inferential statistics show that the use of multiple-instructional technique at secondary level for teaching of English is highly effective. It provides with better results despite the difference of learning styles and intellects of students. As mean, standard deviation and standard error mean of post-test is greater than mean, standard deviation and standard error mean of pre-test, it depicts highly significant amount of effectiveness of multiple-instructional technique. Significant difference between pretest and posttest variables with sig. (2-tailed) with P value $\leq$0.05 i.e., (0.000) also adds to the effectiveness of proposed study.

Recommendations

Based on collected data and findings, following recommendation were suggested:

1. Multiple-instructional technique should be adopted by teachers of English at Secondary level in District Peshawar for effective learning.
2. Multiple Intelligence and different learning styles call for multiple-instructional technique.
3. Teacher needs to be familiarized and trained for using multiple-instructional techniques in classrooms.

References

Alberta Learning. Teaching Students Who are Gifted and Talented. Edmonton, AB: Alberta Learning, 2000.

Al-Jarf, R. (2011). Teaching spelling skills with a mind-mapping software. Asian EFL Journal Professional Teaching Articles, 53, 4-16.

Ammon, U. 2001. The Dominance of English as a Language of Science: Effects on Other Languages and Language Communities. Berlin: Walter de Gruyter.

Baugh, J. (2007). *Linguistic contributions to the advancement of racial justice within and beyond the African diaspora. Language and Linguistics Compass, 1(4), 331–349.*

Binod, K. S. (2004). Principles of teaching English. New Delhi: Kalyani Publishers, p. 180.

Brown, A. (1982). Learning how to learn from reading. In J. A. Langer & M. T. Smith-Burke (Eds.),Reader meets author: Bridging the gap (pp.2654).Newark,DE:InternationalReadingAssociation.

Brown, H. Douglas. (2001). Teaching by Principles. 2th edn. White Plains, NY: Pearson Education.

Budd, J. W. (2003). Mind maps as classroom exercises. Minnesota: University of Minnesota.

businessballs.com (2009). Howard Gardner's multiple intelligences. http://www.businessballs.com/howardgardnermultipleintelligences.htm.

Chi, M. T. H., &Bassok, M. (1989). Learning from examples via self-explanations. In L. B. Resnick (Ed.), Knowing, learning, and instruction: Essays in honor of Robert Glaser (pp. 251–282). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Chi, M. T. H., Bassok, M., Lewis, M. W., Reimann, P., & Glaser, R. (1989). Self-explanations: How students study and use examples in learning to solve problems. Cognitive Science, 13, 145–182.

Chi, M. T. H., de Leeuw, N., Chiu, M., &LaVancher, C. (1994). Eliciting self-explanations improves understanding. Cognitive Science, 18, 439–477.

Chickering, A. &Gamson, Z., "Seven principles for good practice in undergraduate education", AAHE Bulletin, vol. 39, no. 7 (1987). http://teaching.uncc.edu/articles-books/best-practice-articles/instructional-methods/7-principlescomprehenders. British Journal of Psychology, 79, 173–186.