

Effective Teaching Practices and Learning Styles in Higher and Secondary Education - A Comprehensive Literature Review

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ABSTRACT

Teaching and learning practices in secondary education urgently need improvement-witness the recommendations of several academic council of government authorities on secondary education. Understanding learning styles and the role of learning styles in the teaching/learning process is a key component in effective teaching. The review of related literature is an important pre-requisite for execution of any research work. It gives us the direction to carry out the research in a particular way. It helps the researcher to discover what is already known, what others have attempted to find out, what methods have been promising and what problem remained to be solved. In order to explore the intended research more effectively, the proposed research represents adequate literature reviewed at the glance for effective teaching practices and learning styles in higher and secondary education system over the research conducted previously during the past fifty years. In the present research, the extensive literature review has been explored with respect to studies related to learning styles and preferences; studies related to teaching styles and teaching strategies and studies related to teaching strategies for English Language.

Keywords: Effective Teaching Practices, Learning Styles, Secondary Education, Literature Review.

1. INTRODUCTION

Effective teaching requires flexibility, creativity and responsibility in order to provide an instructional environment able to respond to the learner's individual needs. As per Tomlinson, 2001, beyond the experiential evidence that pervasive uniformity in teaching fails many learners, there is reason in both theory and research to support a movement towards an instruction attentive to students' variance manifested in at least three areas: the student's readiness, interest, and learning profile. One of the ongoing challenges the secondary school teachers are facing is related to matching the teaching strategies with the students' learning styles in order to improve the academic achievement. Numerous teaching strategies such as white board, lecture, cooperative learning, writing assignments, demonstration, field trips, grouping, brainstorming, guest speakers, bulletin boards, debates, panel discussion, crossword puzzles, teaching with cases, team-based learning, team teaching, library research on topics or problems, audio-tutorial lessons, making of posters by students, puppets, use of motion pictures, educational films, videotapes, current events and internet are utilized in the modern classroom for secondary education. Each teaching strategies has their own pros and cons. Also, as per Learner point of view, It is very important for an individual to know his/her learning style. The reason is that one of the most significant issues in learning to learn, or in becoming effective in the process of learning, is an individual's taking the responsibility for his/her own learning. For this purpose, the individual should know what their own learning styles are and what characteristics this style has and they should thereby behave according to this style. In this way, the individual can acquire the constantly changing and increasing amount of information without need for the assistance of others and minimize students academic performance as well as achievement. When the learner takes the responsibility of his/her own learning, she/he attributes meaning to the process of learning. He/She develops an understanding of his/her own form of learning styles and becomes much more satisfied with the environment she/he interacts with. Every opportunity for learning is a chance for him/her. It is very much clear from the above discussion that learning styles has a great role and influence on the learning of the students. Also, if the teaching strategy can be taken as per the need of the learning

style of the students, it may certainly contribute to the better learning among the students. So, such type of research work, which the researcher is going to undertake may be of great importance for the education field.

The review of related literature is an important pre-requisite for execution of any research work. It gives us the direction to carry out the research in a particular way. It helps the researcher to discover what is already known. What others have attempted to find out, what methods have been promising and what problem remained to be solved. To make our research effective, adequate related literature is reviewed at the glance over the research conducted previously and presented in the subsequent subsections.

2. REVIEW OF LITERATURES

In Asian and Western countries, significant numbers of studies have been carried out to establish the association concerning selected teaching strategies and learning style preferences for high school students. Most of these past studies have sought to establish the relationship between the two variables; whereby selected teaching strategies have been the independent variable (IV) and the learning styles has been taken as the dependent variable (DV). Some of these studies have also sought to understand the relationship by gender, and most of them have found significant relationships between the two variables and by gender. This chapter summarizes the information from other researchers who have conducted their research on the subject of teaching strategies and learning styles preferences. In the present research study, reviews of selected literatures has been divided into the sub-sections: (i) Studies related to learning styles and preferences; (ii) Studies related to teaching styles and teaching strategies; (iii) Studies related to teaching strategies for English Language.

2.1 Studies related to Learning Styles and Learning Preferences

While concerning effective teaching in classroom environment for secondary school students, Learning Styles is another vast area in which the research is going on rapidly. The researchers are trying to determine student learning styles preferences based on various pilot studies. The work is going on to find the relationship between effective teaching strategies and learning styles pertaining to different subjects. This section deals with the literature survey of various experiment successfully applied for the determination of learning styles of students.

In 1904, French psychologist Alfred Binet developed the first intelligence test. It is commonly believed that this first IQ test spurned an interest learning styles. Shortly thereafter, in 1907, Dr. Maria Montessori developed the Montessori Method of education, a “hands-on” approach to learning. The next big leap came in 1956 from an American Educational Psychologist, Benjamin Bloom. He, of course, developed Bloom’s Taxonomy, which many consider to be the foundation of the education. Bloom’s Taxonomy is a developmental model by which students evolve through knowledge, comprehension, application, analysis, synthesis, and evaluation.

In 1962 the mother-daughter team of Isabel Myers-Briggs, an American Psychological theorist, and her mother, Katherine Briggs, who became a self-taught expert on people, developed the Myers- Briggs Type Indicator, commonly referred to as MBTI, and which seeks to measure psychological preferences for types of learning.

In 1976, the **Dunn and Dunn** Learning Style Model was the first teaching model to introduce diagnostic testing for evaluation purposes. In 1983, American Developmental Psychologist Howard Gardner developed Gardner’s Seven Knowledge Types. This theory breaks down human learning into rather distinct areas including: Logical - Mathematical Intelligence, Linguistic Intelligence, Spatial Intelligence, Musical Intelligence, Kinesthetic Intelligence, Interpersonal Intelligence, and Intrapersonal Intelligence. In 1984, Social Psychologist David A. Kolb developed his experience - based learning model. Dr. Kolb’s work in the 80s and 90s was the most influential for creating emphasis that teachers modify teaching style to accommodate student learning style.

Davenport (1986) conducted a research on Learning styles and its relationship to gender and are among elder hostel participants. The purpose of the study was to determine if learning style was related to gender and age among elder hostel 103 participants results indicate that gender was related to learning styles in two out of four components channels. Males scored significantly higher on the abstract sequential channel than females and women scored significantly higher on the abstract random channel than males. However both genders scored highest on the concrete sequential channel. Age and learning styles were not found to be related.

Newble and Entwistle (1986) in his research on learning style concluded that the concept of learning style is important to understanding why students respond differently with respect to particular teaching strategies.

David (1988) conducted a research study to determine the serious, analytical and active practical learner characteristics of urban and rural area students and experimentally observed that the rural students are fact oriented and more observation centered and they are significantly higher in analytical, serious and active practical learner characteristics with respect to urban students.

Verma (1988) had made a research study on introvert and extrovert type students with respect to their learning styles and practically found that extrovert type students had grander preference for field dependent learning style and both introvert and extrovert type students had preference for field-independent learning style.

Felder and Silverman (1988) had conducted a survey to find the relationship between individual's preference for sending and receiving information. The Experiment was conducted using four engineering teachers betrothed in design problem and it has been experimentally found that most of the participants preferred to receive information visually and engaged in drawing very little during the design exercise.

Verma et. al. (1990) conducted a research study on, Students learning styles across the academic streams on 210 male and female students studying in arts, science and commerce stream in senior secondary schools of Delhi. The findings of the study suggested that there is some relationship between learning styles and academic streams.

Petty G.C. and Holtzman F. (1991) conducted a research study on the adult students coming into post-secondary establishments and experimentally observed that their brain dominance was considerably associated with their learning styles. The positive relationship and lack of pattern among students indicates that they need totally different learning styles and individual teaching strategies.

O'Brien (1991) had made meta-analysis of forty two experimental studies and found that variations in learning styles were related to tutorial action.

Furnham (1992) rumored that introverts types of students were found to be reflectors in learning styles and extrovert variety of persons were found to be activist in learning styles vogue whereas introverts found to be reflectors in learning designs, neurotics were found to be a lot of theorizer in learning styles than stable variety of persons.

Dunn et al (1993) created an exploration on learning styles characteristics of united states of America students by taking a sample size of 687 from class four through six and compared results with Anglo-American students. In the research, it was found that there exists significant differences between male and female American students on learning style preferences.

Severians et al. (1994) in his research study indicated the strong impact of learning styles on men's and women's and experimentally shown that if gender differences in learning styles were taken into consideration, men like to prefer the abstract conceptualization mode of learning styles as compared to women.

In 1995, faculty member Mark Tennant categorised styles of learning into three different categories: Attitude, Skills, and Knowledge (i.e. ASK design), which can be innumerable traced, changed and used among a spread of for-profit programs.

Hong et al. (1995) had used a learning styles inventory scores by taking samples of 49 Korean-American students (29 girls and 20 boys) and 46 Korean students (68 girls and 78 boys) and conducted a research study on learning styles to examined the changes in students learning styles from social, culture and environmental changes within an 'ethnic group and it has been observed that there exists a significant difference between the learning styles of United states and Korea students with respect to environmental and social differences.

Mathews (1996) made an investigation of learning styles and perceived academic achievement for high school students and experimentally found that students most well-liked designs within the instruction style will profit the standard of learning atmosphere and will lead to positive students learning outcomes.

Marzano (1998) has practically observed that regardless of matching with learners' modalities, tactile and graphical representations of the subject matter had conspicuous effects on learning styles of the students.

Mahajan N. (1999) conducted a study on learning style and locus of control of gifted and average students in different academic subjects. Researcher found that learning style of gifted student's in general day to day situation were found to be that of assimilators and where as those of average were found to be divergers. In the subject of science', both the gifted and average students had similar learning style that is of assimilator.

David (2000) conducted a study on learning styles of gifted and non-gifted secondary school students studied in Hong Kong and China. Study was done by using Chinese version of learning style inventory. It was found that gifted students preferred interpersonal: verbal exchange and autonomous learning. No significant gender difference was found. The findings of study suggested that students of younger age group has significantly greater preference for learning styles related to games and student's activities as compared to older age group students.

Li Guangchao (2000) had conducted a research to determine the relationship between english teaching strategies and learning styles by selecting four different types of teaching strategies for English Language.

Drysdale et al. (2001) meted out a study on the impact of learning vogue on the tutorial performance of first year students by taking a sample size of 4546 and experimentally found that tutorial performance supported learning vogue and there is no important variations between the training designs and tutorial performance of science and liberal arts students.

Aragon et. al. (2001) studied the influence of learning style preference on student success in online and face to face environments. The aim of the research study was to determine the impact of properly designed learning environments on student learning preferences, regardless of conceptual and practical knowledge of students. It has been concluded that students can be equally successful, in face to face or online environments, regardless of their learning style preferences.

Kopsoich (2001) meted out a probe study to make a link between learning varieties of students and their arithmetic scores using Texas assessment of academic skills test. The test data was taken from North Texas Intermediate school by randomly selecting 500 students from grade five and it has been experimentally found that there exist a significance relationship of 0.542 at the 0.05 level of significance. Also, it has been suggested that providing a

selected teaching strategies concerning students' learning style preferences will be beneficial for the student achievement.

Liyan (2002) conducted a research study at Wuhan Science Technology University to investigate the learning styles of Chinese adult students and had analyzed the factors which are responsible for shaping their different learning style preferences.

Srivastva (2002) conducted a study on secondary school students to determine their learning styles and achievement in the subject of science and it has been observed that the first learning styles of the secondary school students is accommodating learning styles and second popular learning styles is convergent.

Fritz (2002) concluded that learning style inventory results can be used to create personal learning profiles that will empower students to become active learners and successful learners.

David and Ryan (2002) conducted a study to compare the learning styles preferences for students opting online distance learning program and on campus students. It has been experimentally observed that the students opting online program were more independent than on campus students with respect to their learning styles preferences. Also, the authors had concluded that students enrolled in local health education online class have learning styles equivalent to on-campus students.

Keri S. (2002) studied into congruities between instructors and students learning styles and student satisfaction revealed that the results indicated that student satisfaction did not relate to congruities in styles it was palpable to conclude that student satisfaction encompassed indeterminable number of variables.

Brown (2003) examine that as a result of most business categories serene of scholars having different learning styles, lecturers had to adopt a versatile approach on their tutorial follow so that their final approach will be integrated.

Martin (2003) found that some students had long-faced language difficulties with huge success however with very little efforts. In distinction, different students long-faced these difficulties with to a small degree success and delight. They conjointly showed that every learner had his/her best approach of learning and was laid low with his/her culture, instructional background and temperament.

Hmielecki (2003) conducted a research on learning style preferences and practically observed that students preferred learning style impacted student performance and that students learn more effective when these exist a correlation between learning style and teaching strategies.

Mayya and Rao (2004) had made a research study on learning styles at Kasturba Medical College, Manipal by taking a sample size of 130 students to determine the connotation between learning styles preferences and performance of the students. The research study found no significant difference either in learning style preference scores or in university examination make: between genders. In the research study results, a negative correlation has been observed between percentage of marks and tactile preference score in the university examination.

Verma (2004) conducted a research on learning style by taking sample of 120 senior secondary student: (40 from Tibetan school of Shimla and 80 from Govt. Sec. Schools of Shimla) and It had been found that Indian students had significantly stronger preference for legislative and conservative thinking and learning styles and lower preference for global and external styles thinking and learning than Tibetan students.

Castro and Peck (2005) conducted a research study on learning styles preferences and found that foreign students face learning difficulties at college level and concluded that in foreign language classroom, the student's preferred learning style can help for his entire success.

However, as per Kolb's learning style preferences, it has been experimentally observed that while analyzing the distribution of grades, there exists no significant correlation between learning style and student grades.

Verma (2006) conducted a research study on learning styles at Himachal Pradesh university by taking a sample size of 180 students of different courses and observed that course related dissimilarities happened in learning styles for university level students.

Patel (2006) in a research study on learning styles preferences had indicated that cooperative learning was found to be effective in teaching science in a school. The experimental results show accomplishment of positive individual and social skills in psychomotor and cognitive affective areas.

Chere Campbell (2006) conducted a study to observe the impact of preferred learning styles and perception of barriers on completion of external baccalaureate degree programme. It was found out that multivariate analysis resulted into significant difference in both learning styles and perceived barriers of determined between students preferred learning styles and perception of barrier to completion of an external baccalaureate degree.

Greenfield S. (2007) at Oxford University published an article on 29th July, 2007 in Times Educational Supplement Magazine that the learning styles approach to teaching is nonsense as per neuroscientific point of view.

Slater and Iujan (2007) conducted study on the influence of gender in learning style preference among first year medical students and applied learning preferences questionnaire i.e. visual auditory, reading/writing, kinesthetic (VARK). The sample data of 56.7 % female students and 56.1% male students was taken into consideration, while conducting the research study and it has been observed that there is no significant difference between genders with respect to types of modality combinations.

Tight (2007) conducted a research study on English college students learning Spanish language and experimentally found that regardless of perceptual learning style preference, students performed equally well on vocabulary tests.

Woste (2007) studied to look at the best mechanism for relating any particular individual's cognitive learning style to relevant material in an adaptive hypermedia platform for the individual in a kinesthetic, visual or auditory environment. It has been experimentally concluded that if the study material was designed by considering individuals learning preferred style, the quality of learning material will be enhanced.

Halder (2007) concluded that science students were found to be most cooperative than arts students in terms of learning attitudes and there is significant difference between science and commerce and science and commerce students were almost uniformly inclined towards competitive learning attitudes than arts students. Male and female students showed no significant difference in the nature of learning behavior attitudes.

Singh (2008) conducted a research study to determine the relationship between learning style preference and academic achievement for high school students. The sample size of 538 students of 10th grade was taken from rural and urban area of Dehradun in Uttaranchal State. It has been experimentally observed that no significant relationship between Long-Attention Span and Short-Attention Span for Learning Style Preference of the rural area girls.

Sharma and Verma (2009) in a research found that main effect of intelligence was not found significant for learning modes (concrete experience, reflective observation, abstract conceptualization and active experimentation) and Learning styles (imaginative, analytical, precision and dynamic). It is found that there is non-significant interaction between personality and learning styles. Neither extroversion nor neuroticism dimension of personality in combination with intelligence showed significant effect on any learning mode or any learning style.

Ismail Erton (2010) has conducted a research study on learning styles by taking a sample size of 102 students of first year at Bilkent University. The Jeffrey Barsch's Learning Style Inventory was used to test the learning styles preferences and test scores were used to analyze the arithmetic coefficient between the two variables. The experimental results have found the correlation coefficient of 0.306 and it has been experimentally proven that there is a weak positive statistical relationship between the learning styles of the students and their achievement in foreign language.

Abidin, Rezaee, Abdullah, & Singh (2011) performed a research on learning styles for investigation of the relationship between academic achievements and learning styles. The sample size of 317 students from Islamic school in Malaysia had been taken into consideration. Joy Reid's Perceptual Learning-Style Preference Questionnaire based Learning Styles Survey (LSS) instrument was used for the research study and one-way ANOVA and multiple regression analysis was applied to analyse the final score. It has been experimentally observed that there exists a significant relationship between learning styles and overall academic achievement.

Gappi (2013) explored the research study on the student's preferred learning styles. The research student was conducted to determine the relationship between the learning style preferences and the students' academic performance and to observe and to observe that whether preferred learning style differ with gender, age and academic program. The sample size of 131 first year students was taken into consideration while making the research study. The Index of Learning Styles (ILS) questionnaire was used for the effective research study. The experimental results with $r = -0.056$ shows that there is no significant effect of age, gender and academic program for the learning style preferences of the students. Also, it has been observed that there is no significant statistical correlation between the learning styles preferences and academic achievement of the students.

Vaishnav and Chirayu (2013) has applied Howard Gardner's VAK learning style brain box and VAK Learning Style Inventory invented by Victoria Chislett and Alan Chapman to identify the preferred learning style of secondary school student. The sample size of 200 students was taken from class 9th to 11th from state of Maharashtra. The one way analysis of Variance (ANOVA) and f-test was applied to identify the effect of learning style on academic achievement. Experimental value of $r = 0.658$ shows that here exist positive high correlation between kinesthetic learning style and academic achievement. The experimental value of $r = 0.287$ is found for auditory learning style and $r = 0.129$ for visual learning style, which shows that there is no strong relationship between these two learning styles.

Gokalp, M. (2013) has taken sample size of 140 students from the Faculty of Education at University to evaluate the learning styles of education students. It has been experimentally found that there was a significant difference between the scores of pre-tests and post-tests and statistically significant differences exist between the results of the first and final applications of the subtests on academic success and learning styles.

2.2 Studies related to Teaching Styles and Strategies

A review of the Scriptures provides ample evidence that Lord Jesus Himself utilized a wide variety of methods in his teaching e.g. Jesus provided direct instruction in the Sermon on the Mount (Matthew), guided questioning to relate current lessons to past experiences and to gauge understanding (Matthew), experiential learning at the Lord's Supper (Luke and John), and discussion with the disciples on the road to Emmaus (Luke). Furthermore, Jesus modified His approach in order to ensure that His listeners would be able to understand difficult and abstract principles (Williamson and Watson). His use of parables, as recorded throughout the Gospels, indicates a common means by which Jesus employed concrete experiences as a foundation for the deeper concepts He wished to convey. Perhaps most

importantly, Jesus purposefully focused His teaching on those He was instructing rather than simply on the information He was presenting.

Gregorc (1979) indicated that a teaching style-consists of a teacher's personal behaviors and the media used to transmit data to or receive it from the learner".

Dunn and Dunn (1979) claimed that teachers' teaching styles correspond to their learning styles. Based on their personal learning experiences, teachers tend to teach students how they themselves learn the best and introduce learning strategies that have benefited their own learning. The same learning strategies, however, may not work well for all of their students. Therefore, Dunn and Dunn indicated that teachers should adjust their preferred way of teaching to reach each student.

Jarvis (1985) used three classifications to identify teaching styles: (a) a didactic style which was teacher-controlled through lectures and student note taking; (b) a Socratic style which was teacher directed through the use of questions to which the students responded; and (c) a facilitative style in which the teacher prepared the learning environment and the students were responsible for their own learning. However, Van Tilburg and Heimlich (Heimlich, 1990) in an attempt to describe an individual's teaching style, defined two domains, sensitivity and inclusion. The sensitivity domain is based on the ability of the teacher to sense the shared characteristics of the learners. The inclusion domain is based on the teacher's willingness and ability to utilize instructional strategies that take advantage of the group's characteristics. An individual can be classified into one of four teaching styles based on their sensitivity and inclusion scores. The low inclusion and low sensitivity quadrant is labeled "expert". The "expert" teacher is subject oriented and tends to use the lecture method of instruction. Teachers scoring in the low inclusion and high sensitivity quadrant are termed "providers". "Providers" are learner centered and seek to teach effectively. "Providers" tend to use group discussion, demonstrations, and guided activities. The quadrant defined by high inclusion and low sensitivity is labeled "facilitator". Teachers falling into the "facilitator" category are teacher centered and the method of instruction is dictated by the subject matter. Teachers in the final quadrant with scores of high inclusion and high sensitivity are "enablers". "Enablers" are very learner-centered and the learners define both the activity and the process in the learning environment.

Gifford (1992) also studied how instructors and students viewed teaching styles. Her research participants were 34 instructors and 519 adult students. Gifford discovered that there was a disparity between faculty's and students' perceptions of teaching styles. Teaching methods also vary. Some instructors lecture, others demonstrate or discuss; some focus on rules and others on examples; some emphasize memory and others understanding. How much a given student learns in a class is governed in part by that student's native ability and prior preparation but also by the compatibility of his or her characteristic approach to learning and the instructor's characteristic approach to teaching (Felder & Henriques 1995). The way they normally teach addresses the needs of at least three of the specified learning style categories; regular use of at least some of the instructional techniques given below should suffice to cover the remaining five (Felder & Henriques 1995).

- Motivate learning As much as possible, teach new material (vocabulary, rules of grammar) in the context of situations to which the students can relate in terms of their personal and career experiences, past and anticipated, rather than simply as more material to memorize (intuitive, global, inductive).
- Balance concrete information (word definitions, rules for verb conjugation and adjective-noun agreement) (sensing) and conceptual information (syntactical and semantic patterns, comparisons and contrasts with the students' native language) (intuition) in every course at every level. The balance does not have to be equal, and in elementary courses it may be shifted heavily toward the sensing side, but there should periodically be something to capture the intuitions' interest.
- Balance structured teaching approaches that emphasize formal training (deductive, sequential) with more open-ended unstructured activities that emphasize conversation and cultural contexts of the target language (inductive, global).
- Make liberal use of visuals: Use photographs, drawings, sketches, and cartoons to illustrate and reinforce the meanings of vocabulary words. Show films, videotapes, and live dramatizations to illustrate lessons in texts (visual, global.)

Felder and Henriques (1995) claim that students retain 10 percent of what they read, 26 percent of what they hear, 30 percent of what they see, 50 percent of what they see and hear, 70 percent of what they say, and 90 percent of what they say as they do something. Thus, what must be done to achieve effective foreign language learning is to balance instructional methods, so that all learning styles are simultaneously accommodated. However, teaching styles are made up of the methods and approaches with which instructors feel most comfortable; if they tried to change to completely different approaches they would be forced to work entirely with unfamiliar, awkward, and uncomfortable methods, probably with disastrous results from the students' point of view.

Grasha (1996) supported the idea of viewing teaching style in terms of its elements. He define teaching style as several elements that teachers demonstrate in every teaching-learning moment-behaviors, roles, instructional practices, characteristics, and beliefs. He was in agreement with Dunn and Dunn and claimed that educators should modify their teaching styles so as to meet the needs of all students. Grasha also groups five teaching styles into four clusters (1996):

Cluster 1: Expert/formal authority: tends toward teacher-centered classrooms in which information is presented and students receive knowledge.

Cluster 2: Personal model/expert/formal authority is a teacher-centered approach that emphasizes modeling and demonstration. This approach encourages students to observe processes as well as content.

Cluster 3: Facilitator/personal model/expert cluster is a student-centered model for the classroom. Teachers design activities, social interactions, or problem-solving situations that allow students to practice the processes for applying course content.

Cluster 4 : Delegator expert places much of the learning burden on the students. Teachers provide complex tasks that require student initiative to complete. However, students learn in many ways-by seeing and hearing; reflecting and acting; reasoning logically and intuitively; memorizing and visualizing.

McCollin (2000) used the Principles of Adult Learning Scale (PALS) to investigate instructors' teaching styles. The PALS was also adapted to measure teaching styles as perceived by students. The sample consisted of 84 faculty members and 585 college students. The data analysis, utilizing an independent t-test, indicated a significant difference between instructors' self-perceived teaching styles and students' perceptions of teaching styles.

In another study, **Kulinna, Cothran, and Zhu (2000)** also examined teachers' perceived teaching styles. The researchers compared the results of their study with those of Cothran, Kulinna, and Ward (2000), since the latter investigated college students' views of teaching styles. The study revealed, again, that teachers' and students' perceptions of teaching styles differed significantly. Teachers used slightly more styles than students observed. The study also showed that teachers and students valued different teaching styles; however, the two groups had different opinions about which teaching styles enhanced motivation and learning.

Ford and Chen (2001) explored the relationship between matching and mismatching of instructional presentation styles with students' cognitive styles, that is, the area of matching of student and teacher styles. The results suggest that the matched-conditions group had better performance than the mismatched-conditions group only for students. To some extent, this study provides support for the effect of matching condition on learning outcomes.

Zeeb used the information obtained from assessing learning and teaching styles to help teachers modify their teaching styles to accommodate varying learning preferences, which resulted in improving students' test scores.

Farkas (2003) investigated the effect of teaching styles on two groups of seventh-grade students. Students in the experimental group preferred similar learning styles and were taught according to their preferences, while the control group was taught with a conventional teaching style. In this study, the students in the experimental group, who received a teaching style that matched their preferred learning styles, outperformed the control group academically. The experimental group also showed more positive attitudes toward learning, more understanding of people's feelings, and an increased ability to transfer what they had learned from one area to another. Researchers have classified teaching style in many ways and have considered certain teaching styles more effective in improving student learning.

Curtin (2005) studied a group of English as a Second Language (ESL) students and their teachers and categorized teaching styles as didactic and interactive. Didactic teachers make most of the decisions in the classroom, emphasize teaching the content, and put students in a passive role. On the other hand, interactive teachers allow for the diverse learning styles of their students, place much emphasis on the teaching and learning process, and expect students to be active learners. The findings of Curtin's study suggest that teachers who adopt an interactive teaching style can better meet the unique needs of their ESL students. The interactive instructors utilized more cooperative learning strategies along with numerous activities that worked best with ESL students.

Chang (2002) indicated that a constructivist teaching style affects students' perceptions toward physics teaching and learning. Chang explored views of students who were instructed with a constructivist approach and a traditional approach. Students placed more value on having the opportunity to actively participate in group discussions and to examine concepts they learned when they were taught through the constructivist approach rather than the traditional approach. The study suggested that the constructivist teaching style fosters greater flexibility in teaching, and brings about students' use of deep learning strategies (thinking and discussing) and knowledge construction.

Kim's (2005) research on teaching styles in Korea indicated that even though students who received a constructivist teaching style for nine weeks had greater use of learning strategies than those who received a traditional teaching style, there was no significant difference between learning strategies used by these two groups. More experience with the new teaching style would help determine the effect of that new teaching style. Results of research on problem-based learning (PBL) have revealed that this learner centered teaching style promotes the self-regulated skills of students.

Sungur and Tekkaya (2006) administered the Motivated Strategies for Learning Questionnaire to 61 high school students and divided them into two groups. The control group was taught using a traditional teaching style while the experimental group received a PBL approach. Teachers who utilized PBL placed emphasis on learner-centered instruction and on teaching students how to learn. The researchers found that the PBL approach positively affected learners' intrinsic goal orientation and their perceptions of learning biology. In addition, PBL students used more cognitive and metacognitive strategies than did the control-group students. The results revealed the influence of different teaching styles on students' use of learning strategies.

Norzila, Fauziah, and Parilah (2007) conducted a research for teaching styles of 175 college students by taking a questionnaire adapted from Grasha's Teaching Style Inventory (1996) to see if there were differences between students' perceptions and preferences of their English language lecturers' teaching styles. The researchers found that there were no gender differences in students' preferred and perceived teaching styles. However, students preferred

learner-centered teaching styles, whereas the most frequently used teaching styles of lecturers were teacher-centered in nature.

Boulware-Gooden, Carreker, Thornhill, and Joshi (2007) studied 119 grade three students using a pretest-posttest design with treatment and comparison groups. The purpose of the study was to determine the effectiveness of systematic direct instruction of multiple metacognitive strategies designed to assist students in comprehending text. Results showed that the intervention group improved significantly over the comparison group both in vocabulary acquisition and reading comprehension ($p < .05$). According to analyses of monitoring interventions, the studies conducted showed an average effect size of .91. This means that student performance on comprehension, recall, and vocabulary acquisition improved by 31 percentile points.

Fidalgo, Torrance, and Garcia (2008) conducted a study with 77 grade eight students using a posttest only design. The study included control and treatment groups organized from intact classrooms. Before administering the treatment, the researchers analyzed supplemental measures, such as grades, to assess group equivalency. The dependent variables included scores from student written essays and self-report survey items. Results showed statistically significant differences ($p < .05$) between the treatment and control groups on writing quality, coherence, and structure. According to results from self-report items, students in the treatment group spent more time planning for writing, but less time on actual writing at a statistically significant level ($p < .05$).

Fidalgo et al. (2008) used four stages for implementing the intervention. First, the teacher delivered explicit instruction on how to use the strategy along with an explanation of its benefits. Two mnemonics were used to prompt inclusion of writing elements such as objective, main idea, and audience. Second, the teacher modeled how to use the strategies to create a writing outline. Students duplicated the teacher's planning procedures by writing along with the teacher during this stage. In stage three, students practiced using the writing strategies with a partner. Students wrote and verbalized their thinking during the writing process, while partners observed and made suggestions. In the final stage, students rehearsed through guided and independent practice.

Similarly, **Ramdash and Zimmerman (2008)** studied the effects of training students to use self-correction strategies to improve mathematics achievement with 42 grade five and six students. The study employed a pretest-posttest with random assignment to treatment and control groups. Results showed that students in the treatment group solved long-division problems more accurately in comparison to students in the control group at a statistically significant level ($p < .05$). The intervention consisted of three phases: First, students in both groups learned a step-by-step solution strategy to solve division problems. Second, the teacher in the treatment classroom taught students how to check their answers by multiplying the quotient by the divisor and then comparing the result with the final answer. Third, students in the treatment group used a checklist to guide self-correcting procedures.

Chen (2008) developed an instrument for investigating junior high school students' perceptions of their teachers' teaching styles as part of his thesis project. He produced the Junior High School Teacher's Teaching Style Questionnaire in an effort to classify teaching styles of educators (i.e., authoritarian, democratic, laissez-faire, or indifferent), based on Sun's (2007) teachers' discipline style inventory. In his research of 1,587 students, Chen found that the most prevalent teaching style perceived by students was the indifferent teaching style. The findings of the study showed that there were significant differences between students' perceived teaching styles and their academic achievement. Students who perceived that their teachers employed an authoritarian or a democratic teaching style scored higher on tests than students who perceived a laissez-faire or an indifferent teaching style. It has been concluded that students performed better academically if they felt that their teacher established rules to manage their learning, but at the same time listened to students' opinions toward learning and gave them feedback. Several research studies have been conducted to determine if there are differences between teachers' and students' perceptions of teaching styles.

Tracy et al. (2009) organized the intervention into four stages, including *developing background knowledge*, *discuss it*, *model it*, and *support*. During the backgroundknowledge phase, students learned two mnemonics for planning and organizing writing. In addition, students verbalized their understanding as they answered questions about story elements. In the discussion phase, the teacher modeled and practiced identifying story parts and discussed these aloud with students. Students also graphed the number of parts shown in their stories using colors and numbers to correspond to specific elements. In the modeling phase, the teacher led students through guided practice to write a story. Furthermore, the teacher used verbalizing and a graphic organizer to model procedures. In the support phase, students wrote stories and used goal setting to prompt inclusion of story elements. Last, students checked that they had included all of the story parts by coloring squares on a diagram.

In a similar study, Tracy, Reid, and Graham (2009) examined the effects of self-regulation strategies on 127 grade three students. This study used intact classrooms with a pretest-posttest, treatment and control group design. The dependent variable consisted of scores on student written stories. Results showed that students in the treatment condition wrote more words and earned higher scores on story elements, such as setting, characters, and main idea, at a statistically significant level ($p < .01$) in comparison to students in the control group.

Hughes (2009) researched the relationships between teaching styles perceived by students and teaching styles adopted by instructors. A total of 117 students participated in the study and were put into either a control group or an experimental group. The instructor taught control-group students pre-calculus with a conventional lecture-based approach. On the other hand, two instructors in the experimental group adopted a teaching style that increased student

involvement; they also provided real-life examples and sufficient time for students to learn a concept by asking questions. The results showed a significant difference in students' perceptions of teaching styles between the control group and experimental group. The results also revealed that students felt they learned better when instructors employed a teaching style that was more interactive than when instructors adopted a conventional lecture style.

Huff and Nietfeld (2009) examined the effects of reading comprehension monitoring strategies on 118 grade five students. A pretest and posttest was administered to treatment, comparison, and control groups organized from intact classrooms. Results showed that students who received training in comprehension monitoring were more confident in their responses to reading comprehension questions, according to Likert-type self-report items, at a statistically significant level ($p < .01$).

Reynolds and Perin (2009) used a pretest-posttest design with intact classrooms assigned to treatment and comparison groups to study the effects of summarizing text. The study was conducted with 121 students in grade seven social studies. They found that students in the treatment group scored higher on a test covering content-specific reading passages at a statistically significant level ($p < .01$).

Unlike previous studies examined in this review, the studies by Zirkle and Ellis (2010) and **Ramdass and Zimmerman (2008)** lasted less than three days and intervention training lasted between 10 and 45 minutes. However, the average *ES* calculated from the two studies was .71, which would result in an increase of 26 percentile points for students using evaluating strategies on similar recall and mathematics problem solving tasks.

Dunn et al. (2009) asserted that valid and reliable instruments are available for assessing the learning styles of students of all ages; additionally, they claimed educators can effectively utilize results gathered from such assessments to develop instructional lessons that are responsive to student needs. Meeting the needs of students is essential if educators are to make substantial progress toward the goal of developing lifelong learners.

Zirkle and Ellis (2010) studied the effects of spaced repetition with self-testing as a way to increase long-term memory of geographic place-names on a map of Middle America. The study was conducted with 69 grade six students using a pretest-posttest design with intact classrooms assigned to treatment and comparison groups. Results showed that students in the treatment group scored higher on a test which assessed their ability to accurately recall place-names on a map at a statistically significant level ($p < .01$). The intervention consisted of two parts. First, the teacher identified locations on a map through direct instruction. Second, students practiced locating place-names for themselves. However, during practice sessions, students also engaged in self-testing. Students were instructed to examine the map key, which was printed on the back side of a blank practice map, in order to refresh their memory and complete the practice session. **Brunstein and Glaser (2011)** studied the effects of self-regulation strategies on 117 grade four students using pretest-posttest design with intact classrooms assigned to a treatment and comparison condition. The dependent variable measured characteristics of students' writing. Results showed that students in the treatment group scored higher across writing measures, such as story plans, text revisions, and story quality at a statistically significant level ($p < .001$).

Brunstein and Glaser (2011), Tracy et al. (2009), and Fidalgo et al. (2008) showed effect sizes of .85, .39, and .69, respectively. The average *ES* of the three studies was .62. This means that using the planning strategies described in these studies improved student writing quality by 23 percentile points. One interpretation of these results is that a student scoring at the 50th percentile on writing quality measures would be predicted to score at about the 73rd percentile after intervention. Table 2 shows a summary of the effects of planning strategies on student achievement as it relates to writing quality.

Multisensory techniques enable students to use their personal areas of strength to help them learn. They can range from simple to complex, depending on the needs of the student and the task at hand. Multisensory techniques that stimulate visual reasoning and learning are called visual techniques. Those techniques that focus on sound and stimulate verbal reasoning are called auditory techniques. Multisensory techniques that involve using body movement are called Kinesthetic Methods (Logsdon 2009). For instance, the visual teaching methods include strategies such as using text or pictures on paper, posters, models, projection screens, or computers, student-created art, and images. Auditory techniques include strategies such as using hearing aids, video, film, or multi-image media with accompanying audio; and music, song, instruments, speaking, rhymes, chants, and language games. Moreover, multisensory methods involve games such as jumping rope, clapping, stomping or other movements paired with activities while counting, and singing songs related to concepts. Generally speaking, students learn more when information is presented in a variety of modes than when only a single mode is used. The point is supported by a research study carried out several decades ago.

Therefore, rather than select a specific model and conduct further research in an attempt to define or support the existence of such a model, it was my desire to adopt an eclectic understanding of learning style theory and instead focus on practical application in teaching and learning. The theoretical framework of the current study, then, incorporated a variety of learning style theories from both the Approaches of Learning Style and Teaching Strategies as attempted to explore "*Effectiveness of Selected Teaching Strategies in Relation to the Learning Styles of Secondary School Students*". In this research work, researcher intended to utilize an assessment tool that measures a broad range of learning styles, rather than adopting an instrument specific to a particular model or theory. Further, an eclectic approach enabled us to keep an open mind about the variety of learning styles and accommodating instructional/Teaching strategies and the relationships that may exist between the two. The results of such a study can be particularly

beneficial for promoting and guiding further research as well as leading to the development of a practical system for increasing instructional effectiveness and enhancing students' learning.

2.3 Research Studies on English Language Teaching

Rockwood H. (1989) suggested that teachers and authors should give the passive more room in their upper level classes and texts because its role in Business German is significant. Although more research on cognitive patterns might suggest a better way to introduce the specific thought patterns or sociolinguistic contents the passive conveys, people in the field should at least experiment with contextually motivated ways of practicing it. Some teaching materials developed by one instructor are discussed, many of which use authentic German materials.

Cajkler Wasył Addelman Ron (1994) carried out a study on "*The Practice of Foreign Language Teaching*". This book on aspects of modern foreign language teaching is written for trainee, new, and experienced teachers of students aged 11-16 and is intended as a practical source of information. The discussion of specific teaching issues includes implications for classroom practice.

Rivers W.M. E. (1995) stated that a group of inventive writers and teachers had pronounced their own approaches and techniques for language teaching, which may be helpful for classroom teachers taking language classes more communication and participatory oriented.

Berkson Alan et. al. (1996) carried out a study on "*Scope and Sequence for High School English as a Second Language Instruction*". The scope and sequence for high school English-as-a-Second-Language (ESL) instruction outlines the goals, objectives, skills, and assessment techniques for an integrated, holistic curriculum for the ESL program found in most Chicago public high schools.

Olbert Sharon et. al. (1998) carried out a study on "*What Works for Me*" which contained specific teaching ideas of six writing teachers at community or four-year colleges. Includes suggestions on teaching grammar and punctuation, eliminating plagiarism, defining technical writing, and writing character analyses.

Paul S. (1999) carried out a study on "*Pantomime as an L2 Classroom Strategy*" discussed the use of pantomime to arouse student interest and promote foreign language acquisition, providing several examples demonstrating the inclusion of mimetic activities for teaching about culture and grammar, introducing new vocabulary, and testing.

Hinkel E. (1999) in his survey on "*L2 Tense and Time Reference*" suggested that grammar teaching employing explanations of time accepted in English-speaking communities to explain meanings and usages of English tenses can limit learner understanding.

Si Qing Chen (2000) in his research on "*A Challenge to the Exclusive Adoption of the Communicative Approach in China*" The merits and weaknesses of major language teaching methods in China are examined, along with the characteristics of Mandarin, Chinese students' learning disposition, and current social needs. An eclectic approach to teaching, including the grammar translation method, is advocated over the communicative approach.

Tschirner Erwin (2000) in the article on "*From Input to Output: Communication-Based Teaching Techniques*" had described communication-based teaching strategies, which may be helpful for German language students from input to output in a inspiring and encouraging learning atmosphere. Input activities are furthermost valuable for presenting vocabulary, speech acts and grammar, while output activities are useful for fine-tuning of vocabulary, speech acts and grammar as well as for expanding students' productive skills.

Safnil (2001) carried out a study on "*Techniques of Dealing with Large English Classes*". Most secondary school English classes in Indonesia are large, often with 40-60 students of mixed ability. Classroom management and student motivation are difficult issues for teachers. This article reviews various techniques to solve the problems, including teaching aids, group work, and group communicative grammar teaching.

Williams James D (2001) carried out a study on "*Rule-Governed Approaches to Language and Composition*" described the transformational-generative model of grammar and discusses how this theory has influenced composition teaching and theory. Outlines a new model of language being developed by cognitive scientists and how this model might inform composition in the future. (HB)

Etter Fran Crabb Joan M (2002) carried out a study on "*What Works for Me*" described teaching methods and techniques found to be useful by practicing teachers, including "Using 'What Works for Me'"; and "Song Lyrics to Teach Grammar."

Chastain Kenneth (2002) in his investigation on "*Meaning in Second Language Learning and Teaching*" concluded that the role of grammar rules and their relationship to language learning, teaching and communicating are attempt to stimulate language teachers to examine the approach for teaching grammar rules.

Arey M. J. (2004) in his research on "*French Films: Pre-Texts for Teaching Syntax*" commented on an experiment on teaching grammar that the use of proficiency-based approach for teaching uses films as texts that provide a visual, cultural and linguistic context for class functions.

Green J. M. et. al. (2005) carried out a study on "*What Works for Me*" described teaching methods and techniques found to be useful by practicing teachers, including midsemester written evaluations of teachers by students; telephone conversations and poetry; reading journals and assigned reading materials; grammar handbooks aimed at students, not teachers; and student conferences with their writing teachers.

Winter J. K. and Winter E.J. (2006) in his investigation on "*Adapting Composition Theory to the Business*"

Communication Course examined nine of the most widely accepted tenants of composition theory to derive approaches for teaching business communication. Discusses grammar, correcting, positive feedback, evaluation and written comments, quality versus quantity, self-evaluation, reading, planning and prewriting, and active involvement. (SR)

Jones Nathan B (2006) carried out a study on "*Business Writing, Chinese Students, and Communicative Language Teaching*" taking a sample size of 60 Taiwanese graduate students who are studying English as a Second Language in a business writing course with respect to communicative language teaching (CLT) and traditional activities. It has been observed that combination of traditional, grammar-based instruction and communicative language teaching questioned the value of student journals and peer editing.

Cross David (2006) in his thesis on "*Formal Instruction in Language Teaching Programmes*" focused on the teaching of English language and observed that optimum three-way split between grammar-awareness raising, formal language work, and communicative activities and these ways vary from class to class.

Maestri Franca (2007) carried out a study on "*Exploring Structure and Discovering Meaning*" overviewed the communicative approach and traditional grammar-based language lesson for teaching languages. It has been concluded that adopting a less prescriptive approach to the formal system of the language and bit by bit coaching students to ascertain the written text as another style of interaction can contribute to developing a sensitivity for the implications of language in use.

Lang-Frederick K. and Moser Janet (2008) carried out a study on "*Parallel Courses: Preparing Native and Non-Native Students for Freshman Composition*" described a method of teaching basic writing to native and nonnative students that emphasizes a regression to the most basic elements of writing. Considers what writing content, rhetorical techniques, grammar exercises, and proofreading methods are most effective for the two groups.

Baskin Rory S (2008) conducted a research study on "*Japan: Learning English and Learning about English*" described a movement in Japan that is taking English teaching from an out-of-context grammar and vocabulary emphasis to a conversational and contextual emphasis. Shows specific approaches that feature student-centered work as opposed to teacher-imposed exercises.

Thompson Geoff (2009) in his investigation on "*some Misconceptions about Communicative Language Teaching*" presented four misconceptions surrounding communicative language teaching (CLT) and discusses the reasons for their existence. These delusions are: (i) CLT means teaching only speaking; (ii) CLT means not teaching grammar; (iii) CLT means expecting too much from the teacher and (iv) CLT means pair work, which means role play.

Schwind Camilla-B (2009) in his research on "*Error Analysis and Explanation in Knowledge Based Language Tutoring*" presented an outline for dealing with mistakes in natural language sentences within the framework of automated second-language teaching and has observed that by clearly defining an error and analyzing the source of error, it is possible to describe various types of errors in an unchanging structure.

3. SIGNIFICANCE AND CRITICAL INSINUATIONS BASED ON STUDIES REVIEWED

It is very much clear from the above discussion of the reviews that learning styles has a great role and influence on the learning of the students. Also, if the teaching strategy can be taken as per the need of the learning style of the students, it may certainly contribute to the better learning among the students. So, such type of research work, which the researcher is going to undertake may be of great importance for the education field. It is understood that the learners can learn tenses and modals if the learning situation is something different. Stories are liked by all, especially short stories. These stories are read and understood when the tenses and modals are used in appropriate places and tenses and modals in the context of conversation passengers. If such learning situation are provided and the teachers present the materials suitably for the learning of tenses and modals, it would enhance learning of English grammar at higher secondary level.

Creating multi-sensory lessons that help students focus on the material at hand is a helpful way to meet this goal. These activities will be that the student has a visual memory from seeing materials, an auditory memory from hearing the sound it makes, and a kinetic memory from having body movement. When planning a unit, the teacher should try to check to be certain that he or she includes elements like movement activity, pictures, tape recorder and so on. In order to meet diverse needs from individual students, many multi-sensory activities need to be presented at once.

It was studied that all other strategies used in teaching grammar at higher secondary level might not how yielded the desired result. So, the investigator tried to have some other selected strategies, like story letting and conversation passages, to teach tenses and modals to enhance learning of English grammar at higher secondary levels. The review of the study rendered how the researchers and experimenters, had attempted to enhance the learning of English language. English grammar and especially learning of tenses and modals. Though many had done several attempts, enhancing learning of tenses and modals at higher secondary have not yielded desired result. A fresh look is needed to find some new approach or method of teaching grammar especially tenses and modals.

4. CONCLUSION

The authors have successfully presented the extensive literature review of teaching practices and learning strategies in higher and secondary education scenario. A review at the literature pertaining to the learning style preferences of the students reveal that, most of the researches have taken into account personality, cognitive ability, learning environment as the associate variable. However, not a single study could be reported to check the effectiveness of selected teaching strategies in relation to the Learning Styles of Secondary School Students jointly. Through few studies have been conducted on exploration of learning styles of the students of primary school level, none has tackle the pair of conducting any research study taking into account learning styles and Teaching Strategies and to apply the selected teaching strategies. However most of the studies conducted earlier have tried to focus on determining the personality, correlates of learning styles based on the motivations characteristics. Literature reveals that though many researches have been conducted abroad on learning styles, but studies in India on this variable is sketchy. Most of the studies conducted on learning styles have taken personality characteristics, learning environment, motivations traits, locus of control as the conjoint variable. However not a single study on Secondary school students have been conducted in India for exploring the effectiveness of selected teaching strategies in relation to their learning styles preferences. Studies of learning styles preferences of the Primary students though are conducted abroad but these studies have not focuses on secondary school students. Hence, the further research studies can be used to explore the effectiveness of selected teaching for learning styles of secondary school students.

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