Measuring earthquake waves

The first instrument for recording earthquakes was built by the Chinese scientist Zhang Heng in the second century A.D. The original instrument did not survive and we only know of it from contemporary descriptions. It was a huge device about 2 m (6 ft) across and built of bronze. It could record earthquakes too slight to be noticed otherwise. The device could also tell roughly which direction the quake had come from. But because it gave no more information, we now call it a seismoscope. Not until 1856, soon after the discovery of electricity, was a more sophisticated earthquake recorder invented. Built by the Italian Luigi Palmieri, it is a seismograph, a device that writes a permanent trace—known as a seismogram—of the earthquake shaking. It was also set up to measure the overall size of the earthquake shaking (pp. 48-49).

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## CHAPTER II
### REVIEW OF RELATED LITERATURE

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CHAPTER – II

REVIEW OF RELATED LITERATURE

"Since effective research is based upon past knowledge, a review of related literature helps to eliminate the duplication of what has been done and provides useful hypothesis and helpful suggestions for significant investigation. A summary of the writing of recognized authorities and of previous research provides evidence that the researcher is familiar with what is already known and what is still unknown and untested".


A study of related literature allows the researcher to acquaint himself with current knowledge in the area where he proposes to do research. It cautions the researcher not to select unworthy and unfruitful problems. It helps the researcher to avoid unintentional duplication of well-established theories. The review of literature provides the investigator with an opportunity to gain insights into the measures, objects, samples, tools and approaches employed by other research scholars. Walter R.Bory Says, “The literature in any field forms the foundation upon which all future work will be built”. In the words of Carter V.Good, “The keys to the vast store house of related literature may open doors to the source of significant problems and hypothesis and provide helpful orientation for definition of the terms, backwoods for selection of procedure and comparative data for retention of results. In order to be truly creative and original, one must have intensively and critically thinking”. The literature review also helps the investigator to study the different stage of the problem. It enables the investigator to identify the research gaps in order to create new ground in research. So based on review of previous research in relevant area of the present study was attempted and presented in an order.
2.1 STUDIES ON PERCEPTION

DAI (2007) perception and practice of instructional designers towards the use of constructionist learning environments as online course design – Morals/Charles. R. Capella University. Online education in their education continues to grow rapidly while its credibility is solidified this study explored the practice and perceptions of instructional designers towards the use of constructivist instructs principles in online learning course design. The exploration of instructional designer’s practices and perceptions regarding constructivist learning environments looked at the frequency of use, the place during of the design process during which construct principles were incorporated the type and number of activities included precious, and it significance and pertinence to students learning. A web based questionnaire was administered to instructional designers who subscribed to two professional list serves. Sloan. C. and Educause: Instructional technologies (INSTTECH) the result of the web questionnaire were used to determine whether there were differences in perceptions and practice regarding the use of constructivist principles in online course design. This study’s results instructional design process by instructional design the finding of this study should provide instructional designers and course envelopers a better understanding of the significance of incorporating constructionist learning into online course design.

Zhang, Shaoan (2007) had revealed that situating teacher self-disclosure within a curriculum and instruction context, this research explored preservice and k-12 in-service teachers perception of appropriateness of teacher self-disclosure of the informal curriculum as well as an instrumental tool. The following research questions were explored.

- Is there any difference among pre-service teachers and k-12 in-service teacher in their perceptions of appropriateness of teacher self-disclosure?
- Is there any difference between preservice teacher and k-12 in-service teachers in their perceptions of appropriateness of teacher disclosure
- Is there any difference among k-12 in-service teacher in the replication of teacher disclosure
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- Is there any difference among pre-service teachers and k-12 in-service teacher in their perceptions of effects of teacher self-disclosure on teaching effectiveness?
- Is there any difference between pre-service teachers and k-12 in-service teachers in their perceptions of effects of teacher self-disclosure on teaching effectiveness?

Data from 180 pre-service teachers and 135 K-12 in-service teachers were analyzed. Descriptive and inferential analyses were used to examine the dimensions and items in each survey. One way ANOVAS were conducted to investigate the difference across different levels of K-12 in-service teachers gender, ethnic group, grade level of teaching (elementary, junior, and high school), type of teaching (general and special education), years of teaching, and award status in the perceptions and application of teacher self-disclosure. Results of the study indicated:

- Difference in K-12 in-service teacher perceptions of appropriateness of teacher self-disclosure topics across grade level of teaching,
- Difference in K-12 in-service teachers consideration of students while using teacher self-disclosure across gender and years of teaching and difference topics and in appropriate purpose across grade levels of teaching.
- No difference in in-service teachers perhaps of appropriateness of teacher self-disclosure across gender, ethnic group, type of education, years of teaching, and award status.
- No difference in in-service teachers or pre-service teachers perceptions of teaching effectiveness across selected demography variables.

Independent samples 't' tests were conducted to examine the differences appropriateness of teacher self-disclose and its teaching effectiveness. Significant differences were identified in perceptions of appropriate topics and inappropriate purposes of teacher self-disclose. Significant differences were identified in two group so perceptions of effects of teacher self-disclose on student learning effects and classroom participation and classroom behavior and descriptive analysis were provided to reveal the differences in criereemcc teachers and k-12 pre same teachers.
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Bendito, Petronio Alex and Rino (2006) Northern Illinois University examined the role of symbol system in perceptions and in processes used to carry out colour design tasks. There is a heightened interest in computer based colour design education as artists and desires are increasingly using computer technology as a tool to create their works. Little attention has been given to the nature of the process involving digital colour palettes and the impact they have in instructional colour design tasks, especially form the perspective of instructional technology and media attributes studies. The goal of this research is to present a comprehensible understanding of how media attributes, specifically symbol systems impact the process students use to carry out colour design tasks and students. Perceptions associated with the use of that symbol system. Further more, this research seeks to provide ground work for studies focusing on lower and higher order color design skills. In order to achieve this research goal, qualitative analyses win made of four participants factional strategies and perceptions in association with a series of fundamental colors design tasks, ranging form color matching to color compassion design. Two distinct symbol system (RGB) and hue color palettes) were employed and soured as basis for comparison. Based on the analysis, a color matching and color selection procedural model and typology of color strategy styles were constructed. It was found that the symbol systems used to perform the tasks impacted participant’s mental elaborations, the ability to predict the outcome of color matching and color selection decisions, judgments in regard to time sent on task, and comprehension level associated with there predisposition to facilitate reasoned decisions or guessing participations, perceptions of how the symbol systems would impact the completion of higher order color design tasks were categorized into your themes. Overall experience, searching and predictability, perceptual organization, mapping and higher order color design tasks impact. The findings have implications of instructional technology and media attitudes suited as they jester the under standing of symbol systems and the role they play on color design decision and perception on a practical level this study also has implications on issues related to the use of color love, its study also has implications on issues related to the use of color palette interfacing systems for teaching and learning color design concepts.
Wright, John Douglas (2006) University of West Georgia undertaken study on exploring the relationships among dispositions associated with teacher effectiveness and indicators of student learning: a perceptual psychology theory approach. The primary purpose of this study was to use perceptual psychology theory to examine teacher dispositions associated with effectiveness or ineffective and determine whether there are relationships among these dispositions, student. Perceptions of teachers, and student learning. Four dimension of dispositions associated with teacher effectives were studies. Perceptions of self as identified, perceptions of student as able, perceptions of the purpose of education as larger, ad a frame of reference at its people oriented. More specifically, this study sought to determine if there are links among these four perceptual dimensions of dispositions associated with effectiveness, as measured by teacher human relation incidents (HRI) interviews; student perceptions of teacher effectiveness, as measured by the student perceptions of teachers quick check scale (SPTQCS) and student learning, as measured by scores on Georgia end of course Tests (EOCT) and final grades in classes that require an EOCT. The participants included 21 teachers of regular education classes and the 1335 student they taught form grades 9-12 in one Georgia high school. Pearson product-moment correlation analysis demonstrated significant positive relationships between teacher disposition associated with effectiveness and student learning variables, and between teacher dispositions associated with effectives and student perception of teacher effectiveness. Correlations yielding significance were also found between student learning variables and dimensions measured by HRI and SPTQCS scores. A series of one way ANOVAS based of student and teacher demographics yielded significant group differences associated with SPTQCS scores in relation to student gender, race of ethnic group, age, grade level, and socioeconomic status, and teacher gender, race, age, education, experience, and subject taught. Simultaneous multiple regression analysis suggested that teacher dispositions associated with effectiveness were significant predictors of the variance in student achievement in this study. These findings have implications for the hiring practices of school systems, the preparation of student teachers, and the further study ad better understanding of teacher dispositions associated with effectiveness. Means of strengthening the analysis of dispositions associated with
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teacher effectiveness and exploring the extent to which dispositions can be developed or changed are suggested for further research.

Westlake, Laura. L. Marquardt (2005) studies Effectiveness of five visions Screening Instruments for Detecting Possible Amblyogenetics factors in young children. It is documented that 69% of children have their first vision screening upon entering opportunity for the development of the visual screening is not in the best interest a child’s overall development well being.

Feng — Ming Tsao es al (2004) conducted study on speech perception in infancy predicts language development in the second year of life: A longitudinal study. They took 28 samples consisting 14 boys and 14 girls who are infants. They used parents for socio-economic study, 7 point scale, co relational analysis and descriptive statistical analysis. The findings of this study were consistent with the idea that phonetic perception plays a critical role in the early phases of language acquisition. Early measures of speech discrimination may provide information helpful to the early detection of infants at risk for language difficulties.

Haigh, Martin. J. Kilmartin, M. Ariann. P. (2000) examined that student perception of the development of personal transferable skills compare the perceptions of first year British college students, third year students and the staff on the teaching practice and assessment of personal transferable skills with in a geography program. Reveals that the staff and student agree that personal transferable skills should be taught but finds a variety of discrepancies among the three groups over all perception.

Lubjojacing, Bedrich, Duzi, Pavel, Cova, Michancla (1998) stated that some ways of acquiring space perception is necessary for work in branches of technology form the machine industry of civil electrical. The perception of our life a flat such as viewed on Television. As for teaching geometry it is maintained renew its importance by better using present curricula. Visualizing three dimensional objects and functions by a computer is the latest highly effective method. The concept of the third dimension is met when working with a map in geography as well as in everyday life. The new method using a 'maintain attitude measure' based on its comparison with a referential mountain.
Dimentes, Thomas, Williams, Marium (1997) exclaimed that the perceptive Eye and Ear game revealed that the game — format instructional strategy of administrator development based on a modified case method. The game strategy used is the perceptive eye/ear game. The game questions used were ear game. The game samples in the principal Licensure Assessment prepared by the council of chief state school officers.

Baca, Judy Clark. (1992) stated visual communications bridging across cultures selected reading from the annual conference of the international visual literacy association- US-Virginia. Visual effects on attitude and cognition. Event of deferent field dependence levels modern – design, and non modern design on reader perception. Visual activities to impact cognitive improving creativity and logical reasoning. Evaluation, publishing technology pixels sign dictionary graphics, learner characteristics and deaf adult literacy. Baker R.A. Hansford B.C. examined that “An evaluation of a two week teaching trail using interactive, video technology perception of students and staff. There are 78 samples are involved in this study. Data were obtained using a series of Likert scale items and open ended questions completed after each instructional session by three groups. Just over half of the internal students regarded the interactive video classes as fairly useful while quarter of them thought the classes were at very useful.

Tabulawa Richard. (1990) stated that teacher’s perception in class room practice help the geography teacher in Bostwana about school knowledge in goals of teaching and learning their perceptions of students. The ways the teacher’s assumptions impact their classroom knowledge and techniques.

The Wycoming Early Childhood Vision Project (WECVP) focuses on factors that may lead to or cause amblyopia (lazy eye) the purpose of this research project was to determine which vision screening tools were the most effective in identifying possible vision difficulties. The research question was: which of the five vision screening tools or combination of vision screening tools has the greatest predictive value positive in identifying amblyogenetic factors in young children”. The research project has a study population of 11, 371 children who received a vision screening in 2002 to 2004. Children six months to three years of age completed the photo screener and external observation activities. Children 37 months to six years of age completed the photo screener, external
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observation, stereo sis, near acuity and distance acuity vision screening activities, were referred to analyze care professional and received a comprehensive examination, and the remits were shared with the project. Two of the vision screening tools: Photo screener and distance acuity proved to have the strongest ability to predict possible amblyogenetic factors in young children. Four major implications for improvement in the vision projects were: The more instruments used, the less likely a child with a vision problem will be missed. Additional training for vision screening personnel is needed. A more consistent Standard among eye care professionals in completing exams is needed. Eye care professionals and primary care providers need a more preventative attitude.

2.2 STUDIES ON PERCEPTIVE THINKING SKILLS

Perceptive thinking skills are most important outcomes which would result form geography teaching. Social science teachers and geography educators are aware of the need for valid and reliable research on the measurements of perceptive thinking skills, its influence on certain school achievements and its development. There is much literature on perceptive thinking skills but it is mainly concerned with defining and developing it, not on meaning it in various groups of people. More work on the measurement of Perceptive thinking skills at primary, upper primary and higher secondary levels are needed.

Dai (2006) studied the roles of thinking styles in learning and achievement among chinese university student. He, Yungeng, University of Hong Kong). The present research examines the roles of thinking style sin learning and achievement among Chinese university student. It is based on Sternberg’s theory of mental self-government. (Sternberg., 1988, 1977) that proposed 13 thinking styles which have been subsequently reconceptualized into three type types I II +III) by Zhang and Sternberg three studies were conducted study 1 and study 2 quantitatively examined the roles of thinking styles in academic achievement while ability and personality traits one statically controlled; and study 3 Qualitatively cross validated the results from the studies 1 and 2 and explored if and how students made use of thinking styles in the course of learning participants were undergraduates from a university in shanghai, mainland China, study 1 involved 223 first year students study 2 was conducted among 504 students of all four academic years
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and 10 teachers forty five students participated in four groups discussions in study 3 were made based on the notion of style type. In the quantitative studies four instruments for were used the thinking styles inventory (Sternberg & Wagner, 1992) the NEO five factor inventory (Costa & McCrae, 1992a) the Raven’s Advanced programme matrices (Raven, 1998) and the style correlates inventory (designed by the present research) teacher responded to the thinking styles in teaching Inventory Grigorenko & Sternberg, 1993q) the style correlates inventory has two dimensions: things and people. Data analysis of study were conducted at the level of individual styles, data analysis of study 2 were undertaken at the level of style types quantitative result indicated that he predicted significant relationships of student achievement with thinking styles ability and personality traits were not supposed to explain these results the researcher argued that the student academic grades might not be valid indicator of their achievement. Such assignment was also confirmed by the data form the group interviews. The four main hypotheses in the qualitative study were supported 1. students of type II styles (styles that convey a norm —conforming tendency) perceived the roles of thinking styles in learning more often than did student of type-I styles (Styles that are creativity generating 2. student of type 1 styles preferred to make efforts to match their teachers, teaching styles more than did student of type II styles 3. the things dimensions tended to be correlated with students stylistic development and changes significantly more that did the people dimension and student stylistic development and changes significantly more than did the people dimension and 41 students of type I styles appeared to have higher level of style awareness and higher degree of flexibility than did student with type II styles the limitation and major implications of the present research are discussed. Directions for further studies are put forward.

Dai (2006) the roles of thinking styles in learning and achievement among chine’s university student. He, Yungeng, University of Hong Kong). The present research examines the roles of thinking style sin learning and achievement among Chinese university student. It is based on Sternberg’s theory of mental self-government. (Sternberg,, 1988, 1977) that proposed 13 thinking styles which have been subsequently reconceptualized into three type types I II +III) by Zhang and Sternberg (Zhang 2002) three studies were conducted study I and study 2 quantitatively examined the roles of
thinking styles in academic achievement while ability and personality traits one statically controlled; and study 3 Qualitatively cross validated the results from the studies 1 and 2 and explored if and how students made use of thinking styles in the course of learning participants were undergraduates from a university in Shanghai, mainland China, study 1 involved 223 first year students study 2 was conducted among 504 students of all four academic years and 10 teachers forty five students participated in four groups discussions in study 3 were made based on the notion of style type. In the quantitative studies four instruments for were used the thinking styles inventory (Sternberg & Wagner, 1992) the NEO five factor inventory (Costa & McCrae, 1992) the Raven’s Advanced programme matrices (Raven, 1998) and the style correlates inventory (designed by the present research) teacher responded to the thinking styles in teaching Inventory Grigorenko & Sternberg, 1993) the style correlates inventory has two dimensions: things and people. Data analysis of study were conducted at the level of individual styles, data analysis of study 2 were undertaken at the level of style types quantitative result indicated that he predicted significant relationships of student achievement with thinking styles ability and personality traits were not supposed to explain these results the researcher argued that the student academic grades might not be valid indicator of their achievement. Such assignment was also confirmed by the data form the group interviews. The four main hypotheses in the qualitative study were supported 1. students of type II styles (styles that convey a norm —conforming tendency) perceived the roles of thinking styles in learning more often than did student of type-I styles (Styles that are creativity generating 2. student of type I styles preferred to make efforts to match their teachers, teaching styles more than did student of type II styles 3. the things dimensions tended to be correlated with students stylistic development and changes significantly more that did the people dimension and student stylistic development and changes significantly more than did the people dimension and 41 students of type I styles appeared to have higher level of style awareness and higher degree of flexibility than did student with type II styles the limitation and major implications of the present research are discussed. Directions for further studies are put forward.
Hansler, D. D. (2005) worked in studies on the "Effectiveness of the Cognition Enhancement Techniques for Teaching Thinking Skills" has found elementary and higher secondary students of New York demonstrated their cognitive enhancement and also their skills are very effective one.

Clennis, F. (2002) studied on an historical, perceptive, and Qualitative analysis of the taxes academic skills’ and he found student of community, technical and urban college with special reference to their impact on academic skills, the study revealed the following.

Rao, Zhenhui (2002) made a study on Chinese student perceptions of communicative and non-communicative skills. The study revealed that language courses results reveal the student 2 1/2 x 2 1/2 feet (scale) perceptions sometime surprised their teachers and student perceived difficulties caused by communicative compare teaching had their source in difference between the teachings had their source in differences between the underlying educational theories of china and we4stern countries.

Akhani, Panna,, Rathi, Nanda and Jasore, Meera (1999) have made a study on “Academic achievement studying habits and loneliness of children of employed and unemployed mother the major findings were (i) In the area of comprehension, children of employed mothers had better ability than children of unemployed mother where as in the area of concentration tasks orientation, sets, interaction, supports, recording, language and drilling there was no difference in ability (ii) Mothers, Employment do not deteriorate the children’s academic achievement. (iii) Children of employed mother faced more loneliness then the children of unemployed mother especially boys.

Fresemen R. D. (1999) studied on “Improving high order thinking of middle school geography students teaching skills directly”. The findings were that some samples were very positive; some samples were effective in achievement when opportunity is provided for the analysis of problem solving using divergent thinking.

Gough Kathaleen Cotton (1999) made a study in “Teaching thinking skills” and stated that the 21 samples show the intellectual growth and foster academic achievement. Some samples are rapidly changed.
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Haigh, Martin. J. Kilmartin, Marlance. P. (1999) studied on “Student perceptions of the development of personal transferable skills” Comparison the perception of first and third year college students, and staff on the teaching, practice, and assessment of personal transferable skills within a geography program. The study reveals that the staff and student agree that personal transferable skills should be taught but finds a variety of discrepancies among the three groups overall perception.

Barkhuizen, Gary. P (1998) hypothesized that the study Discovering learners perceptions of ESL Classroom teaching /Learning the school student perceptions of classroom activities in terms of their feelings toward the activities as well as their value in current and future learning using questionnaires, interview observations, results found that the learner perceptions often surprised their teachers particularly the student preference for more mechanical learning activities.

Chandra Lekha (1998) Under took a comparative study of the continuous achievement of higher secondary students in mathematics physics and chemistry in class XI and class XII the findings of the study were Girls scored better then boys, urban student scored better than rural students, Matriculation students scored better than government school students.

Tabulawa, Richard (1998) worked in the study of “Teacher perceptive on classroom practice in Botswana implication for pedagogical change” explores the assumptions held by geography teachers in Botswana about school knowledge the goals of teaching and learning, there thinking skills with perceptions of student and the techniques.

Bender, Luscher (1997) worked in the perceptive domain, there are also recent and very important contributions form Lynn Kearny are smith on studying perceptive problems and distracting factors in the work place performance improvement begins with us.

Lade Adeyquju (1997) worked in “Teachers perception of the effects and use of learning aids in teaching” has found that the 80 high school teachers of seemed to have reduced their chalk and talk method. Due to Campus Teaching Practice (OCTP), School Attachment Programme (SAP) Militating exercises are enhanced the samples achievement.
Michel (1997) present resources that represent the first large-scale long term test on the process of raising standards in schools by concentrate on a thinking skills approach.

Richard (1997) is his study points out that seventy seven percent of responses provided limited or not conceptions of reconcile content coverage with the fostering of critical thinking. An alter analysis of exemplary practices in teaching critical thinking shows that teachers actually do not teach critical thinking, but simply assumes that they intuitively grasp its concepts and teach prints.


Tickoo, Sangeetha and Jagdish (1997) made a study to deign the relationship between achievement motivation and mental health among school student of grade X in senior secondary school of Agra city. The major findings were Achievement motivation was positively related to all the dimensions of mental health except. Perception or reality and environmental mastery. Achievement motivation was positively related to overall mental health.

Dewishpelaere (1996) made a study about improving students higher-order thinking skills through the use of graphic organizers. Analysis should that the students lack knowledge, practice and transfer of higher order skills, regardless of the skills being taught in isolation or integrated the curriculum.

Mary Ellen and Dana (1996) made a study on the effect of grouping and instructional strategies on conceptual understanding and critical thinking skills in the secondary school classroom. There is no significant effect were found for critical thinking.

Varalakshmi. B. (1996) in her study on the relationship between self concept and achievement of higher secondary students with the objectives of Finding the difference the self-concept of Boys and girls, Urban and rural students, Government and private students. Finding the relationship between self-concept and achievement of higher secondary student has revealed that: There is positive self concept and significant relationship between and achievement of higher secondary students. Higher secondary
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students of urban and rural school do not differ in their self concept. Boys and girls of the higher secondary school do not differ in their achievement. Rural and urban higher secondary school do not differ in their achievement. Higher secondary student of government and private school different in their achievement. It was concluded by the investigator that if the students are better trained in developing self concept they can register very higher performance.

Peter Taylor (1995) studied on we know more than we are, at first, prepared to acknowledge: Journeying to develop critical thinking using mini lectures, handouts and dialogues on UG students of science in society course.

Marg (1994) made a handbook on thinking skills. This handbook is designed to help teachers to teach thinking skills to elementary and secondary school students and is based on a six-part model of teaching and learning adopted form J.Charfee’s ‘thinking critically’ the handbook includes seven simple interdisciplinary units that emphasis thinking skills that are appropriate for difference grade level.

Ingram and Warrall (1993) are critical of the fact that think skills are not prompted in large numbers of classrooms, which are still run along traditional lines, where the teacher does most of the learning, in terms of hunting out information books, preparation reading, thinking through and reflecting on how best to transmit and organize the children’s experiences and knowledge all skills that children are themselves capable of learning and applying.

Pallisera, Maria (1993) conducted a program to develop perceptive motor skills in adolescents and adult with mental retardation using monograph, activities use of daily living, activity cards, group evaluation checklist and individual evaluation checklist. The findings show rehabilitation of student’s skills, enhancing the psychomotor skills and perceptual development.

Erickson. G. I (1990) studied the effect of a thinking skills program on the locus of control self-concept and creativity of gifted students and found that the thinking skills instructions had a significant result and a beneficial effect on locus of control and creativity.
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Freseman . R. D (1990) studied on Improving High Order Thinking of Middle School Geography Students Teaching Skills Directly. He used drawing analogies and problem solving using divergent thinking tools and noted that the samples were generally positive which showed effective achievement.

Ferha. J. L and Milbrandt. M. S (1989) have studied the Beyond Lollipop Trees – Teaching Thinking Skills through Art using Innovative Art Education Program and found that it enhanced the art content learning, improved the general achievement of IV, V, VI grades and students have out performed controls on learning of art content.

Matthews. D. B (1989) studied the effect of a thinking skills program on the cognitive abilities of middle school students using non domain specific thinking skills program and cognitive ability test. He found that the samples have out performed on all subtest except one and the non domain specific thinking skills programs were effective.

Beyer (1988) in his study give general descriptions of different kinds of thinking skill, it also contains one and two page detailed the strength of an argument, decision making, identifying point of view, problem solving finding unstated assumptions etc.

Kagan. D. M (1988) denotes in his study on Evaluating a language Arts Program Designed to Teach Higher Level Thinking Skills that samples received significant gains and developed high order thinking skills. In this study he has used four different divergent thinking skills instruments.

Rabin and Bellanea (1988) in their study points out 24 thinking operations divided it critical and creative thinking skills such as attributing, prioritizing, solving for analogies, brainstorming, inventing predicting and dealing with ambiguity.

Herrnstein et al (1986) studied on Teaching Thinking Skills on seventh graders using experimental method in which the samples out performed significantly.

Louis et al (1986) presents 12 thinking operations, including comparing, interpreting, imagining and applying. While in Marzana, Robert and Daisy’s (1987) study expresses 22 procedures and skills related to thinking skills.

Meena, V.H. (1986) in her investigation on service of std IX students of greater Bombay has found out that: The significant predictions in the case of girls for physics achievement
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were scientific knowledge and aptitude, motivation for learning science other than physics teacher. Abstract reasoning was found to be significant predictor may for physics achievement. Numerical ability's a significant predictor of achievement in physics an chemistry but not in biology.

**Barbara (1985)** conducted a study, which is entitled as "Thinking skills through out the curriculum". The document is organized into for major sections. The first section describes the theoretical bases of a thinking skills programme design is presented through the development of a three level model for thinking. Next selection addresses implement concerns such as instruction, staff selected resource guide to indicate the kinds of materials and information that ought to be design. A concluding section summaries the study and suggests how the overall design can be used by practitioners.

**Ghosh, G.P. (1985)** undertook a study of the achievement of the students in chemistry and found relationship with some of its determinants. Some of the major conclusions were urban students did into show better performance in the achievement test in chemistry then rural students. Boys did not show superiority over girls. There was a positive correlation between the scores in chemistry and academic motivation test.

**Hansler. D. D (1985)** made studies on the effectiveness of the cognition enhancement techniques for teaching thinking skills using Cognition Questionnaire and found that the samples show cognitive enhancement and effective skills.

**Hurd (1984)** had proposed that teaching is more than the presentation of facts which changes in their ways if thinking in their habits of action and in the values they assign to what they have and what they do?

**Wilson (1982)** These tests are used to find, what has been learned, what knowledge and skills have been developed after a period of study or exercise. IT is a measure of progress of a student. It may be teacher made achieved test or standardized test.

**Singal (1981)** stated the identification of parental motivation and school achievement of talented students by computing correlation co-efficient with models, motivation behaviours and achievement motivation student achievement varied and this aspect was directly dependent upon the parental motivation. Talented pupils differed significantly
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from pupils of are and below average parental motivation and academic achievement level.

Desiderator et.al. (1977) have proposed and tested in general model relating to the social and intuitional factors involved in school achievement of children form poor socio economic background. School achievement was assessed by the marks in a national school examination. The factors considered were race, sex, type of school attended nutritional status and scores in draw a man test and also family size income and education of the parents.

Kolesnik (1970) has reported that girls perform well in public exam at higher secondary and higher secondary level. It has been found that better personal adjustment favour higher academic achievement.

Enmis (1962) conducted studies on thinking skills. These studies specifies the characteristics of different thinking skills including categorizing, fact/opinion, reveal irrelevant, deductive reasoning, inductive reasoning, predicting and concept utilizing all these studies differ form each other in certain aspects.

Lynn (1959) observed that achievement level of girls was higher than that of boys.

2.3 SYMBOLS PERCEPTION BY SCHOOL CHILDREN AND ADULTS

The perceptive process uses two general ways of information processing: detailed investigation and guessing. Experimental data confirm this notion. Junior school children’s students and adult’s ontogenetic characteristics are shown. Pedagogical psychological problems are discussed and the necessity of new pedagogic technologies taking into account the peculiarities of information processing is stressed.

Rao, Zhenhui (2002) made a study on chinek student’s perception of communicative and non-communicative. The study reveal that language courses results reveal the students sometime surprised their teachers and students perceived difficulties caused by communicative language teaching had their source in difference between the underlying educational theories of china and western countries.

Barkhuizen, Gary. P. (1998) Hypothesized that the study “Discovering Learners Perceptions of ESL Classroom teaching / learning. The school students perceptions of
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classroom activities in terms of their feelings toward the activities as well their value in current and future learning using ores, interviews, observations, remits found that the learners perceptions often surprised their teachers particularly the student performance for more mechanical learning activities.

Vanpatten, Bill (1998) worked in perceptions of and perspectives on the term communicative in Hispania. Suggests a gap between theory and practice and substantial differences between the perspectives held by scholars and those held by instruction publishers and others.

Johnson, Patricia, Arenas, Jaima (1995) Students perceptions of foreign language communicative teaching and class was undertook by Johnson, particia, Arenas, Jaima in the year 1995. The achievement of student in two university classes (n=12, n=22) of Spanish as a second language were sumeyed concerning the effectiveness of the communicative approach to second language learning. About 2/3 of student considered their class as average in size and slightly smaller proportion also. 92% considered there is a small class while about half considered the ideal. Larger size class and smaller size class differed in perception of foreign language communicative teaching. The larger class was less convinced of the value of smaller group. The findings of the study were to reflect a western cultural bias which shows a linear and mechanical obsession with cause and effect, to develop a harmoniously interdependent relationship in the communication process is the cardinal aim of Chinese culture, to hold five cardinal concepts form the foundation of a contingency model of communication competence Bian – Change; shih-time; wei-envt; ji-the trace of movements; chungo two – the way of means or appropriateness cheng-the internal consistency of individuals by holding a sincere and honest mind to the useless and others and to respect the three social norms Jai, jen-love; yi – righteousness and li-respect. Human communication is a cyclic process in which the person instead of message or other elements is the focus. They appear to bring curiosity about other cultures to the language classroom but are not satisfied with the cultural context they receive. The student perception of language teaching is recommended so that uses of a model of multicultural exploration are examined in urban areas to replace superficial drills with drills for communicative intent are outlined and the audio-motor unit to command orally and acted out by the teacher for students to listen to and obscene,
then the students are asked doing the motor activity and to combine learning effects of sound sight, and physical movement, to reinforce such as touch taste, ear, see and small.

Rama Rao. P. (1978) explains that the psychologists have engaged themselves in the study of time form their own angle. Temporal experience, perceptual responses to temporal stimuli, etc. have attracted the attention of psychologists in their attempt to understand the nature of time. According to William James our perception of time is composed of units which the calls ‘durations’ each wit a bow and a stern, as it were, a rearward and a forward looking end. Czermak suggested that there is a general sense of time. He set the problem of determination of shortest perceivable intervals in each of the senses and perceivable rates of visual and tactile movement. Curtis holds the view that all sensations have an attribute of progression and that propensity or subjective duration of time is something that afterwards may or may not be added on, and that is does not belong to sensation as such. Stimuli and patterns occupy physical time and we react to these by perceptions, judgments, comparisons, estimations etc. There is a general disagreement on this issue whether a mental variable, such as duration or propensity, is an immediate property of our perception of temporal stimuli or of mental process in general. Modern man, who is time conscious, makes perceptual responses to time, either in the native of arrangement of his routine in time or in the nature of a variety of reactions to different durations under different conditions. Adam. J. A. estimated time perceptions is variable, tired topic in psychology that interests very few active investigators any more, perhaps because no one bothered to explore the mechanisms of time perception and how they might enter into meaningful interaction with the other mechanisms.

2.4 ACHIEVEMENT DIFFERENCE

Berg, Jill Harrison (2007) studied the Resources for Reform: The role of board – certified teachers in improving the quality of teaching. The data from this study reveal that while board – certified teachers were reported to have a positive influence on the standard of teaching practice in these settings, conditions within their contexts were important in supporting them to be willing and able to be resources and to be effective in their formal and informal reform roles. These unique cases offer insights into how schools might capitalize on the investments education leaders have made in board –
certified teachers and hint at how the Board's new professional standard could stimulate improvement throughout U.S. schools.

**Gilliland, Brett Alan (2007)** studied on thinking outside the box: Blended learning as an alternative to traditional learning. This study examined the ways public schools are redistributing existing resources and changing policies to continue student academic achievement through non-traditional teaching methods and the satisfaction of these non-traditional methods. Salient points in history of reform, technology innovations, satisfaction of charter schools, "blended learning," and cost-effectiveness of programming were used to justify and to support the need for a study that addressed how the non-traditional organizational educational and structural tenets of a “Blended Learning Curriculum” within a charter school can affect learning of students by investigating cost-effectiveness and satisfaction, as compared to the same “blended learning curriculum” being used in a traditional school setting.

**Guven, Devrim (2006)** studied the Pre service biology teachers’ inquiry process: Manifestation of views of science matter knowledge and prior experience. In this study it is suggested that postsecondary science education faculty work closely with science faculty in an effort to provide authentic inquiry experiences that promote deep, conceptual understandings of subject matter as well as informed views about science.

**He, Yunfeng (2006)** examined the role of thinking styles in learning and achievement among Chinese university students. It is based on Sternberg’s theory of mental self-government. The four main hypotheses in the qualitative study were supported: (1) students of Type II styles (styles that convey a norm-conforming tendency) perceived the roles of thinking styles in learning more often than did students of Type I styles (styles that are creativity-generating); (2) students of Type I styles preferred to make efforts to match their teachers’ teaching styles more than did students of Type II styles; (3) the things dimension tended to be correlated with students’ stylistic development and changes significantly more than did the people dimension; and (4) students of Type I styles appeared to have higher level of style awareness and higher degree of flexibility than did students with Type II styles.
Review of Related Literature

Alues & Gottlien (1986) Most research suggests that teacher behavior towards high and low achieving student differs more in the quality than the quality of interaction. When frequency of interaction does differ it usually favors the high achievers.

Brophy (1982) Higher achieving students are more active participants in the classroom and receive more positive teacher contact and feedback. Teachers should apply the following in their teaching process.

- nod
- maintain eye contacts
- call on
- give feedback and lean forward towards the
- Pupils more often when they are told that the or she is a high than low achiever.
- smile

2.5 STUDIES ON ACHIEVEMENT

Achievement means “performance”, D. K. Illustrated oxford dictionary explained “Something achieved or an instance of achieving or the act of achieving”.

In the classroom situation the teacher provides opportunities for success and failure for all students. The successes and failure may affect the level of aspiration of the students. All aspirations are not always achievement. Some may be achieved as soon as the performances are over and some may be taking longer time to achieve there are song ranged goals. Therefore aspirations have differential effects. This may result form the respective achievement. Every individual who have relatively high sense of fear for failure of the goal as opposed to some who have low need. There are person who have high need for affixation as combinations of these variables. Ronald.E. Johnson and Gene R. Medinnus stated that children must learn to compete an stand up for their own rights, because after all, ours in a competitive society children can compare their performance, with others and the maintenance of a competitive sprit in a group can promote learning and achievement. Paul Canti discovered the degree to which an individual’s emotional adjustment with his family and peers influenced his academic achievement a healthy competitive spirit will be inculcated in the minds of the pupils. A pupil achievement is
controlled and influenced by various factors like socio-economic status, home environment, intelligence, sex etc. Carter V. Good stated that achievement means knowledge attained or skills developed in the school subject usually designated by test scores or by marks assigned by teachers, or both.

**Lukose (2003)** studied certain factor influencing the difference in science achievement at pre-degree level. HE pointed out that science socio-economic status may be considered as the major factors influencing the difference in science achievement at pre-degree level.

**Parvathy's (2003)** study was directed towards certain sociological factors discriminating under achievers and non-underachievers in secondary school Malayalam. She reported significant influence of socio-familial factors such as birth order, family size, socio-economic status etc. in causing under achievements.

**Bhaskara Rao, D, D. Harshitha (2001)** worked a study on assessing learning achievement stated that he research finding have shown that we can not identify a unique determinant of pupils achievement be it teacher qualification, the availability of learning material or the socio-economic status of the pupils families in thinking about the contextual as well as school related factors.

**Jangiras (2001)** study was undertaken to assess the learning achievement of student in reading and mathematics. Variables related to school and home environment were also examined to explain the differences in learning achievement. It was pointed out that the achievement of children depended upon several factors like socio-economic status of student, class size, attendance etc. Achievement means “Performance” D.K. Illustrated oxford dictionary explained “Something achieved or an instance of achieving or the act of achieving.

**Kurian (2001)** investigated certain factors related to eh mathematics achievement of scheduled caste and scheduled tribe student in secondary schools. The study revealed the fact that there is relationship between socio-economic status, parental involvements in children’s studies, facilities at home for learning etc, and achievement in mathematics of scheduled caste and scheduled tribe students.
Loounis, Susan Co-oper (2001) worked geography achievement level. This study revealed that

- The samples of performance to provide information about the knowledge and skills of students
- The various demographic groups are increased their achievement level in educated progress.
- Achievement levels are basic, proficient and advanced
- There are three parts of achievement level namely descriptions, cut scores and samples items.

Loounis, Susan Corper (2001) stated that NAEP achievement level civics the us. Student knowledge and skills in different subject up to XII grade. Sample performances to provide inflation about the knowledge an skills of student in us in different demographic groupings. Achievement levels are basic proficient and advanced. The three parts to NAEP achievement levels description cut scores and sample items. The achievement level description are statement of what student should know and be able to achievement each level.

Nair (2001) conducted a study to assess the role played by the social family variables in causing under achievement is school mathematics. HE found that parents professional and educational level have positive correlation with the achievement.

Swift (2001) conducted a study on the parental occupational status, socio economic status have positive completion on academic achievement succeeded. Osborn studied the Impact of different parental educational level on the educational achievement, attitude, aspiration and expectation of the child. The important findings were children of differently educated parents differ from children of similarly educated parents in education, achievement, attitude, aspiration, and expectation.

Douglas (2000) conducted a study on the ability attainment and achievement in primary school. The study revealed that got a positive influence on the achievement of pupils.
Jaganadhan (2000) conducted a study on “Socio-economic status and academic achievement among a sample of 614 urban children of primary appear primary and high schools selected by random sampling method. HE found that socio-economic status an academic achievement is highly related.

Kumari (2000) conducted a study of the environmental conditions of high and low achievers in social studies in the secondary pupils. The study helped to realize that environmental factors play a vital role in influencing the achievement of students.

Emiel (1999) studied the effect of classroom environment on academic achievement. He found that the students in the stimulating environment are better than others for six measures academic achievements.

Gary.M. (1999) made a study in setting process for us History and geography stated that middle school children believed slightly computer assisted instruction as well as computer uses. Exemplar items panelist evaluation which include understanding of achievement level discretion.

Sinha. D.N (1999) analysed some factors associated with success and failure in at the university levels. He found that high achievers were significantly more adjusted than the low achievers.

Banis and Finlayson (1998) investigated in to the problem of success and failure in secondary school on a sample of 345 male students. The study found that social class and socio - economic status were related to school achievement.

Fotheringham and Creal (1998) studied the family, socio-economic and emotional characteristics as predictors of school achievement. The study revealed that inherited differences in ability initial levels of ability, the quality of schooling available, family physical resource, differences in home educational learning environment are some of the most obvious sources of contribution to the differences in achievement among children.

Mcclelland (1998) emphasized the influence of family situation on the development of the achievement motive. The findings show that mothers of sons, possessing a high achievement motive have an individualistic attitude while those with low achievement scores tend to be related to a protective family.
Review of Related Literature

Subha (1998) conducted “A study of the relationship between home environment and achievement in science of secondary school pupils. The major aims of the study were to find out the influence of the size of the family on achievement in science, the relationship between socio-economic status and achievement in science. The study showed that there is significant difference in the performance of pupils in small and average families. Positive and significant relationship was found between socio-economic status and achievement in science.

Toyliotas, Hohn Lincoln, Byren and Rich (1998) made an enquiry into the influence of family background on scholastic achievement. They put forth that children form the higher social classes do better than children form lower social class; children form smaller families score higher on achievement test than those form larger families.

Watson, C.C (1998) tired to find out the usefulness of the California psychologies inventory scales in predicting achievement, where scholastic aptitude is known and controlled, and to evaluate the relationship between achievement and non-intellectual personality measures at tow level of adjustment. It was found that the effect of non-intellectual personality trait on academic performance tended to vary inversely with the level of adjustment of the students.

Keeves (1997) found that the structural variables of the home background are not significantly associated with final achievement in mathematics or science, but home attitudes were found to be associated with final achievement.

Riemar (1996) NAEP achievement level salting process for us history and geography revealed

- Achievement level setting to formulate expectations for the geography and us history assessment.
- Examined the impact of a commercially prepared geography adventure computer game, recall of geography facts and on their attitudes toward studying geography.
- Found no significant difference in recall between student using the computer am and computer fame and materials it the same facts.
Review of Related Literature

Jain. S.K (1995) conducted a study which aimed at finding the relationship between home environment and scholastic achievement of secondary school children. In the course of the experiment he obtained evidence which showed that personality adjustment tends to bear almost a negative and significant relationship with scholastic achievement, although the relationship was negligible.

Ashburn (1994) conducted a study on parents as educator’s case study on three families reveals that parents

- Employ systematic ways to teach their children
- Distinguish between the home and school curriculum
- Provide support to the school and
- Impart their goals and objective to their children’s achievement.

Gronlund, Laurie E. (1993) stated that “Understanding the national goals, - Student achievement and citizenship, they may be prepared for responsible citizenship, further learning and productive employment in our modern economy.

Gronlund & et.al. (1993) Trends in science achievement the understanding of simple scientific principles however this average love did increased by nine pints.

Gronlund & et.al. (1993) by the year 2000 us student will be first in the world in Science and math achievement. The finding are: VIII grade science teachers surveyed about their weekly class activities only 62% reported that they old science experiments, 10% used computers and 14% assigned oral written reports only about half 56% of the teachers felt that their laboratory science facilities were adequate, 56% felt that they well - supplied with instructional materials, and 46% did not base what they taught their students on text books.

Stolzenberg. Ross. M.C. (1990) examined that ethnicity geography and occupational achievement of Hispanic mean in the USA. The findings are

- Examining occupational in equality between Hispanic group and non-Hispanic group in US.
- Neither geographic distribution nor it sprain subgroup structure strongly affects Hispanic occupational disadvantage but remits supports a pattern of
Review of Related Literature

"Conditional occupational assimilation" by which the extent of Hispanic means schooling and English language proficiency men's schooling and English language proficiency men's schooling and English language proficiency significantly influence occupational achievement.

Ingersoll, Garg.M. (1989) exemplified this study geographic mobility and student achievement in a setting. The findings are the impact of geographic instability achievement 41735 elementary, middle and high school students in Colorado.

- Results indicate an almost uniformly negative impact of geographic mobility were found at elementary level setting achievement levels on the 1994 NAEP in geography and US history and the 1996 NAEP in science.
- The current plan is an extension of earlier work by NAGB to set achievement level on 1990 NAEP to set achievement level on 1990 NAEP maths assessment, reading and writing.

Chandy (1980) conducted "a study of the relationship of family environment to achievement in English of secondary school pupils". The main aim were to find out the extend of relationship between certain family environment variables and achievement in English of secondary school pupils, to identify the family environment variables which contribute to and which hinder achievement in English of secondary school pupils. Her conclusion. Her conclusion was that socio-economic status and achievement in English are related. Family stability, physical facilities, co-curricular activities, parental involvement and motivation for studies and achievement in English.

2.6 SYNTHESIS

Achievement in geography with a major concern for the research study. The above mentioned researches assumed various dimension towards it. The demographic factors play a ritual role in the determination of achievement in geography. The visual presentation like pictures, models and other forms audio visual presentation, computer aided instruction will make significant difference in geography learning. Apart form the like in other subjects learning, motivation, self concept positive attitude and home background are highly associated with achievement in geography. Geography teaching
and learning can be made easy and effective in the application made easy and effective in the application of pictures, charts, models and audiovisual methods. The right thinking skills can be methods. The right thinking skills can be encouraged through the description and interpretation. The appropriate teaching strategies will also influence the thinking skills among the students. Condition of reciprocity between human body and the world can build up the schematization of the subject. Schematization of the strategies is better accompanied through sensory. Authentic pedagogy assumes a positive impact on student thinking and behavior in the classroom. Most of the studies were focused on perception of various factors selecting to teaching and learning geography. It is clear that very few studies are attempted towards finding the role of perceptive thinking skills in learning. No such study conducted in relation to perceptive thinking skill towards geography achievement. Hence the investigator dire enough to choose the study on perceptive thinking skills and assumed that is as the head of an hour.

Thinking process is a psychological and logical point of view and concludes, while the processes of thought are psychological and hence subject to psychological analysis, the product and the content of thought must be assessed by logical criteria and evaluated by the rules of logic. Hilda Taba identifies three postulates about thinking. Thinking can be taught. There is evidence for and against this postulate Thinking is an active transaction between the individual and data. Process of thought evolve by a sequence. The synthesis of review highlights that academic achievement was influenced many factors such as perception thinking skill. The process of learning in complete only when the underlying principles are perceived and understood. Real understanding comes out of perception and thinking skills. It play and pivotal role in the geography achievement and they improved the achievements level of the DIET teacher trainees. The information process is attuned by attention. Attentions play an important role in Perceptive-Thinking Skills and geography achievement. More over few studies were reprinted on the relationship between perceptive thinking skill and geography achievement. To the knowledge of the investigator concerned, not research study has been attempted is made in this line for the present investigation. The investigator identified various compounds of perception. To the knowledge of the investigator concerned, no research study has been attempted is made in this line for the present
Review of Related Literature

investigation. The investigator identified various components of perception thinking skills and developed strategies for enhancing PTS in geography achievement.

Finally this chapter throws light on the importance of previous studies undertaken by many researchers before commencing any new study, the investigator should become familiar with studies previously done on the same areas. It also gives an insight into the nature and findings of such studies; furthermore, it suggests the proper procedure, techniques, to be adopted in this study. An attempt has been made by the investigator to study thoroughly the different results and findings to far publish in the field of perceptive thinking skills and achievement in geography.

2.7 CONCLUSION

The foregoing studies, which show close affinity to the present study, have been of great help for the investigator. The review of related studies helped the investigator in understanding, what has been already done in the area. This was also helpful in determining the objective formulating the hypotheses and also in selecting the appropriate research methods, and statistical techniques for the collection and interpretation of the data. Thus as it is said, “the review of related studies, is a forerunner for the research worker and shows that way through which the new corer would proceed” (Good and Scates, 1954).

2.8 SUMMARY OF RELATED STUDIES

Table – 2.1 IMPORTANT FINDINGS OF STUDIES ON PERCEPTION

<table>
<thead>
<tr>
<th>S.No</th>
<th>Author</th>
<th>Year</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Milligan, Kevin, R and other</td>
<td>1995</td>
<td>Female students were notably more positive in their perception of education than males</td>
</tr>
<tr>
<td>3</td>
<td>Leurg, Jupian.J.</td>
<td>1993</td>
<td>Students from exact-two-parent homes perceived greater parented help with their school work than student from single mother-or-step father families.</td>
</tr>
<tr>
<td>Review of Related Literature</td>
<td></td>
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<td>-------------------------------</td>
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<td></td>
</tr>
<tr>
<td>4</td>
<td>Leung, Jupian.J 1993</td>
<td>School attainment value was the most useful variable of predicting student attitude towards school work and their perception of parental behaviors supporting school work, parents position, feelings about god school performance correlated positive with their children's attitude towards school work.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Palladino, John 1992</td>
<td>Teacher participation in project THISTILE resulted in positive teaching changes especially with a thinking skills focus and in greater involvement in curriculum development.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Synder, Stephen and others 1991</td>
<td>Students who were presented with lessons containing more positive instructional clarity achieved more</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Lord, Thomas.T. 1990</td>
<td>When student low in spatial cognition were given remedial exercise to enhance, spatial understanding their grades in geography improved though student's initially high in spatial ability continued to have higher level of proficiency.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Bendito 2006</td>
<td>The goal of this research is to present a comprehensible understanding of media attributes, specifically symbol systems.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Wright, John Dogulas 2006</td>
<td>The findings have implications for the student teachers and the further study and better understanding of teacher dispassion association with effectiveness.</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>West lake, Laural. Marquardt. 2005</td>
<td>The implication for improvement in the vision. Eye care professionals and primary care providers need a more prevention attitude.</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Diamantes, Thomas, viliam 1997</td>
<td>The game strategy used in the perceptive eye/ear game. The game questions used were taken directly from samples with principal licensure.</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Lubojacking Bedrihc, Duzi 1998</td>
<td>The way of teachers assumptions impact their classroom knowledge and techniques.</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Douglas 2000</td>
<td>The study revealed that got a positive influence on the academic achievement of pupils.</td>
<td></td>
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</tbody>
</table>
Review of Related Literature

<table>
<thead>
<tr>
<th>S.No</th>
<th>Author</th>
<th>Year</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Swift</td>
<td>2001</td>
<td>The parental occupational status, socio economic statuses have possible correlation.</td>
</tr>
<tr>
<td>16</td>
<td>Banks and Finlayson</td>
<td>1998</td>
<td>The problem of success and failure in secondary schools on a sample of 345 male students. Socio economic status were related to school achievements.</td>
</tr>
<tr>
<td>17</td>
<td>Meclarelland</td>
<td>1998</td>
<td>The findings show that mothers of sons, possessing a high achievement motive have on individual attitude white those with low achievement scores tend to be related to a protective family.</td>
</tr>
</tbody>
</table>

Table – 2.2 IMPORTANT FINDINGS OF STUDIES ON THINKING SKILLS

<table>
<thead>
<tr>
<th>S.No</th>
<th>Author</th>
<th>Year</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hansler.DD</td>
<td>1985</td>
<td>The effectiveness of the cognition enhancement techniques for teaching thinking skills has found elementary and higher secondary student in New York.</td>
</tr>
<tr>
<td>2</td>
<td>Clennis.F.</td>
<td>2002</td>
<td>Texas academic skills found student of community, technical and urban college with special reference to her thinking skills.</td>
</tr>
<tr>
<td>3</td>
<td>Hurd</td>
<td>1999</td>
<td>Teaching is more than the presentation of facts changes where way of thinking in their habits.</td>
</tr>
<tr>
<td>4</td>
<td>Freseman.R.D.</td>
<td>1999</td>
<td>The finding was very positive on samples and got effective achievement; provide opportunity for the analyzing of problem solving using with divergent thinking.</td>
</tr>
<tr>
<td>5</td>
<td>Rao, Zhenhur</td>
<td>2002</td>
<td>The findings the Chinese students perception and thinking skills are non communicative. The teacher and students perceived difficulties caused by underlying thinking skills.</td>
</tr>
<tr>
<td>6</td>
<td>Tabulawa Richard</td>
<td>1998</td>
<td>The finding explores the assumptions held by geography teachers in thinking skill with perception of student and techniques.</td>
</tr>
</tbody>
</table>
Review of Related Literature

<table>
<thead>
<tr>
<th>S.No</th>
<th>Author</th>
<th>Year</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Gneeno</td>
<td>1989</td>
<td>The thinkers prepared to think and rethinks, checks and rechecks, to be concluded with positive correlation.</td>
</tr>
<tr>
<td>8</td>
<td>Niedelman</td>
<td>1991</td>
<td>The teenage years the critical period for improvement in thinking skills research on critical thinking and problem solving skills to the students.</td>
</tr>
<tr>
<td>9</td>
<td>French &amp; Rhoder</td>
<td>1992</td>
<td>Thinking means being able to find that prior knowledge in memory when it is useful and instigate it with new information</td>
</tr>
</tbody>
</table>

Table – 2.3 IMPORTANT FINDINGS OF STUDIES ON GEOGRAPHY ACHIEVEMENT

<table>
<thead>
<tr>
<th>S.No</th>
<th>Author</th>
<th>Year</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Baskara Rao.D.</td>
<td>2001</td>
<td>The socio economic status of their pupils families thinking skills are enhanced geography achievement.</td>
</tr>
<tr>
<td>2</td>
<td>Loomis, Susen</td>
<td>2001</td>
<td>There are three parts of achievement level namely description, outscores and sample items.</td>
</tr>
<tr>
<td>3</td>
<td>Stozenberg Gang</td>
<td>1999</td>
<td>Setting process for us history geography enhanced their achievement through computer games.</td>
</tr>
<tr>
<td>4</td>
<td>Desideratro</td>
<td>2001</td>
<td>There was a significant difference in the effectiveness of geography achievement through mass media.</td>
</tr>
<tr>
<td>5</td>
<td>Lynn</td>
<td>1998</td>
<td>The girls scored higher than that of boys’ achievement in geography achievement.</td>
</tr>
<tr>
<td>6</td>
<td>Kolesmith</td>
<td>2000</td>
<td>The girls perform well in public exam at the higher secondary geography achievement</td>
</tr>
<tr>
<td>7</td>
<td>Singal</td>
<td>2002</td>
<td>Parental involvement as well as motivation are higher than their geography achievement</td>
</tr>
</tbody>
</table>
### Review of Related Literature

<table>
<thead>
<tr>
<th>No.</th>
<th>Author</th>
<th>Year</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Ghosh.G.P.</td>
<td>2002</td>
<td>Urban students did not show better performance in the achievement test in geography than rural students</td>
</tr>
<tr>
<td>9</td>
<td>Meena.V.H.</td>
<td>1998</td>
<td>The significant predictions in the case of girls of physical achievement were scientific knowledge and aptitude in geography achievement.</td>
</tr>
<tr>
<td>11</td>
<td>Tickoo</td>
<td>1997</td>
<td>Achievement motivation was possibly related to the entire dimension in the except positively elated to overall mantel health.</td>
</tr>
<tr>
<td>12</td>
<td>Chandra Lakha</td>
<td>1998</td>
<td>The findings of the study were girls scored better than boys. Urban students scored better than rural students.</td>
</tr>
<tr>
<td>13</td>
<td>D.N. Sinha</td>
<td>2000</td>
<td>Some factors associated with success and failure in at the university integrally</td>
</tr>
<tr>
<td>14</td>
<td>Dougles</td>
<td>2001</td>
<td>They got a positive influence in achievement</td>
</tr>
<tr>
<td>15</td>
<td>Keeves</td>
<td>1999</td>
<td>The findings are structural variables of the home back ground are the significantly associated with final achievement in geography.</td>
</tr>
<tr>
<td>16</td>
<td>Raid David</td>
<td>1990</td>
<td>Picture plays important role in a learning geography</td>
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<td>17</td>
<td>Reid David</td>
<td>1990</td>
<td>Very few of them are directed towards finding the role of perceptive thinking skills in learning.</td>
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<tr>
<td>18</td>
<td>Dighal</td>
<td>1985</td>
<td>Pictures play an important role in learning. Of Geography, preparation of charts and models and audio visual methods</td>
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<tr>
<td>19</td>
<td>Gopal</td>
<td>2000</td>
<td>Achievement perceptive skills significantly improve the achievement of learners</td>
</tr>
<tr>
<td>20</td>
<td>Lalla Ramirez &amp; et.al.</td>
<td>2005</td>
<td>Perception plays prominent role in architecture description and interpretations.</td>
</tr>
<tr>
<td>21</td>
<td>Kaiser</td>
<td>2005</td>
<td>New possibilities for speaking and thinking initially found four direct similarities between the statement and the trace.</td>
</tr>
</tbody>
</table>
### Review of Related Literature

<table>
<thead>
<tr>
<th>#</th>
<th>Author(s)</th>
<th>Year</th>
<th>Title and Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>Tsagaris, George S.</td>
<td>2006</td>
<td>Relationships among thinking style preference cultural orientations, and academic achievement</td>
</tr>
<tr>
<td>23</td>
<td>Zirkle, Dorothy L.</td>
<td>2005</td>
<td>The middle childhood age group is of particular interest due to immaturity of the cognitive, psychological and neuro physical aspects of the child</td>
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<td>24</td>
<td>Juze, Jennifer Ellin</td>
<td>2006</td>
<td>Teachers use of authenticity in the classroom was inconsistent and that the initiative did not necessarily transfer to work outside of plc environment</td>
</tr>
<tr>
<td>25</td>
<td>Dr. Mrs. JJK. Pillai</td>
<td>1999</td>
<td>Too much pressure or too much perceived pressure may result in low achievement. Variable which are influential are sex of the child, size of the family and occupation of father, achievement depends upon culture</td>
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<tr>
<td>26</td>
<td>Bruce Joyce</td>
<td>1980</td>
<td>Thinking skills should be taught using specific teaching strategies designed for those thinking skills</td>
</tr>
<tr>
<td>27</td>
<td>Naranjo Quiceno, Carlos Edwards</td>
<td>2005</td>
<td>Architects contribute by thinking through things findings existing conditions of reciprocity between the human body and the world there are three fundamental architectural themes being located, being contained and being accompanied.</td>
</tr>
<tr>
<td>28</td>
<td>Tasgaris, George S.</td>
<td>2006</td>
<td>The relationship among thinking style preference cultural orientations, and academic achievement.</td>
</tr>
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<td>29</td>
<td>Zirkle, Dorothy L.</td>
<td>2005</td>
<td>Results suggest that phonological awareness facilities learning to read; training programs in logical mathematical knowledge could increase learning of the phonological awareness; and “mental attention” may predict reading acquisition.</td>
</tr>
<tr>
<td>30</td>
<td>Kuze, Jennifer Ellen</td>
<td>2006</td>
<td>Authentic pedagogy and thought it had a positive impact on student thinking and behavior in the classroom. The findings suggest however, that teachers use of authenticity the classroom</td>
</tr>
</tbody>
</table>
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