CHAPTER-III

REVIEW OF RELATED LITERATURE
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The literature review serves to explain the topic of the research and to build a rationale for the same. It provides an overall framework for where the problem - undertaken by researcher - fits in the “big picture” of what is already known about the topic. It may be used to provide a rationale for the study, and/or it may be used to develop the design of the study as it may provide guidance for appropriate sample size or identifying promising data collection practices or instruments. The review of literature can be seen as an end in itself, either to inform practice or to provide a comprehensive understanding about what is known about a topic.

In this chapter the researcher has categorized and presented the review in the following manner:

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LEARNING DISABILITIES

_Bhattacharya (1985)_ tried out a technological method of preventive teaching for the alleviation of learning disabilities of the students in life science. The sample included 300 students selected from twelve schools in West Bengal. Patterns of disabilities were identified through a diagnostic test. Some of the major findings were:
(i) The experimental groups taught by audio-visual materials and techniques achieved significantly more than the controlled groups taught by the conventional method. (ii) Learning through audiovisual materials and techniques caused more prolonged retention than that by the conventional method. (iii) The experimental groups showed more interest in the lesson than the controlled groups.

*ERIC Digest (1995)* published an article titled “Beginning Reading and Phonological Awareness for Students with Learning Disabilities”. The article stated that learning to read begins well before the first day of school. Key to the process of learning to read is child's ability to identify the different sounds that make words and to associate these sounds with written words. Many children with learning disabilities have deficiencies in their ability to process phonological information. Thus, they do not readily learn how to relate letters of the alphabet to the sounds of language. Therefore, for all students – especially the children with learning disabilities, the processes of phonological awareness, including phonemic awareness, must be explicitly taught. To teach phonological awareness, teacher must begin by demonstrating the relationships of parts to wholes. It is best to begin with easier words and then move on to more difficult ones. Beginning readers require more direct instructional support from teachers in the early stages of learning. Opportunities to engage in phonological awareness activities should be plentiful, frequent, and fun.

*Thompson (1996)* in her online article “Nonverbal learning disorders” states that though most scholastic accomplishments are measured and defined through language-based communication, yet, it has been found that more than 65% of all communication is actually conveyed nonverbally. A student who has innate difficulties reading, spelling, and/or expressing herself stands out in most classroom situations. And likewise, a student who is a top reader, achieves excellent spelling scores, and is very articulate in expressing him-/her-self, usually does not prompt the teacher to consider a learning disorder. But, this is often exactly the presentation a child with nonverbal learning disabilities (NVLD) syndrome manifests in the early elementary grades. Nonverbal learning disorders (also called "right-hemisphere learning disorders") often go unrecognized and unaided by teachers and other professionals for a large part of a child's schooling. Developmental histories have revealed that a number of the children suffering from nonverbal learning disorders who have come to clinical attention have at some time early in their development: (1)
sustained a moderate to severe head injury, (2) received repeated radiation treatments on or near their heads over a prolonged period of time, (3) congenital absence of the corpus callosum, (4) been treated for hydrocephalus, or (5) actually had brain tissue removed from their right hemisphere. All of these neurological insults involve significant destruction of white matter (long myelinated fibers in the brain) connections in the right hemisphere, which are important for intermodal integration. Hence, current evidence and theories suggest that early damage (disease, disorder, or dysfunction) of the right cerebral hemisphere and/or diffuse white matter disease, which leaves the left hemisphere (unimodal) system to function on its own, is the contributing cause of the NVLD syndrome (definitely not dysfunctional home lives).

Three categories of dysfunction present themselves: (1) motoric (lack of coordination, severe balance problems and/or difficulties with fine graphomotor skills), (2) visual-spatial-organizational (lack of image, poor visual recall, faulty spatial perceptions, and/or difficulties with spatial relations), and (3) social (lack of ability to comprehend nonverbal communication, difficulties adjusting to transitions and novel situations, and/or significant deficits in social judgment and social interaction).

*Lyon (1997)* found that 17-20 percent of his nation's children have substantial difficulties learning to read. Also, in contrast to what was once thought to be conventional wisdom, he found that almost as many girls as boys manifest reading disabilities. Over the past 20 years, data obtained from family, twin and chromosomal studies provide compelling evidence that reading disability aggregates in families, is heritable and is most likely caused by one or more genes having a major effect on neural development. The data suggest that these genetic effects influence the transmission of phonological deficits that produce the decoding, word recognition and reading comprehension difficulties. Reading intervention studies have found that many youngsters can learn to read quite well if the appropriate instruction is provided early enough. In these longitudinal studies, it was found that both early and informed intervention is critical.

*Schaeffer (1997)* addressed the particular problems university freshmen with learning disabilities encounter which put them at-risk in terms of academic success. All of the participants had documented learning disabilities and earned low grades the
previous semester. Conclusions indicated that most of these students arrived on campus with very poor study skills. Their expectations of the rigor of university core courses were very unrealistic. Many of the students cannot read well and as a result do not even purchase text books. These students were able to perform adequately in high school by listening carefully and memorizing the content presented by their teachers. They are not able to keep up with or sufficiently comprehend the material in their textbooks. They don't manage their time well. Merely listening in class is not sufficient. Parental and teacher support is missing. Classes are large and impersonal. Their grades are terrible, self-esteem and confidence plummet. The findings stress upon the need to provide the necessary resources and support to enable freshmen with learning disabilities to achieve academic success.

Fletcher et al (1998) reviewed the historical basis and rationale for identifying children as learning disabled on the basis of a discrepancy between scores on measures of intelligence and achievement. Throughout this article, the role of IQ testing in the designation of children as learning disabled for research and public policy is addressed. The authors conclude that IQ tests have limited utility for the identification of children with LD. Alternative approaches to classification that incorporate the idea of a discrepancy between aptitude and achievement is discussed.

Shaywitz et al. (1998) conducted research using a relatively new technology, called functional magnetic resonance imaging (fMRI), which enables researchers to look into the brain as it is working, and found convincing evidence that dyslexia, a language-based learning disability, is caused by a functional disruption in the brain. These findings represent a critical new piece of evidence that builds on the already solid research in the area of reading disability. The research used fMRI to image the brains of 32 nondyslexic and 29 dyslexic adults while they attempted to perform a progressively complex series of reading tasks. The tasks included letter recognition, rhyming letters and words, and finally, categorizing words. The findings showed that brain activation patterns of dyslexic readers were significantly different from those of nondyslexic readers.

Reading requires an ability to recognize that spoken words can be segmented into smaller units of sound (phonological awareness) and that the letters in the printed word represent these sounds. Dyslexic readers do not recognize these smaller sounds
and have difficulty mapping alphabetic characters onto the spoken word. The study shows that nondyslexic readers systematically increased their brain activation as the difficulty of mapping print into phonological structures increased. The readers with dyslexia failed to systematically increase their brain activity. The demonstrated disruption in brain function among dyslexic readers occurs in a part of the brain involving traditional visual and language regions. During reading, those with dyslexia showed a pattern of underactivation in a large posterior brain region, an area which connects the visual areas with the language areas. These findings reconcile seemingly contradictory evidence from previous imaging studies which were not able to map out the full extent of the disruption. Of particular importance is the finding that the angular gyrus, a brain region considered pivotal in carrying out cross-modal (e.g., vision and language) associations necessary for reading, is involved. The current findings of underactivation in the angular gyrus of dyslexic readers coincide with earlier studies of those who lost the ability to read due to brain damage centered in that same area of the brain. According to the researchers, “it is no coincidence that both the acquired and developmental disorders affecting reading have in common a disruption within the neural systems serving to link the visual representation of the letters to the phonological structures they represent...These findings have important implications for the large numbers of intelligent men, women and children with dyslexia...Up to now, individuals with dyslexia were often doubted and there was
little concrete evidence they could show to support the neurobiologic nature of their reading difficulty. These brain activation patterns, by revealing a functional disruption in those neural systems responsible for reading, now provide neurobiologic evidence for what, up to now, has been a hidden disability.”

*West (1998)* states that most research to date have focused mainly on the obvious problems to be corrected rather than the hidden potential to be identified and developed. It may be better to look to highly individualized personal reports and case histories to see if we can learn new ways of approaching old problems. What we consider talents and disabilities depends greatly on the needs for particular abilities at particular times—within a changing economic and technological context. Perhaps it is time to recognize that many of the problems that dyslexics have are, in reality, artifacts of an old print-based technological culture whose prime has past. Perhaps it is time to recognize that many of the talents that many dyslexics exhibit are, in reality, strikingly appropriate for a new image-based technological culture whose prime is yet to come. As we proceed along the way, however, we should expect the pace and direction to be set by strong visual thinkers and creative dyslexics who will often ignore conventional verbal descriptions—instead, putting themselves into their own mental models, talking with their hands. And, perhaps a broader understanding of the importance of rediscovered spatial abilities, coupled with the greater use of sophisticated spatial assessment tools, might help prevent conventional educational systems from dropping by the wayside many of those who are especially well suited to emerging families of new visual and spatial tasks. It is time to take a long, hard look at visual thinkers and creative dyslexics and begin to see how these individuals and our larger culture can benefit from new understandings about what we used to see mainly as problems.

*International Dyslexia Association* (formerly The Orton Dyslexia Society) *(1999)* quoted the National Institutes of Health which estimated that approximately 15% of the U.S. population is affected by learning disabilities. Of students with learning disabilities who receive special education services, 80-85% have their basic deficits in language and reading. Every year, 120,000 additional students are found to have learning disabilities, a diagnosis now shared by 2.4 million U.S. school children. Many children are never properly diagnosed or treated, or "fall through the cracks" because they are not deemed eligible for services. Dyslexia occurs among all groups,
regardless of age, race, or income. Many successful people are dyslexic and many dyslexic people are successful. Recent research has established that dyslexia can run in families. A parent, brother, sister, aunt, or grandparent may have had similar learning difficulties.

The document of *National Summit on Research in Learning Disabilities (1999)* on the theme “Two Decades of Research in Learning Disabilities: Reading Comprehension, Expressive Writing, Problem Solving, Self-Concept – Keys to Successful Learning” presents four brief papers that review and synthesize the research on intervention with students who have learning disabilities (LD). These are:

- "Can School-Based Interventions Enhance the Self-Concept of Students with Learning Disabilities?" (Batya Elbaum and Sharon Vaughn). This review finds that school-based interventions of either the skill development or skill enhancement types can lead to beneficial changes in students' self-perceptions and that middle school students appeared most responsive to such interventions.

- "Reading Comprehension Instruction for Students with Learning Disabilities" (Russell Gersten and Scott Baker). Findings indicated the effectiveness of reading comprehension interventions, instruction in self-monitoring techniques, and peer-assisted learning strategies. Continuing difficulties with teaching students to generalize new skills were also found.

- "Teaching Expressive Writing to Students with Learning Disabilities" (Russell Gersten and Scott Baker). Found that instructional writing interventions lead to significant improvements in students' writing and that common features of successful instruction included explicit instruction in the phases of writing, teacher demonstration, and teacher and/or peer feedback.

- "Intervention Research for Adolescents with Learning Disabilities" (H. Lee Swanson). This paper reports on a meta-analysis of 58 interventions. It found that direct instruction and strategy instruction were the most effective techniques.

*Bremer et al (2000)* in their research work discuss two reading instruction models for teaching secondary school students with disabilities. The first, Collaborative Strategic Reading (CSR), is designed specifically for students with
learning disabilities and students who are at risk of reading failure. This strategy adapts reciprocal reading and incorporates cooperative learning. CSR utilizes four strategies: preview, click and clunk (students identify parts of a passage that are hard to understand, then using four “fix-up” strategies, get the gist and wrap up. Students are also taught to use the following cooperative group roles: leader, clunk expert, gist expert, announcer, and encourager. The second strategy, Strategic Instruction Model (SIM), consists of a package of components for use by students with learning disabilities, as well as instructional tools for use by teachers. The reading strategies portion of SIM includes: paraphrasing, self-questioning, visual imagery, and word identification. The Content Enhancement Routines in SIM help teachers manage and present the content of their classes in ways that help all students learn.

Sood (2000) reports research related to learning disabled (LD) students which has evidenced the effects of repeated failures on attributions for success and failure and suggested that these motivation constructs may effect overall academic achievement. Studies have demonstrated that attribution and persistence retraining result in short-term improvement in math and heightened reading persistence and increased effort. This study aimed to directly measure increases in reading ability as a result of changes in persistence, effort and attributions. The procedures for this study followed a pretest, intervention, posttest schedule. A sample of LD students was matched on the basis of single word reading ability. The matching procedure produced three groups: (a) the attribution retraining group (ARG), (b) control group 1 (CG1) and (c) control group 2 (CG2). The ARG and CG1 were then pretested with regard to persistence for reading difficult material and attributions for success and failure in reading. After pretesting an attribution and persistence treatment was conducted with the ARG over the course of 14 weeks for 10 individual sessions of 30 minutes. Each group was then posttested for word identification, reading persistence and attributions for success and failure in reading using the pretesting measures. It had been anticipated that the ARG would demonstrate reading achievement gains among those students who were low on initial persistence, but not among those who were high on initial persistence. ANCOVA results yielded a demonstrated increase in reading achievement for all initial levels of persistence. Secondly, it had been anticipated that students reporting extrinsic attributions for successful reading could be retrained to report intrinsic attributions and that the retraining would effect single
word reading achievement. Lastly, it was anticipated that attribution retraining would negatively affect reading achievement for students who initially reported intrinsic attributions. ANCOVA analysis revealed that attribution training does increase single word reading achievement for students who initially report extrinsic attributions. Students who initially reported high levels of intrinsic attributions for success demonstrated lower single word reading gains. Overall, this study suggests that assessment of achievement motivation is of utmost importance for LD students' reading achievement and that retraining in this area should be selectively conducted.

*Winner et al (2000)* conducted a research titled “Dyslexia and Visual-Spatial Talents: No Clear Link”. They state that researching strengths is emerging as a new area of research: developing operational definitions for strengths, creating standardized assessments, and conducting empirical studies may perhaps further uncover strengths. Most research on dyslexia has explored the behavioral and neurological deficits at the core of this syndrome. Some researchers, however, have searched for possible compensatory strengths associated with dyslexia. Orton (1925) suggested that dyslexia is sometimes accompanied by spatial talents. Geschwind & Galaburda (1987) noted a high incidence of individuals with dyslexia in professions requiring spatial abilities, professions such as art, engineering, or architecture, and proposed a theoretical model involving the influence of testosterone on fetal brain development to account for such a link. Several case studies have described individuals with indisputable spatial talents who may also have been dyslexic. There is also a growing popular view that individuals with dyslexia have compensatory visual-spatial talents that allow them to excel in spatial activities.

Do individuals with dyslexia have a higher than average incidence of spatial talents? Review of the literature provided mixed evidence. Researchers therefore investigated this question in a series of studies. They first compared 21 young adults previously diagnosed with dyslexia to 39 young adults with no such diagnosis. All were given three standardized spatial tests. Their studies thus far did not support the popular (and comforting) view of dyslexia as a deficit associated with compensatory visual-spatial talents. They were able to demonstrate a statistically significant (p<.05) spatial advantage for dyslexics on only one task: speed of recognition of impossible figures. This task requires integrating the parts of the drawing into a whole. On all
other tasks, they demonstrated either a disadvantage for dyslexics or equivalence to controls.

Yoshimoto (2000) had written an article titled “Celebrating Strengths and Talents of Dyslexic Children: An Educational Model”. Author states that though dyslexic children experience difficulties in processing the written language, they are often bright, creative, and talented individuals. Their Strengths may include mechanical aptitude, artistic ability, musical gifts, and athletic prowess. The dyslexic student may also evidence advanced social skills as well as talents in computer/technology, science, and math. Generally, programs for this group of students focus on remediation. The emphasis is on the student’s weaknesses, which continues to adversely impact their self-esteem. As such, there is a need to balance remediation with a rich and stimulating curriculum that identifies and nurtures their strengths and talents. It is the process of discovering and enhancing the talents of dyslexics that is the emphasis here. A multi-modal model, based on the belief that all children should be taught as though they were gifted, the program consisted of three essential components: 1) a differentiated-integrated curriculum; 2) enrichment courses; and, 3) a mentoring program. These three modules were integrated with each other along with counseling, diagnostic testing, and remedial instruction. First of all, a number of methods for identifying the talents or strengths of children were employed. Formal diagnostic testing not only assesses weakness but also strengths in the learning profile of students. Subsequently, students were also administered the Torrance Tests of Creative Thinking which assessed a range of abilities associated with creativity, such as fluency of ideas, elaborateness, originality, internal visualization, abstractness, and resistance to premature closure. Then according to their abilities and special talents, special enrichment courses must be organised. This is one model for balancing remediation with a curriculum or educational program that enriches children's learning as well as nurtures their strengths or gifts. Identification and development of talents should be the framework of the school’s attempt to meet the needs of dyslexic children and must be infused in all aspects of education from assessment to curriculum innovations.

Baker & Gersten (2001) in their article – “Teaching expressive writing to students with learning disabilities: A meta-analysis” – present analysis of 13 studies designed to teach students with learning disabilities to write better expository or
narrative text. They noted the success of these interventions and detailed three components for any comprehensive instructional program: instruction in writing process, critical dimensions of different writing genres, and structures for feedback. In other words, these components are: (1) adhering to a basic framework of planning, writing, and revision; (2) explicitly teaching critical steps in the writing process; and (3) providing feedback guided by the information explicitly taught. The paper also mentioned two specific teaching methodologies that incorporate these three principles: (i) Self-Regulated Strategy Development, which involves self-directed prompts, and (ii) Cognitive Strategy Instruction in Writing, which focuses on pre-writing strategies. Emerging issues in writing instruction are identified, including the mechanics versus the content of writing, dictation as a means of eliminating mechanical difficulties of expressive writing, and transfer of writing skills and related strategies to other subject-matter areas.

**Bausmith (2001)** examined the effects of accommodating learning styles on the writing (a) quality and (b) quantity (word count) of students with learning disabilities. These students had taken, but not passed the writing portion of the South Carolina Exit Examination. A multiple-treatment research design was used to assess the effects of accommodating the learning styles of three secondary level students with learning disabilities while completing writing assignments. Two learning style preferences (intake and sound) were implemented in the intervention phase, in alternating fashion. Scores on the writing assignment were used to measure the effect of the accommodations. The study lasted for seven weeks with the number of sessions with each student ranging from 16 – 22. The results demonstrated that providing learning style accommodations did not have a positive effect on the overall quality of each student's writing. In contrast, accommodating the student's learning style preference had either no effect or a positive effect on quantity. In the interviews at the end of the study, all three students indicated their preference for being allowed to eat snacks or listen to music while completing the writing assessment.

**Crossen (2001)** examined group differences in reading self-concept, perception of general intellectual ability, and self-worth among three groups of third and fourth graders: students with LD in resource classes (LD-R), students with LD in inclusive classes (LD-I), and Normally Achieving students (NA). As predicted, both groups of students with LD demonstrated lower perceptions of general intellectual
ability than NA students. The absence of group differences in self-worth was also consistent with the hypothesis. The only difference between the two groups of students with LD was found in theory of intelligence. Compared to LD-I students, a greater proportion of LD-R students espoused an entity theory of intelligence. Regression analyses using block entry of variables showed that theory of intelligence was not a significant predictor of motivation among the NA Entity or Incremental groups. Among the LD Entity and Incremental groups, the only significant predictor of motivation was perception of reading difficulty for the LD Entity group.

Dawson (2001) explored the effects of class placement on the self-esteem of students with learning disabilities. Hypotheses were developed in light of the trend towards full inclusion and arguments proposed on both sides of this issue with regard to self-esteem outcomes for students with learning disabilities. It was hypothesized that students with learning disabilities in different types of class placements, including self-contained, resource room/pull-out, and fully inclusive, would demonstrate significant differences in self-esteem. In this study self-esteem was viewed as a multidimensional and hierarchical construct. Differences among the class placement groups were investigated with regard to global self-esteem, perception of academic competence, perception of peer popularity, perception of familial acceptance, and perception of personal security. Results indicated there were not statistically significant differences among the groups on the variables of global self-esteem, perception of academic competence, perception of peer popularity, or perception of familial acceptance. There were statistically significant differences among the groups on the variable which measured perception of personal security. The self-contained group was found to have significantly lower self perceptions in this area than the resource room/pull-out group. Examination of group means revealed that the resource room/pull-out group had the highest mean scores on all assessed self-esteem variables. Findings from this study and others like it have not provided sufficient, consistent data to empirically respond to issues raised by the inclusion debate. This study fails to provide evidence suggesting that full inclusion best enhances the self-esteem of students with learning disabilities as compared to other less inclusive class placement settings. In this study, students in the resource room placement demonstrated the highest mean scores on all assessed self-esteem areas. Results do
suggest that self-contained classes may be associated with lowered self-esteem in at least one area, perception of personal security.

Gill (2001) investigated attention deficit hyperactivity disorder (ADHD) as an adaptive anxiety response that is affected by subject laterality, nonverbal learning disability (NVLD), and anxiety levels within the theoretical framework of psychoneuroimmunology (PNI). Middle school ADHD and NVLD subjects were divided into two mixed groups: an experimental group and a control group. Both groups received instruction about right- and left-brain learning styles and preferences. The two groups were compared in terms of laterality as measured by a set of tasks used to determine brain dominance; a learning-styles self-assessment list that was administered to both groups during instruction; NVLD, as measured by at least a one-year history of school problems in handwriting or math as documented in student Individual Education Plans (IEP); and subject-state and trait-anxiety levels as measured by the State Trait Anxiety Inventory (STAIC). The experimental group received an intervention that addressed spatial cognition abilities through a program of spatially oriented handwriting exercises. The outcomes of the study compared subject laterality, the presence or absence of NVLD, and subject-anxiety levels. The data indicated that in the ADHD only experimental group, right-brained ADHD only subjects showed a statistically significant trend in the data on comparison of the post-state experimental and control group anxiety measure. The study data suggested that an integrated, not associated or comorbid, relationship between ADHD, anxiety, NVLD, and right-brained learning-style preference exists. Findings from this study added to, and may help integrate, the existing literature on anxiety, ADHD, NVLD, laterality, spatial cognition, and utilization of right- and left-brain learning styles in treatment protocols.

Grant (2001) created a Project Demonstrating Excellence to increase science content and vocabulary skills, self-esteem, and employability skills in eight Learning Disabled target students. The eight students were enrolled in high school LD classes at the time of the study. The eight LD target students were chosen as a result of assessments that demonstrated the target students had lower than expected scores compared to other LD students in the same class. They were exposed to the same teaching strategies and methodologies used for all special education students. A review of the literature was conducted and a 12-week program was developed to
integrate and enhance strategies that would increase the target students' knowledge of science content and vocabulary skills, self-esteem, and employability. This was achieved through the use of computer access to the Internet, science resources, and other technology. An analysis demonstrated that the project was successful and all eight target students improved.

Krueger (2001) looked at teachers in one alternative high school through the eyes of their at-risk students. The research sought to find out specific characteristics, attributes and behaviors, of teachers in the alternative high school, the importance of the identified characteristics, and the affect the characteristics had on the students' learning. In the study, five characteristics emerged as predominant themes: helpful, take time to explain, talk to students about life, caring, and nice. In the words of the at-risk students, the importance of the characteristics had to do with building self-esteem, being accepted, and feeling comfortable, which resulted in higher student grades and an increase in learning.

Seeratan (2001) – in the article titled “Learning Disabilities: Metacognition, Motivation and Affect" – remarked that the abundance of the research in the field of metacognition has been focused on understanding the cognitive aspects of self-regulated learning; the developmental trajectories of acquiring and mastering self-awareness; the potential influences that other cognitive factors such as intelligence may have on one’s metacognitive capacities; the association between metacognitive deficits and learning disabilities; and the difficulties of reliably measuring the particular construct. It has been stated in many of these cognitively-oriented approaches that metacognition is not just affected by such cognitive factors but also by affective factors. However, thus far, this potential influence has been left relatively unexplored. Despite repeated advances to the importance of psychosocial or affective factors to metacognition and cognition in general, very few have studied the effects of affect particularly with regards to metacognition but also to some extent, with regards to Learning Disabilities (LD). As children are faced with impasses, they experience success and failure for which they receive feedback, which upon occurring frequently, develops into ingrained attributions of success and failure. These attributions govern self-esteem, self-efficacy, and the effects they have on successful strategy learning and transfer. A number of studies point to the importance of attributional training for students with LD. A more recent study also indicates the importance of individual
attitudes, beliefs, and expectations of their performance. This latter study suggests however, that domain specific attitudes and beliefs will govern metacognitive behavior within these particular domains. So in addition to domain generalize metacognitive deficits as might occur for a person with a Reading Disability (RD), metacognition is likely affected by both cognitive and psychosocial factors. The relationship between metacognitive knowledge, behavior and learning disabilities remains vague but has been the topic of investigation for a number of years. As a result of being diagnosed after a long period of failure, many learning disabled individuals often develop both metacognitive and motivational problems. Instead of attributing success to effort and failure to external factors, LD children tended to attribute success to external factors and failure to effort and ability, attribution patterns that would result in poor self-worth and the development of dysfunctional metacognitive and self systems. This dysfunction is then believed to increase the likelihood of future failure for LD children and reinforce negative self-evaluations, hence perpetuating the failure cycle. As a result of enduring extensive periods of failure, many LD individuals often develop dysfunctional metacognitive and self systems as well as motivational problems.

*Elbaum & Vaughn (2003)* in their meta-analysis looked at the outcomes of school-based interventions aimed at enhancing the self-concept of students with learning disabilities, specifically effect sizes in relation to students' self-concepts prior to the intervention. Results indicated that only students with documented low self-concept benefited significantly from intervention. For these students effect sizes were quite large.

*Weinstein (2003)* in an online article “Lessons Learned” warns the parents to check immediately if their gut tells them something feels different about their child. It's easier to know that child needs to be evaluated if he's not speaking in three-word sentences by age three or seems much clumsier than his peers. However, processing problems, early on, can also present as social phenomena-the child who's afraid to go to the playground because it's too busy, the child who hates birthday parties or panics at any new experience, the child who is overly ritualized and has to sit in the same seat in nursery school every day. Don't wait-it's time to find out. Mothers have an intuitive awareness of behavior that doesn't follow the usual developmental trajectory. Seriously avoidant behavior (i.e., won't look at the letters) is often a sign of an
There's no downside to getting your child tested. But there is a serious risk in waiting until the child hates school.

The research is clear: Earlier is better. The ideal time to start a remediation program is between four and seven years. One consequence of delayed identification is that it occurs late in the child's cognitive and linguistic development, so one might already be pushing the edge of child's cognitive flexibility and ability to learn skills. Author gives some “do's and don’ts” for the parents: (i) Don't tutor your child yourself; (ii) Choose a tutor with specific training in reading remediation; (iii) A tutor must understand the dynamic context of learning; (iv) Choose a tutor you trust; (v) Trust your child's passions; (vi) Provide a predictable, stable environment with a lot of repetition; and last but not the least, (vii) Advocate shamelessly for your child.

Antalek (2005) noted that many learning disabled students are not given accommodations for extended time to complete in-class exams because they have not been diagnosed with visual-motor processing speed deficits. While much has been learned about the existence of different learning disabilities and the challenges faced by learning disabled students, statistical weaknesses in visual-motor processing speed remain the primary benchmark to determine the delivery of accommodations for time to complete in-class and standardized exams. Study was conducted on 67 learning disabled subjects from public and private high schools, including the completion of a complex, timed writing task (Test of Written Language - Third Edition), and whether or not subjects took additional time to complete the task. Each subject selected exhibited one or more of four learning disability attributes; executive functioning, visual-motor processing speed, visual spatial reasoning, and short-term auditory memory; diagnosed through psychometric tests, including the Wechsler scales and the Woodcock-Johnson Psychoeducational Battery, Third Edition. Demographics (gender, grade, age, and school type) and learning disability attributes were compared with different areas of written language (vocabulary, sentence structures, spelling, etc.), the subjects' completion of the task on time, and/or the amount of additional time taken. While no single attribute yielded significant findings with the completion of the task on time or the level of improvement, the majority of the subjects took additional time and their scores on the task improved significantly, indicating a relationship between learning disabilities and the completion of academic tasks within an allotted time frame. Additional findings were noted between specific subtests of
the Wechsler scales and the Woodcock-Johnson and the completion of the task on time as well as the level of improvement. Finally, an average among the four visual-motor processing speed tasks of the Wechsler and Woodcock-Johnson batteries was created, and results indicated that a tendency to collapse these test results into false averages does not bear a positive relationship with performance under timed constraints, indicating that this is not an appropriate practice in the determination of accommodations.

**Beam (2005)** investigated the relationship between placement in inclusive and pullout special education programs with regard to Virginia Standards of Learning (SOL) achievement, and behavior outcomes for 3rd and 5th grade students with learning disabilities. Data collection and analysis also addressed staff costs for the models reviewed. Demographic data such as age, gender, ethnicity, years of special education services, and years in the school division were comparable for the two groups of students. Quantitative methods were used to describe two schools and their special education service delivery models, both inclusive and pullout programs. Individualized Education Program (IEP) goals and objectives, classroom accommodations, and co-teaching methods were reviewed to provide explicit definitions of the models. Results indicated that there were no significant differences between the two service delivery models for students with specific learning disabilities.

**Cavendish (2005)** conducted the study with the purpose to extend the current research examining the psychological and meta-cognitive constructs important in academic achievement as a means of further understanding students with LD. This study used a causal comparative research design with 6th, 7th, and 8th grade students (N = 142) who were classified into three groups (LD, non-LD low achieving, and non-LD average achieving). Normal achieving students reported higher academic and self-regulatory, self-efficacy scores and less frequent use of academic self-handicapping strategies. Experiencing poor academic success was associated with low self-efficacy and high use of academic self-handicapping strategies regardless of special education status. Students with LD reported higher self-efficacy for self-regulated learning than did the low achieving non-LD students. These reports were significantly more discrepant from teacher ratings of self-regulated learning behaviors than were non-LD students. In contrast, students with LD reported using less
academic self-handicapping strategies than did either non-LD group. Regression analyses were conducted to examine the predictive power of self-efficacy beliefs, teacher ratings and group membership with regards to use of academic self-handicapping strategies. Results supported the conclusion that multiple determinants exist. Based on the current findings, language arts self-efficacy, membership in low achieving and normal achieving student groups, and teacher reports of student self-regulated learning behaviors can predict use of academic self-handicapping strategies. Results of this study provide further evidence that no single factor contributes in isolation to the understanding of differences between students who are identified as LD and low achieving students who are not identified as LD. The relationship between self-beliefs and self-protective strategies appears to be complex and potentially influenced by multiple factors. Researcher felt that further elaborate research is needed on the unique interactions that determine long-term outcomes for students with LD.

Donoghue (2005) reviewed that the research-based literature indicated students diagnosed with learning disabilities frequently demonstrate differences in their self-concept formation compared to students who are not diagnosed with a learning disability. The cognitive self-appraisals and the emotional sense of worth that children with learning disabilities hold have been recognized as key components of the development of self-concept. These components are essential to consider when developing a treatment plan aimed at improving academic skills and self-concept correlates related to the learning disability. By investigating self-concept (specifically academic domains) formation and the correlates of self-concept formation within this population, a comprehensive picture of students with learning disabilities can be painted. This collective picture will assist in identifying interventions that incorporate techniques that effectively enhance self-concept development, which ultimately will allow for better academic outcomes for learning disabled students.

Gale (2005) conducted study with the purpose to determine if differences in school performance existed between two groups of middle school students with Specific Learning Disabilities (SLD). One group received special education services in co-taught settings and the other in pullout classrooms. Sixty-seven student files were reviewed to acquire the appropriate data. Both groups were comparable on several factors, including chronological age, intelligence quotients, time receiving
special education services, length of time receiving a formal education, Individualized Education Plan (IEP) objectives, IEP accommodations, ethnicity, grade level, and teacher licensure. Quantitative measures were utilized and a description of the school environments in which students received SLD services was presented. Results indicated non-significance for standardized tests, and attendance. Significant results were indicated for behavior infractions. Implications of the results were reviewed and recommendations for future research were made.

Glago (2005) asserts that self-determination and self-advocacy are necessary skills to be possessed by students with disabilities. These skills can help facilitate students' access to the general education curriculum, achievement of higher standards, and achievement of better post school outcomes. Past research on self-determination has focused on high school students with mental retardation and few studies have addressed teaching these skills to elementary students. This study investigated the impact of self-determination instruction, specifically problem solving skills, on twenty-one 4th and 5th grade students with learning disabilities and emotional disabilities. A pretest-posttest randomized control group design was used to teach students a five-step problem solving strategy. Students participated in nine weeks of self-determination instruction and quantitative data were collected on students' abilities to learn a five step problem solving strategy, apply the steps to scenarios, determine self-efficacy related to self-determination problem solving training, maintenance and generalization measures. Data were collected on five dependent measures and analyzed using non-parametric statistics, independent samples t-tests, paired samples t-tests, and ANOVAs with repeated measures. Findings revealed that students in the experimental groups statistically outperformed students in the control groups in their abilities to learn a problem solving strategy, apply that strategy to scenarios, and generalize the use of that strategy. Students in the experimental groups maintained the ability to list the steps to solving a problem and applying those steps to a scenario three weeks after the study ended. No statistically significant results were obtained regarding students' perceived self-efficacy related to problem solving.

Goldman (2005) conducted a study to determine whether or not general and special education teachers were implementing instructional strategies with elementary, middle, and high school students who were identified as having learning disabilities or who were at-risk for academic failure. These educators were surveyed
to examine if they based their implementation of strategies, involving manipulatives and visual imagery, on what they believed to be brain-based research findings and recommendations. The data revealed that educators were implementing what they believed to be brain-based research strategies when, in fact, they were implementing strategies that were not neurologically research-based.

Gustashaw (2005) observed that the use of elaborative mnemonic strategies has been an effective tool to assist students with learning disabilities recall unfamiliar and abstract information. Previous studies have demonstrated that when the elaborative mnemonics are used on maps typically found in textbooks, students with learning disabilities are able to recall a greater number of locations as well as more associative information about the events. The study consisted of four map conditions that presented Civil War battles and battle information based on the Virginia Standards of Learning using: (a) paper maps with traditional, non-descriptive icons to mark each battle, (b) paper maps using elaborative mnemonic icons, (c) computer generated maps using elaborative mnemonic icons, and (d) computer generated maps using elaborative mnemonic buttons that enlarged when the student clicked the mouse on the image. Scripted lessons were given to students in each condition identifying the correct location of the battle on the respective maps along with factual information about each battle. At the conclusion of the lesson, the examiner gave the student a brief distracter task to prevent rehearsal of the information. At the end of the task, students were asked to identify the proper location of each battle by placing a letter in a box on a test map where the battle took place. After identification of the battle location, students were asked to identify the associative information related to the battle. A 4 condition (traditional, paper elaborative mnemonic, computer elaborative icon, and computer elaborative button) by 2 (location vs. event) repeated measures Analysis of Variance was conducted to analyze the students responses. No significant differences were found among the different conditions on the two respective measures. A significant difference was found when the recall of event information was disaggregated from the recall of location. This finding suggests that the use of computer generated elaborative mnemonics is a powerful strategy to help students with learning disabilities recall unfamiliar and abstract information.

Hung (2005) examined the effects of prior knowledge of adolescents with and without learning disabilities (LD) on their ability to solve a complex math
problem called Fraction of the Cost. Schema theory, working memory theory, and cognitive load theory - all of which emphasize the critical role of prior knowledge on learning - were used as the framework for the design of the study and the explanation of the results. Subjects in the study included 128 seventh graders from six math classrooms in a public middle school. Students were divided into high, average, or low skill groups in computation and in problem solving based on their performance on standardized computation and problem solving subtests. The performances of students with and without learning disabilities in the low-skill group were also compared. Two-way split plot ANOVAs with repeated measures and residualized gain score analyses were used to analyze the data. Fisher LSD and concept-level analyses were also conducted. Results showed that all students, irrespective of their prior math skills or disability status, benefited from the instruction. The analysis also indicated that the students' computation and problem solving skills played important roles in their performance on the Fraction of the Cost posttest as did their understanding of concepts on the Fraction of the Cost pretest. In addition, students with low computation or problem solving skills without LD scored at the same level as students with LD. The study has implications for instruction and future research.

Malanaphy (2005) conducted the research to study the inclusion classroom where students with special learning needs are taught with their peers in the general class, and specialized instructional supports are brought to the student. The demand to teach more culturally and linguistically diverse student populations, coupled with an increase in students identified with special learning needs, has presented teachers with the challenge of how to meet all students' unique and individual learning needs in a heterogeneous general education class. This qualitative study consisted of case studies of two English classes at two secondary schools in Hawai‘i. Each implemented different models of inclusion to provide specialized instruction in the general classroom for students with mild learning and emotional disabilities. Key research questions focused on: What does the inclusion model look like in two classrooms in Hawai‘i public schools and what characteristics positively or negatively affect student academic achievement? Each case study revealed how inclusion functions for the teachers and students in their classrooms. Research methodology included daily observations throughout a semester; informal interviews with key stakeholders such as teachers, students and administrators, and document study. The findings suggested
that there are key components for effective inclusion that were lacking in the classes that were studied. These components were: adequate collaboration between the special education and general education teachers; appropriate class size; professional development to build teacher knowledge and skills; and the use of accommodations and instructional supports to meet students' needs, such as differentiated learning strategies and cooperative learning. The results of this study suggest that future efforts towards the inclusion of secondary students with mild learning disabilities in the general classroom should consider stronger classroom supports, improved teaching strategies, fully-licensed special education teacher support, and administrative oversight at the state, district, and school levels.

McMillan (2005) compared an urban inpatient school-age population who were found eligible to receive services under the eligibility category of Learning Disability with peers not receiving services for a learning disability in relation to suicidal ideation or attempt. The study consisted of 139 subjects, ages 6 to 19 years, who were discharged from a 120 bed urban psychiatric facility. Intake data regarding suicidal ideation or attempt of subjects with a learning disability was compared to non-LD subjects. Z test proportion results indicated the proportion of LD patient admissions was reliably higher than the population proportion ($z = 6.24, p = .001$). A second z test for proportions indicated suicide attempts by LD children and adolescent patients in the sample were not reliably higher than the proportion in the general population who successfully commit suicide. Results of chi-square analysis of the hypothesis that suicide attempts and suicidal ideation were more common among the LD children were not significant. Although adolescents (39.8%) either attempted suicide or expressed suicidal ideation more than children (30.4%), the chi-square analysis indicated that this difference was not reliable. Even though a greater percentage of hospitalized females (12.7%) than hospitalized males (8.3%) attempted suicide, the chi-square analysis indicated that the difference was not reliable. The final chi-square test indicated that the difference in the relative proportions of males (60%) and females (40%) was reliable. Data analysis indicated significantly more children with learning disabilities were found among the individuals in the sample than would be expected given their frequency in the school-age population, thus lending support to the hypothesis that learning disabilities place students at greater risk for depression and/or suicide. A larger sample should be obtained and these analyses replicated.
before coming to any final conclusions about the relation between learning disabilities, depression and suicidal ideation/attempts.

McMullen (2005) observed that the primary problem faced by students with learning disabilities (LD) in middle school, inclusive settings was students' lack of classroom organizational behaviors. Many of these individuals did not bring necessary materials to class, began class on task, completed class work, copied homework assignments, or turned them in. General educators must become aware of interventions that close the gap between teacher expectations and students' ability levels. One effective intervention is self-monitoring. Many self-monitoring studies have addressed academic productivity and increasing on-task behaviors. However, this study addressed self-monitoring and classroom organizational behaviors. The purpose of this study was to investigate the effect of self-monitoring on classroom organizational behaviors with students who have LD in inclusive settings. Using an ABAB reversal design embedded within a multiple baseline across two classrooms, the researcher investigated six sixth-grade students identified as having LD. These students were also viewed by their teachers as having organizational deficits. Students were instructed to self-monitor five organizational behaviors by circling yes or no to determine whether they completed them. One independent observer in each classroom collected data unobtrusively on each student. The study was guided by three research questions, which addressed the effectiveness of self-monitorying, the accuracy of self-ratings, and continuation of classroom organizational behaviors. Findings indicated the following: (1) when self-monitoring was introduced, students evidenced more classroom organizational behaviors; (2) they did not accurately assess their classroom performance with regard to these behaviors; and (3) they continued to perform the organizational behaviors in other inclusive settings. Results provide implications for using self-monitoring for adolescents with learning disabilities and organizational deficits.

Miller (2005) in the experimental study taught information relating to three figures from the early Italian Renaissance to twenty-seven tenth-grade males with language-based learning disabilities in their history classroom, followed by a review of the material that evening. Control participants reviewed each item of the material for thirty-five minutes by means of a direct-instruction recitation format. Experimental participants reviewed the material for thirty-five minutes by means of a
provided mnemonic image for each figure; this image incorporated acoustic, symbolic, and mimetic representations for each item of the material. A free-recall test on the following day indicated that the experimental participants recalled significantly more items of information than did the controls. Tests of correlation indicated that participants who reported using the mnemonic strategy performed better than did participants who reported using oral or silent repetition. Chi-square analysis indicated no significant difference in recall by type of representation.

Morris (2005) viewed that education occurs within a complex structure of historical, social and cultural forces. Western culture has maintained a distinctly right-hand bias for centuries. Within this culture a child must learn. Studies show left-handedness, approximately 10% of the population, is not solely genetically based. Further studies show testosterone can retard brain organization and motor function. This creates a greater tendency for males to be left-handed than females. Left-handedness can also result from stresses termed pathological. Research has shown learning disabilities occur more frequently within the left-handed male population. Left-handed boys in a classroom can exhibit behavior consistent with children with learning disabilities. Tests used to assess learning disabled children are biased toward right-handed. Children may be placed in special education without proper evaluation. These factors and others could lead to a disproportionate number of left-handed males being assigned to special education programs. A hypothesis was formed and to evaluate this hypothesis a survey of the field was completed. An examination of the data the survey had produced demonstrated clearly that there were a disproportionate number of left-handed males assigned to special education.

Putney (2005) conducted study to identify variables that were present in successful and unsuccessful students with learning disabilities, Attention Deficit Hyperactivity Disorder (ADHD), also referred to as Attention Deficit Disorder (ADD) while attending college. Participants in this study included 125 students enrolled in four colleges and universities located in the eastern part of the United States. Each of these students was registered in their respective college's disability support center and was able to provide documentation of their disability. This study used mixed methods to address the following research questions: (a) Is there any difference in GPA among those identified as a student with a learning disability, ADHD, and a combination of learning disability and ADHD? (b) Is motivation correlated with the success of a
college student with a learning disability or ADHD? (c) Is there any difference in GPA among those labeled in elementary school, middle school, high school, and college? (d) Are there significant differences in overall college GPA between students based on (1) race, (2) gender, (3) IQ, and (4) college major? In addition, this study focused on the experiences of college students with LD and ADHD to provide an opportunity for this population to speak about achievements and challenges they faced currently. Therefore, qualitative methods were used to answer the research question: What are the academic and social experiences of college students with LD and ADHD? The independent variables in this study were area of disability, motivation, when the student was identified with a disability, race, gender, IQ, and college major. The dependent variable in this study was student success as measured by students' overall college GPA. Results of the analysis of variance and Pearson product-moment correlations revealed no statistically significant differences in overall college GPA among students with LD, ADHD, or a combination of the two. The bivariate analysis revealed that motivation showed no correlation to student success as measured by students' overall college GPA. ANOVAs also showed no statistically significant differences in overall college GPA among students who were labeled as LD and/or ADHD in elementary school, middle school, high school, and college. In addition, there were no significant differences in overall college GPA between students based on race, gender, and college major. A bivariate analysis was run and showed no correlation between IQ and overall college GPA. Results of the qualitative analysis revealed that students enjoyed active social lives and, although not initially, appeared to have adjusted well to college. Findings also indicate that students were able to incorporate effective strategies that promoted college success.

Reed (2005) tried to understand the factors influencing the successful participation of adults with learning disabilities in higher education. Data were collected through a series of three semi-structured interviews from a sample of ten students presenting verified learning disabilities and attending a minority-serving institution. The key emerging themes and patterns were identified from all thirty transcript analyses. The findings, placed in the context of previous research into college success for students with learning disabilities, enabled recognition of a success model with five overarching themes: (A) A higher education institution committed to access and retention for disadvantaged students, reflected in a mission
tests were performed for the GE group and for the group with LD. The performance of the two groups was then compared with repeated measures analyses. No statistically significant differences were found, which was attributed, in part, to small sample size. Minimal change in the mean performance of either group occurred after audiocassette presentation for Math Concepts. The group mean for LD on Problem Solving improved slightly with the accommodation. Repeated measures analyses showed no significant difference in performance between students with high vs. low levels of math vocabulary. A floor effect, along with the students' level of academic language proficiency, may have affected the results. Some students improved their scores with audio presentation, but others scored lower. This reinforces the need to base the use of any test accommodation on individual need, not disability label or other factors.

Schultz (2005) was perturbed with the trend that schools often place gifted students in Advanced Placement/Honors classes, while at the same time they placed learning disabled students in segregated, remedial settings. Researcher maintained that this practice is an inadequate way for schools to accommodate twice-exceptional students who simultaneously display characteristics of these two groups. This study tried to examine parents', teachers', and guidance counselors' perceptions of Advanced Placement or College Level Learning when planning the academic programs of students with learning disabilities. More specifically, study attempted to seek an answer to the following question: What do parents, teachers and guidance counselors identify as the supports and barriers to students with disabilities participating in Advanced Placement and College Level Learning classes? To answer this question semi-structured interview protocols to probe parents', teachers' and guidance counselors' understanding of program structure and policy regarding Advanced Placement or College Level Learning in their district was used. The data analyzed through analytic induction, looking for patterns and similarities among 36 participants' perceptions. As themes emerged from the data, follow up with participants for comment and validation was carried. The following were among the study's important findings: (1) School culture is a determinant for participation in Advanced Placement and or College Level Learning for a ‘twice-exceptional’ student. (2) Staff development regarding the implementation of Individualized Education Plans must occur for all staff, not just for those who typically work with special needs...
students. Inconsistent implementation of test and environmental modifications acted as a barrier to the ‘twice-exceptional’ students in this study who participated in Advanced Placement and College Level Learning. (3) When transition planning for the ‘twice-exceptional’ student, better coordination between the general education and special education systems must occur. (4) In this study, there was a high ratio of ‘twice-exceptional’ participants. As evidenced, these findings promise to inform professional practice and discourse in the fields of special and gifted education.

Smith (2005) observed that profile analysis with Wechsler scales has a long history in school psychology. Many see profile analysis as a useful hypothesis generating procedure that could assist in diagnostic decisions; however, numerous limitations have been associated with the procedure. Consequently, in the present study researcher sought to investigate the prevalence and diagnostic utility of multiple WISC-III profiles by comparing 2,273 children with learning disabilities (LD) to 2,158 children in the WISC-III standardization sample. Further analyses explored sub-samples of children with specific reading and math disabilities. Results indicated that the presence of a WISC-III profile would not lead to decisions that are useful in discriminating among children with LD and children without disabilities. For instance, WISC-III profiles examined in this study exhibited low sensitivity and moderate to high specificity. Additionally, receiver operating characteristic (ROC) analysis, quantified by the area under the curve (AUC), showed that all WISC-III profiles demonstrated low diagnostic utility. Consequently, the use of WISC-III profiles was not recommended for diagnosing LD.

Stiller (2005) evaluated the effectiveness of intensive phonemic awareness intervention for upper elementary students with Learning Disabilities (LD). The student participants included 14 third to fifth grade students from one public elementary school Special Day Class (SDC). Individuals were administered a pre- and post-assessment of phonemic awareness and received eight weeks of intensive phonemic awareness intervention within the classroom setting. Results indicated a statistically and socially significant change in student ability to perform alliteration, rhyme, oral blending, oral segmentation, and phoneme manipulation. Findings suggested that intensive intervention for students with LD at the upper elementary level could improve their basic reading skills, which could lead to improved reading success.
Stretch (2005) studied to determine the effects of the Paired Reading Method on the reading accuracy and reading rate of middle school students who have learning disabilities and who were significantly below grade in reading. This was a single-subject, multiple-baseline across subjects design using six subjects from a middle school in Maryland. Baseline data were gathered by having each student read from a grade 4 or grade 6 reading level book for one minute to document reading errors and words read correctly per minute. Intervention sessions consisted of 10 minutes of using the Paired Reading method and 1 minute of a taped oral reading. The intervention materials included books from a leveled reading series at each student's reading level. The dependent variables documented the number and type of errors, the number or words read correctly per minute, and the number of words read per minute. As the data did not indicate positive results with these students, the study was concluded without a maintenance phase.

Trissler (2005) observed that students with diagnosed learning disabilities are more likely than other students to experience challenges doing homework. This study examined the attitudes of a group of fifteen southeastern Pennsylvania suburban elementary school children in fourth through sixth grade towards homework. The study also surveyed the regular education teachers of these students who experienced mainstreaming and the effects of least restrictive environment legislation in educating these children. The study analyzed the results of student focus groups, questionnaires, and writing prompts, along with a teacher questionnaire in order to gain insight into student attitudes towards homework. The results of the study indicated that elementary children with learning disabilities understood the importance of homework in reinforcing what was taught in school, but the issues of quantity and time involvement hampered social involvement and led to frustration by many involved in this study. Similarly, homework assignments requiring elementary children with learning disabilities to read or write at a grade level beyond their instructional level in language arts adds additional frustration. When language arts homework was at the student's instructional level, attitudes were more positive - countering the teacher's expectations that all homework involving reading and writing would be viewed negatively by the students. The study revealed that students responded more favorably to homework involving worksheets and hands-on projects. In addition, the study found that parents played a key role in student success by
providing homework assistance. Finally, the literature revealed that many differing 
opinions exist on the topic of homework. However, given the overwhelming research 
that suggested that homework at the elementary level had little affect on increasing 
academic achievement, one is left to question the frustration by students over a task 
that has little correlation with its intended goal.

Volpitta (2005) in the study titled “Socialization of students labeled learning 
disabled: Rewriting the text of self” analyzed a multimedia production generated with 
three adolescents labeled learning disabled (LD) to discover the ways the students 
negotiate the medical and reconceptualist discourses. The problems addressed 
included: (a) the current focus of the academic literature that often treats students 
labeled LD as uni-dimensional and deficient, and (b) the need for researchers to 
collaborate with students labeled LD in order to understand better how they think 
about themselves. Researcher completed three separate analyses: (a) a critical 
discourse analysis of the language in the multimedia presentation and portions of the 
preparatory discussion groups, (b) a critical discourse analysis of the images of 
particular sections of the multimedia presentation, and (c) a thematic content analysis 
of both the discussion groups and the multimedia presentation. First, researcher used 
Foucault's technologies of power as a framework to analyze the ways in which the 
participants use collective images, music, and so forth to negotiate the subject 
positions created through the two discourses. Next, researcher discussed the identity 
constructions of each individual based on the analysis of his or her individual 
participation in the discussion groups and the multimedia presentation. This study 
indicated a need to (a) enlarge the understanding of ‘self” as it is currently addressed 
in the LD literature, (b) recognize the social nature of knowledge construction and the 
relations of power that affect this production of knowledge, and (c) include 
participants as active creators of knowledge. Although the images associated with 
being labeled LD within the dominant discourse are often negative, the learning 
disabilities discourses are mitigated through a vast number of other discourses, all of 
which contribute to who the participants are. The medical and reconceptualist 
discourses in this case proved to be dialectical, rather than distinct.

Walsh (2005) found that the current literature and research in Learning 
Disabilities and Attention Deficit Disorders tend to explore the needs of students who 
have disabilities and disorders, but there is little to no research that explores the needs
of the teachers who are dealing with these students each day in mainstream classes. This study explored those needs, and found that they fall into four major categories: Knowledge needs, administrative needs, personal needs, and needs of actions and behaviors on the part of the students themselves. Knowledge of these needs may help researchers and trainers to devise training programs that are useful and relevant to the teachers, and thus ultimately to the students themselves.

Yoshida (2005) conducted a study titled “The role of music in the mathematical performance of high school students with moderate learning disabilities”. The researcher felt that, there is an urgent need for innovative strategies designed to improve the mathematical performance of students with special needs. The primary goal of this study was to determine the effect of background music, in conjunction with existing instruction, on the mathematical performance of individuals with moderate learning disabilities. The second goal was to determine if disability type was related to background music response. Through the use of a single-subject AB-maintenance design it was determined that background music had a positive effect on 5 out of 7 participants. Also, results suggested that individuals with specific learning disabilities and emotional disorders benefit most from this intervention, while the opposite was suggested for individuals with mental retardation. Algebra teachers may consider this intervention for students with moderate learning disabilities.

Airhart (2006) in this quasi-experimental study measured the effects of a Direct Instruction reading program within the state mandated language arts curriculum. The study aimed to determine if a specific reading program made a difference in reading abilities, pass rate on the Gateway Language Arts exam, and student perceptions of reading. The 104 high school students with specific learning disabilities (SLD) that participated in the study were enrolled in eight 90 minute yearlong resource classrooms in three high schools. Students in the comparison groups were taught the state language arts curriculum using the county adopted text which included components of literature, spelling, vocabulary, writing, and grammar. The Corrective Reading program was substituted in place of the literature and spelling components for the experimental group for 15 weeks. Students were pre and post tested using the Wide Range Achievement Test (WRAT-R) and the Test of Reading Comprehension (TORC-3) and surveyed using the Reader Self-Perception Survey.
Recommended tenth grade students completed the Gateway Language Arts examination. Statistical analyses were used to determine significance between the two groups: independent t-tests for the WRAT-R reading and spelling and the TORC-3 comprehension to determine difference in pretest abilities; paired t-tests for the WRAT reading and spelling to determine posttest significance; analysis of covariance to determine significance in posttest results for comprehension; and independent t-test to determine Gateway pass rate differences. Descriptive statistics were used to compare differences in pre and post on the Reader Self-Perception Scale. Statistical significance was found in spelling abilities with the experimental group exceeding the comparison group. Statistical significance was found in both comprehension abilities and Gateway pass rate with the comparison group exceeding the experimental group. Greater mean gains were made by the experimental group in tests of decoding, spelling, and comprehension. Greater increases in positive responses on the Reader Self-Perception Scale were exhibited by the experimental group. Researcher recommended to further examine the program over an extended period of time to determine if students could move into the average range of abilities in reading and also analyzing various methods of teaching reading to SLD adolescents and using alternate dependent measures to analyze gains.

Bernstein (2006) felt that there is limited research on the motivational style of middle school and high school students with learning disabilities, language impairments, and attention problems. So, his study explored the motivational processes of 7th through 11th graders receiving support services through special education. A well-researched theoretical model of motivation was employed in order to facilitate understanding of the underpinnings of achievement motivation among individuals in this special population. Motivational process model - including implicit theories of intelligence and achievement goal orientation as predictors of individual response to failure - was applied. Following the administration of a failure scenario, behavioral and cognitive responses to failure were measured. Participants in 3 suburban public school districts completed a questionnaire measuring implicit theories of intelligence and achievement goal orientation (i.e., learning, performance-approach, and performance-avoidance). In addition, the students read a failure scenario and then completed questions about their attributions for failure and positive strategy use following failure. Findings revealed that an incremental theory of
intelligence and a learning goal orientation were predictive of a mastery-oriented response to failure as seen in use of positive strategies and mastery-oriented attributions. The predictive power was stronger for positive strategy use when the effects of age were accounted for. Younger students used more positive strategies. Performance-approach and performance-avoidance goals did not have any relationship to other variables. Thus, belief in the malleability of intelligence when combined with a learning goal, tended to insulate adolescents with learning challenges from the effects of a learned helpless response to failure.

Black (2006) – in this phenomenological study – investigated what students labeled with learning disabilities (LD; also called learning differences) view as barriers to their access of higher education and what they see as their accommodation needs for full participation in education. Eleven college students labeled with LD engaged in long interviews utilizing the voice of those labeled with LD as the primary data. Findings were interpreted through emerging theories in the new field of disability studies. Findings indicated barriers to education were seen as socially imposed rather than emanating from individual pathology. Informants indicated they were blocked from moving effectively through higher education by: (a) being misunderstood and misrepresented by their institutions, (b) feeling reluctant to use accommodations for fear of invoking stigma, (c) devaluing their work accomplished with accommodations, (d) needing to work significantly longer hours on homework than their non-labeled counterparts, (e) feeling their extraordinary workload was unrecognizable by faculty, (f) finding their hard work did not produce a product commensurate with their efforts (leading them to believe faculty doubted their work effort) and, (g) not being consulted by clinicians in determining their accommodation needs. Strategies used by some of these informants to overcome these barriers included: (a) rejecting the disability label, (b) establishing interpersonal relationships with their professors in order for professors to see past the stereotype of LD and recognize the capacity of the individual within, (c) having the assistance of an LD Specialist who advocated for informants with faculty and bureaucracies, and (d) establishing empowerment communities with others labeled with LD. Data strongly points to the need for faculty diversity training on LD issues to be implemented by universities. This study also offers an insider's view of how findings in medical research map to the context of everyday life, classroom learning, and social
interaction. Informants describe how difficulties with visual, phonemic, semantic, memory and kinesthetic functioning appear and disappear in the context of social situations.

Brewton (2006) investigated the effects of inclusion on mathematics achievement of general education students in middle schools. Student math academic assessment scores were compared using the Standard Proficiency Assessment (SPA) scores for grades fifth, sixth, and seventh. The Grade Eight Proficiency (GEPA) was used for grade eight. An independent t-test was conducted for the purpose of this study. This study examined the math achievement scores of the general education students in an inclusive environment to the general education students who were not in an inclusive setting in two middle schools. Data from interviews conducted with two principals from the middle schools and two focus groups interviews were held with general education and special education teachers who serviced students in mathematics in a non-inclusive and inclusive setting. The interview sessions were audio-taped. The tapes were transcribed and analyzed to find commonalities and differences by using eight questions to address seven areas within the study. The results of this study revealed no statistically significant differences between the general education students in an inclusive setting and non-inclusive setting. Further data also revealed that placing students with learning disabilities with students without disabilities is not disruptive while math instruction is provided.

Brodeur (2006) conducted a preliminary study on “Building social competence in children with nonverbal learning disabilities.” Children with nonverbal learning disabilities (NVLD) have deficits in tactile perception, psychomotor coordination, visual-spatial processes, and social learning. These deficits have been related to disrupt functioning of the neurological pathways of the right hemisphere. Social learning that remains an area of challenge for children with NVLD was the study's primary interest. The term 'social pragmatics' refers to the interpersonal communication skills necessary for effective functioning within the social world. The study sought to assess the effects of a method of social pragmatics instruction on children with NVLD. Using a non-experimental single-case research design that included assessments of adaptive skills and emotional functioning, the study evaluated a student in a class that teaches social pragmatics. This class was held in a school for children with learning disabilities. Participants included an identified 15-
year-old female NVLD student participating in the class, a male teacher, and the mother of the participant. Measures of both mental health and adaptive skills were administered to determine if an NVLD student's psychological presentations were affected by learning social skills. Because a course in social pragmatics was studied, particular interest was paid to adaptive skills such as leadership, social skills, and adaptability. Outcome measures consisted of the Behavioral Assessment System for Children II (BASC II) with its three respondent report forms (child, teacher, and parent), as well as open-ended interview questions designed by the author for the teacher, parent, and child. For the parent and teacher self-reports, results on the BASC II showed decreases in hyperactivity, depression, withdrawal, and attention problems, as well as increases in social skills, leadership, and adaptability. Interviews with the parent and teacher indicated the student had learned better communication and assertiveness skills. In the student interview, the student reported greater self-confidence. According to the parent, further development of social pragmatics curricula, should include specific instruction in forming and maintaining friendships, because a deficit in this interpersonal area poses particular difficulties in NVLD children. In the parent's interview, this is particularly true with regard to initiating contact and staying in touch with friends over time. The teacher interview indicated that classes for younger children in basic social skills like maintaining eye contact, stating one's feelings, and refraining from interrupting would be helpful, while more advanced topics like conflict resolution could be targeted for middle and high school children.

Canrinus (2006) investigated the social-emotional functioning in children with and without learning disabilities (LD). Evidence indicates that children with LD are less socially skilled, hold lower social status, and have lower quality friendships than children without LD. Some research suggests that children with LD may also be more likely to experience emotional difficulties such as loneliness, anxiety, and depression. Although empirical evidence is minimal, there is some indication that children with nonverbal learning disabilities (NVLD) may experience even greater social-emotional difficulties than those with verbally-based learning disabilities (VLD). This study examined between-group differences social-emotional functioning in children with NVLD, VLD, and non-LD controls. Ninety children aged 8 to 13, their parents, and teachers responded to questionnaires about social and emotional
functioning. Results revealed some group differences between children with and without LD. Few differences between children with VLD and NVLD were detected. Results have relevance to the literature as well as practical implications.

**Clore (2006)** in a mixed methods study designed to investigate the social skills use of adolescents with learning disabilities through an application of Albert Bandura's theory of reciprocal interaction. Data were collected through ranking surveys, observations, interviews, and school records. The study determined whether the language deficits of LD students contributed to their general decreased social competency. Through data from the Social Skills Rating System, the seventh grade participants were considered socially competent to some degree by self report, their teachers, and their parents. Factor analysis revealed students were the best predictors of their social skills use from all data sources. In ranking participants' social skills use, students and teachers were more strongly correlated than were students and parents, or teachers and parents. No relationship of any strength existed between the participants' cognitive ability and their social competence. A use of Bandura's determinants indicated that a relationship existed between some subtypes of learning disabilities and some types of social skills misuse. The participants diagnosed with reading disability, auditory processing disability, receptive/expressive language disability, or nonverbal learning disability all made the majority of their observed social skills errors in the environmental determinant of Bandura's triad of reciprocal interaction. The participants in the four subtypes experienced their information processing deficits in attending to environmental stimuli, or in attending to inappropriate environmental stimuli. The area of the subtype of information processing deficit aligned with the determinant in which the participants in that subtype's social errors were experienced.

**Coady (2006)** was concerned with the statistics of the previous researches which indicated that approximately 15 to 20 percent of U.S. children are bullied or teased on a repeated basis. Bullying behavior becomes particularly problematic during early adolescence within the middle school environment. This may create a school atmosphere of intimidation and interfere with learning. The majority of previous research has focused solely upon direct forms of aggression, more common to males. Some recent studies have included the assessment of indirect behaviors, or relational aggression, more typical of females. Many students who are classified with learning
disabilities maintain certain vulnerabilities, similar to those typical of victimized students. Unfortunately, few studies have been conducted investigating direct and relational victimization involving students with learning disabilities. The purpose of this study was to determine whether direct and indirect victimization is more prevalent among learning disabled (LD) students and whether gender plays a significant role in the prediction of those students at the greatest risk for victimization. The participants comprised 641 middle school students ranging in age from 11 to 14 years. Students were administered the Revised Olweus Bully/Victim Questionnaire (RBVQ) and the Achenbach Youth Self-Report Form (YSR). The independent variables consisted of educational classification and gender. The dependent variable consisted of victimization scores on the RBVQ. Given that students classified with LD often experience other comorbid difficulties, results of the YSR were used to eliminate students with significant behavioral symptoms. Analyses revealed that there were no statistically significant differences between LD and NLD students, or between males and females, with regards to victimization. A significant interaction effect was found for educational classification and gender. Among NLD students, males were more likely to be victimized than females. When participants with significant behavioral symptoms were removed, significant interaction effects were eliminated.

Conde (2006) investigated the social interactions between children with special needs, learning disabilities and/or attention deficit disorder (ADHD). The children were observed in groups of three/four while creating a cooperative art project. During this activity, their interactions were recorded and coded for patterns of verbal communication. Verbal communication was evaluated through statements reflecting requests for information and materials; helping / cooperation / giving; consideration / positive reinforcement; competitiveness; intrusiveness; rejection; self-image; neutral statements; and persuasiveness. Results indicated that children with special needs tended to engage in a greater frequency of helping / cooperative / giving statements as opposed to any other verbal statements. Specifically, positive statements as opposed to negative statements classified their verbal interactions. These children also appeared to demonstrate more internalizing behaviors than externalizing behaviors. The influence of children's behaviors on children's verbal statements was examined. Results indicated that children who evidenced a disability in reading or
language appeared to engage in a greater frequency of cooperative or helping statements than their non-disabled peers. Intrusive tendencies may be associated with the following: presence of a reading disability, absence of ADHD, and absence of a disability in written expression. Additionally, the conversations of children with a disability in mixed receptive language tended to evidence a greater frequency of neutral statements when compared to their peers without a disability. Externalizing behaviors also appeared to be associated with increased use of considerate and encouraging statements. Findings also suggested that intellectual ability may be related to children's verbalizations, but unrelated to children's behaviors. Intellectual functioning appeared to be directly related to children's use of rejecting statements. Upon comparing these findings to previous literature on the social communication between children with and without special needs, it is unclear whether children with special needs evidence a shared communicative culture or ability to interpret communication patterns, which results in more positive communicative interactions. This study has implications for appropriate educational placement, the formation of children's friendships, and the social communication of children with special needs.

Costanzo (2006) observed that generally students in special education experience reductionist instruction based on narrow views of literacy and institutionalized deficit views of students labeled learning disabled. In contrast, this study was based on a broad conceptualization of literacy, including bi-literacy for bilingual students labeled learning disabled and viewed learning and literacy through a socio-cultural, critical lens. It focused on students' competencies. This study may be the first to explore how bilingual students with learning disabilities access opportunities for bi-literacy. This study was a critical ethnography of six elementary-aged, Spanish-English bilingual students labeled learning disabled. All received bilingual special education resource services in addition to instruction in their bilingual homeroom. Data collection consisted of: observation of students in their homeroom, resource, and art and music classes, teacher and student interviews, and relevant artifacts. Findings suggested that bilingual students with disabilities possess an array of bi-literacy competencies despite the fact that instruction does not promote them. Bi-literacy seemed to occur as a natural response to students' interactions within their socio-cultural milieu. Students' abilities exceeded teachers' expectations of them and even surpassed teachers' own socio-cultural and socio-critical awareness. It
implied that bi-literacy is not too challenging for bilingual students with disabilities. In fact, bi-literacy highlights and capitalizes on students' competencies, thereby revealing students' authentic literate and linguistic abilities. Findings from this research support the notion that informal reading opportunities, meaningful conversations, and learning contexts in which language and literacy are integrated into content instruction provide important and authentic language and literacy learning opportunities for students. Additionally, despite the fact that all the students in this study were bilingual and bi-literate to some degree, none had adequate opportunities to use and learn English. It is imperative that school districts provide a structure to guide instruction in two languages, develop curricula for structured English language development (including goals for the acquisition of specific academic content, vocabulary and language usage) and ensure that all students have equal access to it.

_De Santos (2006)_ observed that students with learning disabilities usually carry negative self-perceptions about themselves. Due to the fact that many students with learning disabilities have negative self-perceptions, it places them at a higher risk of failing academically than their non-learning disabled classmates. In order for the students to acquire positive self-perceptions teachers must: (1) teach strategies that allow students to develop successful attributes, and (2) implement academic strategies to improve academic skills. These two interventions together will help increase positive self-perceptions among students with learning disabilities. The participants in this study were 13 students with learning disabilities, five females and eight males. Students ranged in ages from six to eleven years old. The students’ learning disabilities included auditory processing, visual processing and dyslexia. Students with ADHD were also included.

_Dudley (2006)_ was incited by the little knowledge about the effects of interventions on the reading skills of high school students, although considerable amounts of research on reading fluency interventions have been conducted with younger developing and struggling readers. One predominant hallmark of older struggling readers is their failure to gain reading fluency on instructional and grade-level texts. Students who fail to achieve reading fluency experience multiple negative consequences that affect their academic and social growth, options, and success. A single subject across participants design was employed to measure the effectiveness of two, easy-to-implement, reading fluency interventions on the reading fluency and
comprehension of 18 high school students with learning disabilities (LD) who read between the first- and sixth-grade levels. A two-way ANOVA was also used to determine the impact of two interventions and initial reading level on the reading fluency and comprehension as measured by the Gray Oral Reading Test-4, the Test of Word Reading Efficiency, and the Test of Silent Word Reading Fluency. Results suggested that participants whose initial reading skills fell between the first- and third-grade levels made fewer gains in reading fluency and comprehension of connected text during intervention than participants who entered intervention reading between the fourth- through sixth-grade levels.

Edwards (2006) undertook a protocol analysis. The number of students with learning disabilities attending college has increased. Nevertheless, evidence shows that many college students with learning disabilities have difficulty completing their education. One of the most significant factors that affect the performance of college students with learning disabilities is difficulties with written language. This study was conducted to analyze the written product as well as cognitive processes college students with and without learning disabilities used while completing a writing task. This included analyzing the holistic quality of writing, number of words written, and planning and revising strategies used during writing. Twenty-three self-regulatory variables in the processes in planning, monitoring, and revising were used to identify the cognitive processes college students with and without learning disabilities applied while composing. Think-aloud protocols, written essays, and videotapes were used to examine the writing processes of two groups of college students, ten students in each group. College students without learning disabilities wrote essays that were qualitatively better (more appropriate to the writing task in terms of content, organization, style, and grammar) than college students with learning disabilities. In addition, college students without learning disabilities showed statistically significant positive correlations between holistic writing scores and the planning variables of generating ideas, prior knowledge activation, and self-instruction; the monitoring variables of monitoring content, process control, and self-questioning, as well as the reviewing variables of rereading plans, rereading essay, evaluating text and revising text. These results are consistent with the position that self-regulatory behaviors influence writing quality. Moreover, college students with learning disabilities showed no statistically significant positive correlation between holistic writing scores
and any of the planning, monitoring, and reviewing variables. The correlations obtained revealed that students who did more planning, monitoring, and reviewing of their writing were more likely to have higher writing scores. There were no statistically significant differences by group in the number of words written, or the amount or types of written planning and actual revising done while composing.

Faber (2006) reported that individuals with disabilities have not traditionally had the same freedom of choice and control over their own lives as non-disabled individuals have had. This is especially true in the realm of education, but in the past thirty years both educational leaders and advocates for individuals with disabilities have stressed the need for persons with disabilities to develop self-determination. The study described the factors that affected the development of self-determination by three individuals who formerly received special education services for learning disabilities. The findings highlighted the importance of the role of families, friends, educational setting, and religion on the development of self-determination. The findings also emphasized the concept of the individual with self-determination as a causal agent of his/her life who displayed the essential elements of decision-making, self-advocacy, self-awareness, goal-setting, goal-attainment, problem-solving, locus of control, and never settling for less. Implications for policy and practice included establishing better communication between the home and educational setting and helping parents with questions regarding their child's disability. School personnel need to develop additional skills in helping students become self-determining and in working with students with learning disabilities.

Finnsson (2006) conducted a study with the purpose to assess change across two academic years among general education teachers on measures establishing their views on supports or trainings needed to promote the success of the special education students in their classrooms, and their confidence serving students with learning disabilities. Across both academic years, responses were obtained from 190 general education high school teachers. Exploratory descriptive data benchmarked attitudes and pointed to areas in which additional support/training was needed in year one. Year two data illustrates improvements in supports and training regarding students with special needs in general education classrooms. Changes made by the special education staff to improve upon and optimize the successful outcomes of the special education students were validated by these results.
Frigon (2006) believed that school psychologists play a critical role in the identification of students with learning disabilities. Currently, the ability-achievement discrepancy model is commonly used as the classification criterion for learning disabilities. However, different identification models, such as response to intervention (RTI), are being examined. This study investigated school psychologists' perspectives of the classification process and comparison of their beliefs about students with learning disabilities and low achievers. Forty-nine practicing school psychologists in the Central Valley of California responded to the email questionnaire. The respondents did not believe that too many students are classified as learning disabled nor that the students are being classified as learning disabled to receive special education services. The school psychologists surveyed were supportive of changes in the learning disability eligibility criteria, such as RTI.

Fritschmann (2006) conducted the study with the purpose to design and test the effects of an intervention for teaching secondary students with LD how to answer a variety of inference questions. The features of this intervention were based on the theoretical formulations of Kintsch, the factors that have emerged from the literature that lead to improved outcomes for struggling readers, and instructional methods that have been shown to be effective with students with LD. The study employed a multiple-baseline across-subjects design. Secondary students with disabilities representing a variety of socioeconomic and ethnic populations were provided teacher-mediated instruction in the inference Strategy. Measures included scores on researcher-devised comprehension quizzes, a standardized test of reading comprehension, a strategy use test, a strategy knowledge test, and a student satisfaction measure. The results of the study suggest that students with learning disabilities are able to learn to use the Inference Strategy to answer a variety of inferential questions, and mastery of its use can result in improved reading comprehension scores on a standardized measure of reading comprehension.

Goldberg (2006) carried an action research study to determine the effects of peer tutoring strategies where middle school students with learning disabilities work with younger peers in a computer lab setting. In this qualitative study, five 8th-grade students with learning disabilities used a problem-solving strategy known as elaborate help giving and served as peer tutors in inclusive computer classes for students in grades 1 through 6. This three-month project examined processes to implement a peer
tutoring intervention in which the tutors were trained to assist the younger students by using verbal and non-verbal prompts as well as consistent positive feedback. Tutors began working with students in a one-on-one basis and gradually advanced to deliver demonstrations while all tutors provided full-class instruction, with minor assistance, in the final weeks. Data was gathered through close observation of student interactions and tutor journal entries as well as interviews from tutors, tutees, teachers and parents. Results of the study showed that tutors exhibited gains in (1) Social interactions and leadership skills; (2) Strategies in elaborate help giving and praise-giving; (3) Self-confidence and self-worth; and (4) Basic computer problem solving skills. Results also showed that tutees profited from (1) Extra feedback and attention; and (2) Increased peer interactions and positive role models.

Gowan (2006) proposed that an age appropriate, research-based systematic program that teaches a flexible strategy for decoding multisyllabic words may be the foundation for increased reading abilities of middle school students struggling with grade level text. To meet this need, the REWARDS reading program was used with struggling 6th grade readers with learning disabilities (LD). The quasi-experimental research design used in the study was non-randomized control group (N = 20), pretest-posttest design. The Basic Reading Inventory along with DIBELS measure of reading fluency were the instruments used to calculate findings. In a five week period, students’ decoding levels increased by 1.72 grade levels, instructional reading levels increased by 1.45 grade levels, while the reading fluency rates were increased by 28% at instructional reading levels and 17% at grade level. Decoding ability was highly correlated to reading comprehension with the relationship of .88.

Heinrichs (2006) investigated the role of communication in the construction and negotiation of identity among college students with learning disabilities using a mixed-methods research approach. The relationship between and affect of parental communication and self-perceptions was evaluated through the use of quantitative measures. The negotiation of the learning disability identity was examined through open-ended interviews. The results indicated that parental communication was significantly related to participants' self-perceptions, in concert with salient factors correlated to global self-worth. Moreover, these individuals discursively distanced themselves from their learning disability identity roles and simultaneously enacted alternative identity roles, illustrating that their condition is a site of contestation.
Henry (2006) carried a sixteen-week practitioner action research study in a suburban public middle school special education classroom. This student-centered study examined the outcomes when 6th grade students with learning disabilities receiving learning support services developed self-determination skills. Data analysis revealed three major findings. First, participants fell onto a continuum of knowledge, understanding, and skill with regard to self-determination skills instruction. The prior knowledge of learning disabilities, accommodations, and individualized education programs (IEPs) ranged from some to little or none. A disjuncture between the students' and the practitioner researcher's perspectives surfaced. Students exhibited limited self-awareness in terms of their own strengths and limitations. Varied competencies in self-determination skills including choice and decision-making, goal setting, problem solving, self-evaluation, self-observation, self-reinforcement, and self-advocacy, as well as students' attitudes and beliefs regarding such competencies and self-determination instruction in general, emerged. The second major finding relates to the discovery of students' perspectives. Students primarily viewed special education as a place, not as services. Participants revealed they hesitate to ask questions from their teachers and often avoid it altogether when they do not understand material due to fear and apprehension surrounding how their teachers or peers will react. Although students preferred to be included in the general education classroom, a palpable sense of security and comfort accompanied instruction with the learning support teacher. It seemed that participants felt more academically and emotionally supported by the special education teacher, reinforcing the need to provide general education teachers with professional development on supporting the varied needs of students with disabilities. Third, self-determination instruction acted as an agent for change among participants, the practitioner researcher, and the classroom environment. Participation in this study provided participants with knowledge regarding special education practices, procedures, and information; a better sense of self-awareness; skills related to self-determination; and a shift in certain students' beliefs and attitudes.

Kaur (2006) used pre-test – post-test experimental and control group design to study the impact of various instructional strategies on enhancing the mathematical skills of learning disabled children. The study was conducted on 108 students of standard III. Researcher found that all the three strategies under study, viz.,
multimedia, cognitive strategy and eclectic approach were effective in enhancing the mathematical skills of LD children. Eclectic approach was more effective in enhancing the total achievement in mathematics of LD children. Further, eclectic approach resulted in the enhancement in the mathematical skills, verbal IQ, performance IQ and full scale IQ of the LD children.

_Krause (2006)_ examined three types of aggression (physical, verbal, and indirect) using three raters (peer, teacher, and self-ratings). The sample consisted of 230 suburban public school 4th, 7th, and 10th grade students who were either in regular education or were students with learning disabilities. The differences in the three types of aggression between the three grade levels were not significant and consequently the null hypothesis was retained. The current research did find support for differences in self and peer reported indirect aggression between males and females with females having significantly higher scores than male students. For physical and verbal aggression, only self-reports were significant indicating that for physical aggression males had significantly higher scores than females and for verbal aggression, females had significantly higher scores than males. Examination of the differences between type of aggression and rater or the interaction between rater and grade level produced no significant results with regard to physical aggression. For verbal aggression, teachers reported the highest levels of verbal aggression and peers the lowest. Finally, for indirect aggression peer reports indicated the lowest scores while teachers reported the highest levels of indirect aggression. Again there was no interaction between grade and type of rater. Lastly, school attachment scores were related to the educational status of the students. Regular education students had higher school attachment scores than students with learning disabilities.

_Lasley’s (2006)_ purpose of conducting exploratory study was to examine general and special education teachers' perspectives of students with learning disabilities. The theory behind the labeling process is the idea that people with learning disabilities are viewed and handled according to the definition of the learning disability group and not individually. Special and general education participants may have similar perspectives toward the students in the vignettes due to degrees of sympathy, pity, anger, and satisfaction based on their perspectives of that particular student's ability, effort, task and luck, or control of a situation as evidence in the attribution theory. How an individual functions cognitively is based on social
experiences and learning. The participants' current environment, attitude or behavioral beliefs, and perceived behavioral control associated with one of the students within the vignettes may affect the intent of human behavior as hypothesized in the theory of planned behavior also may be a factor. Therefore, when special and general education teachers view students with learning disabilities, their perspectives at any given point in time becomes a composite of beliefs, values, experiences, social norms, incentives, motivation, expectations, and attitudes about learning disabilities as a whole and not individually. A sample of convenience, 218 special education and 145 general education teachers were solicited. From this sample, teachers' perspectives were gleaned by a Likert-type questionnaire which included four vignettes describing students with varying degrees of learning disabilities. The results of this survey indicate that there is no significant difference between special and general education teachers' perspectives of students with learning disabilities based on quantitative correlations. The overall similarities of special and general education teachers' perspectives of students with learning disabilities may center on past experiences, influences, and expectations.

McInerney (2006) observed that since the 1960s, learning disabilities (LD) classification assumed brain dysfunction, deficiencies in capacity, and processing deficit. Yet, many theorists noticed that the history of LD was fraught with poorly defined terms, over-diagnosis and faulty assumptions. While outside influences such as parenting or environmental toxins had been given consideration, more often than not LD was framed exclusively in neurological terms. Disability theorists and philosophers utilized socio-philosophical critiques to undermine LD's basic foundation, yet few addressed specifically how conceptions of perceiving, learning and thinking remained obdurately grounded in the predicated innately organized and ontogenetically structured brain. If the brain was the presumed cause of LD (and the site of a production of knowledge), then it seemed appropriate to dialogue with neuroscience while avoiding its essentialist claims. Through a metabletic historical phenomenology of significant social spaces, brain space was interpreted as socially organized - itself a social space. Then, a genealogical historical phenomenology located the institutionally instructable subject (educable by virtue of the right structure inside the brain). The in-structable subject subsequently was seen as learning abled based upon brain organization while the un-in-structable subject was seen as
disabled based upon brain disorganization. Through a deconstructive neurophenomenological description of the brain and learning, a dis-enclosed and dis-organized brain resistant to age old assumptions about learning was discovered. It was hoped that the aforementioned will make room for a liberatory pedagogy and curriculum that attends to, and values, the flows of differences in all learning.

Nance (2006) observed that students with learning disabilities now are being educated primarily in the general education classroom with accommodations alongside their peers without disabilities. It is the general educator who is faced with the task of providing an appropriate education to the student with learning disabilities with little or no assistance from the special education teacher and little or no training for teaching students with learning disabilities in the general education setting. With the passage of “No Child Left Behind” (2001), states have been required to determine whether or not their teachers meet the highly qualified definition. The definition of a highly qualified teacher requires that teachers hold at least a bachelor's degree in the area in which they teach, demonstrate knowledge and teaching skills in the academic and basic curriculum areas in which they teach, and have certification or a license for the state in which they teach. The reasoning behind this is that if teachers participate in uniform standardized professional preparation then they will be better prepared to enable students to meet the uniform standards of NCLB (2001). This study provides empirical evidence of the relationship of teachers' highly qualified status in one school system to the academic achievement of fourth-, fifth-, and sixth-grade students with and without learning disabilities who receive instruction in reading and math in the general education classroom. The overall results of this study failed to support the assumption that students with and without learning disabilities who have teachers deemed highly qualified will have higher educational achievement in reading and math than students with and without learning disabilities with teachers not deemed highly qualified. Although significant differences were found for the interaction effect of the teacher's highly qualified status and the student's learning disability status for reading scores, a comparison of the means indicated that students with and without learning disabilities of teachers deemed not highly qualified had consistently higher mean scores for reading achievement than students of teachers deemed highly qualified; no significant interaction effects were found for the teachers' highly qualified status and the students' learning disability status for math scores. Significant
differences were also found for the main effect of the students' learning disability status for reading and math scores. Students without learning disabilities had consistently higher mean reading and math scores than did students with learning disabilities in the areas of reading and math.

_**O'Brien (2006)**_ assessed 37 struggling students who had come through the Instructional Support Team process (with little success) in a relatively small, suburban school district and attempted to identify key assessment scores, behavior variables, and weaknesses that distinguished between those who qualified as learning disabled students and those who did not. Obviously, one would expect typical achievement measures to be lower in LD versus non-LD samples (especially if identified through ability-achievement discrepancies), however, this study attempted to determine if other factors such as memory, auditory-perceptual skills, visual processing speed, visual-motor skills, verbal and nonverbal reasoning ability, academic fluency, attention, hyperactivity, impulsivity, emotional lability, executive functioning, social problems, anxiety, oppositional behavior, and other significant factors are more predictive and sensitive (and thus worthwhile measuring or screening) in distinguishing between these two groups of struggling students. This study addressed two important research questions: Are there significant differences in measures of struggling students with and without learning disabilities in the following areas: cognitive ability, achievement, perceptual skills, behavior, and executive functioning? Secondly, in viewing instruments that could be used in the screening process at the IST level (i.e., VMI, TAPS, WJ-III Fluency subtests, Conners', BRIEF), which assessment instruments, composites, indexes, or subtests are the most sensitive/predictive in distinguishing between struggling students with and without LD? Results revealed significant differences between the two groups on measures of verbal comprehension, perceptual reasoning, auditory working memory, full scale IQ, word reading, pseudoword decoding, reading comprehension, numerical operations, math reasoning, spelling, written expression, listening comprehension, overall reading, overall math skills, overall written language skills, short-term auditory memory for numbers forward and reversed, auditory interpretation of directions, auditory word discrimination, auditory processing, overall auditory perceptual skills, anxiety/shyness, perfectionism, social problems, and emotional lability. Significant
differences between the two groups were noted in cognitive ability, achievement, perceptual skills, and behavior.

Parker (2006) examined the use of technology in the general education classroom. Specifically it examined how the educational level, teaching assignment, age, years of service, type of educational certification affect general education teachers' use of technology to help students with learning disabilities in their integration into the general education setting. In addition, this study investigated general educators' knowledge of technology applications and its effectiveness in helping students with learning disabilities in the general education setting. The study included general education teachers (n = 149) from two secondary schools, which are located in an independent school district located in a North Texas suburban area. The participants completed a survey to determine the extent of technology use in the classroom and their knowledge of these selected technologies as an accommodation for students with learning disabilities. The results were analyzed using descriptive statistics. The survey items were cross-tabulated with participants' demographic information using chi-square data analysis. The chi-square goodness of fit test was used to determine if there was a significant tendency toward educators' use of technology and to determine teachers' perceptions about the effectiveness of technology for students with learning disabilities in the general education setting. Analysis of variance was used to determine the differences in usage and effectiveness. The study found reliable, statistically significant relationships between educational level, teaching assignment, age, and years of service. Also statistically significant relationships were found on the educators' use and perception of the effectiveness of these selected technologies. Researcher suggests that future research should include examination of these selected technologies independently to determine the effectiveness they have on integration of students with learning disabilities into the general education setting.

Rasheed (2006) observed that many adult students with learning disabilities have entered postsecondary schools in recent years. Many of these students experience cognitive, emotional, and behavioral limitations that may act as obstacles in their educational processes and subsequent careers. Research has shown that self-determination skills can help ameliorate the effects of these limitations in secondary students. This study assessed the levels of self-determination skills that postsecondary
adult students with learning disabilities possess and tried to identify variables
associated with levels of these skills. The criterion/dependent variables were total
score and Autonomy, Self-Regulation, Psychological Empowerment, and Self-
Regulation sub-domain scores of a revised version of Wehmeyer's *The Arc's Self-
Determination Scale* (ASDS). T-tests yielded no significant ethnic, age level, or
income level differences for the ASDS total score or any of its sub-domain scores.
Gender differences were found with females scoring significantly higher than males
on ASDS total score and two of its sub-domains. The results of the correlation
analyses revealed that GPA was significantly positively correlated with ASDS total
score and with the Autonomy sub-domain score. The results of the multiple regression
analyses showed gender to be significant predictors of ASDS total score and Self-
Regulation score and GPA to be significant predictors of ASDS total score and
Autonomy score.

*Reed (2006)* conducted a study on twenty-two high school level students who
were identified as having mild to moderate learning disabilities, read below 3rd grade
level and participated in an intensive summer reading clinic for six weeks.
Participants were given pre- and post-assessments of words per minute, spelling of
sounds, word attack, sight word, and comprehension. Between the pre- and post-test
dates, the students participated in daily five-hour, intensive, small group explicit
instruction focused on phonics, decoding, fluency, and reading comprehension. A
Paired-samples t - Test were conducted on specific subsets of reading skills. Results
showed that twenty-two students made significant gains in reading abilities. The
implication of the results indicates that students need a continuum of this type of
instruction throughout the school year.

*Scheuermann (2006)* began a line of research focused on the development
and evaluation of a mathematical-instructional model [the Explicit Inquiry Routine
(EIR)] which integrates validated-mathematical teaching practices from both the
general education (inquiry, dialogue, manipulative devices) and special education
(explicit instruction) literature to engage students in an interactive process of inquiry,
while incorporating multiple modes (i.e., concrete, representation, and abstract) of
illustration and manipulation in order to develop understanding and procedural skills
for an essential math concept (i.e., one-variable equations). A multiple-baseline
across-students design was employed with 14 middle-schools (6th through 8th graders)
with learning disabilities and math weaknesses to evaluate the effects of the Explicit Inquiry Routine (EIR) on student's ability to solve one-variable equation word problems. Students were taught in small groups of two to six students. Results indicated that participants learned to illustrate and manipulate one-variable equation word problems using multiple illustration modes and maintained these skills for up to 10 weeks. In addition, findings documented an increase in the students' ability to transfer their skills to a variety of situations including: mathematical notation, textbook word problems, and standardized math achievement measures.

Schwartz (2006) felt that independent school teachers are in need of specific training for teaching LD students as the number of independent school students with learning disabilities continues to rise. This action research study focused on the development of an in-service teacher training and support program aimed at preparing teachers to meet the needs of learning disabled students in independent schools. The data indicated that the current structure and culture of the independent school site is supportive of meeting the needs of students with learning disabilities. However, the teachers lack the training and confidence to appropriately address and meet these students' needs. Many of the forces that restrain learning and teaching opportunities are rooted in teachers' lack of knowledge regarding the nature of learning disabilities and specific techniques for better accommodation of students with learning disabilities. Both students and teachers need structure, guidance and time in order to make the most of learning and teaching opportunities. The findings of the study ultimately indicated that effective in-service teacher training should: (a) be broken into a series of short sessions; (b) be led by someone with relevant classroom experience; (c) include well-documented information; (d) include specific techniques for classroom usage that is supported by practical experience and educational theory; (e) cover the definition and nature of specific learning disabilities, instructional techniques that may benefit all students, and testing accommodations that are feasible to implement in a general education classroom; and (f) provide a tool for teachers for future reference. In addition, in order to fully and successfully implement such training, teachers must participate in ongoing departmental and grade level goal setting and systematic follow-up to training.

Scott (2006) investigated relationships among foreign language attitudes and perceptions and reading skills. Results are consistent with previous research
indicating high school students with learning disabilities report more negative experiences in learning a foreign language. Apparently learning a foreign language is difficult for those with dyslexia tendencies and underscores the importance of instructor awareness and flexibility in teaching methods and grading.

Shih (2006) states that past researches indicated mathematical fact retrieval difficulty is one of the main manifestations of mathematics learning disabilities. Traditionally, interventions for fact retrieval difficulties of students with math learning disabilities have placed focus on mastery of algorithms and repeated practice; however, such instructions failed to address these students' underlying cognitive deficits and can be insufficient and may hinder students' development of mathematical competence in the long run. Empirical studies in neuropsychology have provided evidence that lack of number sense can causally affect individual's math performance. Recently, researchers in the field of math learning disabilities have also pointed out that lack of number sense may causally affect fact retrieval performance of students with math learning disabilities. A single subject multiple treatments (A-B-A-C and A-C-A-B) design across subjects was used to examine the effect of number sense instruction versus instruction using repeated practice on six students who showed early signs of math learning disabilities. Students were divided into two groups. Students in group 1 received number sense instruction followed by repeated practice; students in group 2 received repeated practice followed by number sense instruction. The results showed that students who received repeated practice followed by number sense instruction had better initial performance on fact retrieval. However, students who received number sense instruction followed by repeated practice had higher performance on fact retrieval toward the end and could generalize what they learned to more novel tasks, such as solving word problems.

Soukup (2006) conducted a study titled “Incorporating a multi-sensory, See/Cover/Write/Compare intervention procedure to improve the spelling performance of students who are deaf and exhibit characteristics consistent with learning disabilities (DCLD)”. Research has identified many strategies that are effective in helping students to improve spelling performance. Using a single-subject behavioral dynamics experimental design with replication across subjects, this study demonstrated the effectiveness of a multi-sensory, See/Cover/Write/Compare intervention procedure to improve written spelling performance in students who were
DCLD. Three students received daily tutoring sessions incorporating a multi-sensory, See/ Cover/ Write/ Compare intervention procedure. Dependent measures addressed the spelling performance of each participant, inter-observer reliability, procedural integrity, and consumer satisfaction. Each participant was evaluated in the areas of formative spelling performance, summative spelling performance, and spelling retention. Results from the data demonstrated improvement in spelling for all three participants across all spelling lists. Surveys completed by the participants and their teachers also indicated that they felt the multi-sensory, See/ Cover/ Write/ Compare approach was an effective strategy to improve spelling performance.

Sundheim (2006) conducted study with the purpose to describe the difficulties students with learning disabilities encounter with reading comprehension, to review a sample of strategies designed to improve their reading comprehension, and to determine elementary public school teachers’ existing knowledge about reading comprehension strategies and to what extent these strategies are included in classroom practice, especially for students with learning disabilities. Forty-two elementary teachers in grades 1-6 were surveyed. Results indicated teachers identified content area textbooks as teaching materials most often used. Furthermore, teachers seldom used the majority of reading comprehension strategies, instead relying on a few popular identified strategies. Teachers with less than five years of experience were more familiar with the variety of reading comprehension strategies and provided more direct instruction in those strategies. Findings lead to the conclusion that an effective support system needs to be designed to promote the implementation of a variety of reading comprehension strategies in the elementary classroom.

Tolbert (2006) used signal detection theory used to examine teachers’ decision to referral children for evaluation for special education. Six school psychologists were presented with 100 case reports of children referred for special education. They agreed unanimously that 70 children should have been referred and 16 children should not have been referred. Vignettes were created from the 86 case files describing the child, but omitting testing results. The vignettes were presented to 42 teachers who were asked: Would you refer this child if he/she were in your class? Using the school psychologists' unanimous opinions as the gold standard, a signal detection analysis was conducted. Teachers were only moderately accurate. Child characteristics did not affect referral likelihood as hypothesized. Teachers who made
the most referrals in this study were younger, less experienced, had lower scores on the Dutch Teacher Self-Efficacy Scale and made more referrals in their classrooms in the last year. They also believed that there were more special needs children in the public schools than teachers who referred more conservatively.

**Toomey-Lynch (2006)** – through this study – implemented a treatment program focused on the improvement of gifted learning disabled students' academic self-perceptions through the enrichment of visual-spatial strengths. The rationale for this study was based upon the concept of abilities as developing competencies that can be altered characteristics of an individual. The notion of altering or changing abilities through the implementation of appropriate interventions (i.e. enhancing non-cognitive factors) to improve domain specific areas of giftedness and learning disabilities was the impetus for this study. The research question aimed to determine if enrichment intervention activities positively produced an effect upon the academic self-perceptions of perceived general intellectual ability in Gifted Learning Disabled (GLD) students (i.e. how smart am I?). The participants were 4th and 5th grade public elementary school students who displayed strong visual-spatial skills and learning difficulties. This empirical study included a pre/post treatment design with an experimental group and a waitlist comparison group. The hypothesis was confirmed with treatment results demonstrating significant gains in perceived general intellectual abilities subsequent to the completion of a ten-week enrichment program.

**Zeuschner (2006)** investigated the effectiveness of phonemic awareness to increase reading performance for students with learning disabilities. Research suggests phonemic awareness training is most effective when introduced in grades K-1. It was assumed that through an intensive phonemic awareness program children of all ages/grades can learn how to read. There were 72 participants from grades 3 to 7. They were divided into matched pairs, which resulted in experimental and control groups. Findings in the study, showed no statistical significance. The control group showed more growth than the experimental group in decoding. As the study's findings were reviewed, it became evident that this study yielded no significant findings. However, three areas of interest emerged that raised further questions. These three areas were (1) short term memory's impact on decoding ability; (2) the role age plays in the acquisition of decoding skills, and (3) the impact of phonemic awareness training in later years on reading acquisition?
Zorich (2006) carried a case study which begins with a discussion of spina bifida (SB), a severely and permanently disabling birth defect. Spina bifida children have a characteristic neuropsychological test profile. Their Full Scale IQ scores are approximately 10 - 20 points lower than those of normal children and their Performance IQ is usually lower than their Verbal IQ. Spina bifida children exhibit deficits in visuo-perceptual and visuo-spatial skills, sensory-motor skills, memory, attention, academic skills (reading comprehension, math, and writing) and some aspects of language skills. Several researchers have hypothesized a link between SB and certain cognitive and academic deficits, specifically nonverbal learning disabilities (NVLD). The most important asset found in individuals with SB is auditory perception. Almost all other assets are related to good auditory perception. Primary deficits occur in tactile perception, visual perception, complex psychomotor skills, and the ability to deal with novel material. Secondary deficits are poor visual attention and lack of exploratory behavior. Tertiary deficits involve visual and tactile memory, concept formation, problem solving, strategy generation, hypothesis testing, and difficulty handling informational feedback. The deficits described by the NVLD model are related to academic deficits in reading comprehension, arithmetic computation, mathematical reasoning, writing, and science. Following the discussion of these concepts, a case study of a boy with SB was described by the researcher. Neuropsychological test scores, including cognitive and academic measures, were presented. There was a high correspondence of this boy's scores to the typical profile of SB children. Also, there was considerable congruence between this boy's neurocognitive profile and the profile hypothesized for NVLD.

**CONCLUSION**

When it comes to referring children for special education, Tolbert (2006) found teachers to be moderately accurate. IQ tests also have limited utility for the identification of children with learning disabilities (Fletcher et al, 1998). Smith (2005) does not recommend WISC-III profiles for identifying learning disabilities as it has low diagnostic utility. Students with learning disabilities feel that they are blocked from moving effectively through higher education on account of being misunderstood and misrepresented by their institution (Black, 2006). To overcome
barriers, disability labeling should be rejected and interpersonal relationships between teachers and students should be strengthened.

Sood (2000) stressed that assessment of achievement motivation is of utmost importance for learning disabled students’ reading achievement. On the contrary, Putney (2005) reported that motivation has no correlation to success of students with learning disabilities as measured by their overall GPA.

Gill (2001) reported an integrated relationship between ADHD, anxiety, NVLD, and right-brained learning style preference. Learning disabled children taught using A-V aids showed improved achievement, prolonged attention and more interest (Bhattacharya, 1985). Also, use of computer generated elaborative mnemonics proved to be a powerful strategy in helping learning disabled children to recall unfamiliar and abstract information (Gustashaw, 2005). Elementary children with learning disabilities respond more favorably to homework involving worksheets and hands-on projects (Trissler, 2005). On the contrary, Bausmith (2001) reported that providing learning style accommodations do not have any positive effect on the overall quality of writing.

Students’ problem solving skills play important role in their performance (Hung, 2005). However, Clore (2006) found no relationship of any strength between the cognitive ability and social competence.

Students with learning disabilities usually carry negative self-perceptions (De Santos, 2006). Difficulties faced by them are quite embarrassing to them resulting in decrease of self-esteem (Lyon, 1997). They demonstrate lower perceptions of general intellectual ability than the normally achieving students (Crossen, 2001). Enduring extensive periods of failure result in poor self-worth (Seeratan, 2001). Special education program (Grant, 2001) and helpful and caring attitude of teachers (Krueger, 2001) may build up the self-esteem of students with learning disabilities.

Schaeffer (1997) reported that University freshmen with learning disabilities had poor study skills. Those who used mnemonic strategy performed better than those who used oral / silent repetition (Miller, 2005). Self-monitoring improves classroom organizational behaviour of children with learning disabilities (McMullen, 2005).
ACHIEVEMENT MOTIVATION

Jerath (1979) studied the Personality Motivation and Ability Correlates of Achievement Motivation. The objectives of the study were (i) to differentiate between intrinsic and extrinsic aspects of n-ach in terms of their correlation with other variables, (ii) to find out the correlates of other fantasy measures, viz., n-affiliation, n-power, and fear of failure among males and females. The findings of the study were: (i) Males scored higher than females on fantasy measures, n-achievement, intelligence test, factors B, C, E, and H of the 16 PF, theoretical, economic and political interests. (ii) Females scored higher than males on factors A, I, O, Q3 and Q 4, of 16 PF, aesthetic, social and religious interests. (iii) Factor analysis yielded the following comparable factors among males and females: Anxiety, Introversion vs. extroversion, Body measures, Scholastic proficiency and Good upbringing. (iv) Among females, n-achievement and self-sentiment could not be adequately matched with the factors obtained for the male sample. (v) The obtained second order factors were of 'Anxiety' and "Extroversion vs. Introversion" in both the sexes. (vi) n-achievement emerged as a complex measure in both males and females but with loadings on entirely different factors.

Chatterji (1983) conducted a comparative study on the personality, intelligence and achievement motivation of successful and unsuccessful students in different academic groups at the +2 stage. A sample of 760 male students studying in four academic groups, arts, science, commerce and agriculture of class XII, was drawn from nine different recognized institutions of the Varanasi region by using the purposive incidental sampling method. Academic achievement was determined on the basis of subjects' performance at the board examination. The major findings were: (i) Science students were significantly higher in achievement motivation in comparison with those in agriculture and the arts groups. (ii) Students of commerce and agriculture attained a significantly higher mean achievement motive score in comparison with those in arts. (iii) Scores on achievement-motivation of students of science or commerce were significantly higher than those of the other groups.

Jain (1983) studied the processes (nature, form and kind) and product of concept formation under different levels of intellectual development and achievement motivation employing extreme criterion group samples; the relative inter-action of
verbal intelligence and achievement motivation on concept formation as a process and product; the relative relationship between concept formation and verbal intelligence and concept formation and achievement motivation; and the interaction of intelligence and achievement motivation upon concept formation as a process as well as product. The sample consisted of 405 students of 10th grade of ten Hindi medium higher secondary schools of Bilaspur town. The sample was divided into four groups, namely high intelligence-high achievement motivation group (N = 105), high intelligence-low achievement motivation group (N = 103), low intelligence-high achievement motivation group (N = 90), and low intelligence-low achievement motivation group (N = 107). The findings of the study were: (i) Achievement motivation had a significant effect upon the concept formation ability of the students and highly motivated pupils showed a significantly superior ability in concept formation to those of low motivated pupils. (ii) The pupils of the high intelligence-high achievement motivation group employed ‘Whole’ strategy in their concept formation process, whereas those from the low intelligence-low achievement motivation group opted for ‘Part’ strategy. (iii) The high intelligence-low achievement motivation group displayed significantly superior concept formation ability to the low intelligence-high achievement motivation group. (iv) Intelligence was found to be a better predictor of concept formation ability than achievement motivation. (v) There existed positive linear significant relationship between the students' scores on the tests of concept formation and verbal intelligence, as well as their scores on concept formation and achievement motivation.

Mansuri (1986) conducted study with the objectives: (i) to prepare a reliable and valid verbal achievement motivation scale, (ii) to study the achievement motivation of pupils of classes V, VI and VII and to establish norms, (iii) to study the achievement motivation of pupils of classes V, VI and VII with regard to their psycho-socio factors such as SES, anxiety, motivation towards school and general ability. The factorial design was adopted and analysis of variance was used for testing significance of differences between means and to study interaction effects. Some of the findings were: (i) Grade was an effective variable on achievement motivation. The differences among means of grades V, VI and VII were significant and in favour of successive grades. The students of successive grades showed successive advancement in achievement motivation. (ii) The students with high SES level were found
significantly higher in their achievement motivation than those with low SES level. The interaction effect between grade and SES was not significant. (iii) The students having high-level motivation towards school were better in achievement motivation than those with a low level of motivation towards school. The interaction effect between grade and motivation towards school was not significant. (iv) The students having good general ability also had a high level of achievement motivation. The interactions effect between grade and general ability was not significant.

Singh (1986) investigated the relationship between achievement-motivation, intelligence (general mental efficiency), introversion-extroversion, achievement in mathematics, and a comparison thereof between Haryana and Delhi students belonging to various socio-cultural strata. The sample comprised 184 students from schools in South Delhi and 184 students from Haryana schools. The following tools were used in the study: (i) B.N. Mukherjee's Sentence Completion Test (SCT) to secure measure of achievement motivation; (ii) Raven's Progressive Matrices Test to provide a global measure of intelligence; (iii) Kundu's Introversion-Extroversion Inventory (KIEI); (iv) Daba's Socio-Cultural Scale; and (v) Objective based achievement test in mathematics constructed by the investigator. The major findings of the study were: - (i) The difference between the n-ach scores of students of Delhi and Haryana schools was not significant. (ii) Correlations between n-ach and intellectual efficiency, introversion-extroversion, socio-cultural status and mathematics-achievement were found significant.

Tripathi (1986) studied achievement motivation and its correlates. The objectives of the study were (i) to make a comparative study of achievement motivation of boys and girls, (ii) to study the relationship between n-achievement and intelligence, socioeconomic status, adjustment, level of aspiration and academic attainment on the basis of scores of boys and girls separately, (iii) to determine the amount of effect of intelligence, SES, adjustment, level of aspiration and academic attainment on achievement motivation scores of boys and girls separately, and (iv) to predict the n-achievement of students on the basis of their scores on the independent variables. The study was confined to East UP including nine districts. In all, 500 high school students (300 boys and 200 girls) were selected for sample. The conclusions were: (i) The average level of achievement motivation of boys and girls was found to be low. (ii) The boys' scores in achievement motivation appeared to be significantly
related with intelligence, Socio-economic conditions, adjustment and Hindi achievement. (iii) Socioeconomic background, adjustment and level of aspiration did not appear to have a significant relation with achievement values and anxiety. (iv) Achievement made a remarkable contribution to the variance in the achievement values and anxiety scores. (v) Achievement values and anxiety level of boys and girls could be predicted successfully from achievement marks alone. (vi) It was found that achievement motivation of boys and girls was highly correlated with intelligence and achievement. Among the five correlates of achievement motivation, academic achievement proved to be the most dominant factor.

Fernandez-Fein (1997) believed that though researchers have proposed a number of practices to increase students’ achievement motivation, useful information about practices that may improve students' achievement motivation can be obtained by asking students and teachers for their views. These include the use of rewards, giving responsibility to the students in the classroom, and providing students with choices. This study examined the attitudes towards various practices of fifth grade students (n=102), seventh grade students (n=107) and fifth and seventh grade teachers (n=27). In general, students and teachers had similar views towards practices. Both students and teachers reported that practices involving praising students and offering autonomy to students were the most helpful in motivating students. Students who reported higher levels of self-efficacy/intrinsic value more strongly endorsed motivational practices involving offering students praise and granting autonomy. Few other significant relations were found between these variables and students' views of practices. As in previous studies, seventh grade students reported lower levels of motivation than fifth grade students. Findings from this study indicate that students and teachers have similar views with respect to the effectiveness of motivational practices. Dialogues between students and teachers can therefore reveal areas of agreement that can be built upon to design motivational programs that both students and teachers believe will help students.

Lake (1997) tried to determine if participation in cultural studies effects the self-concept and achievement motivation of African American students. It specifically sought to address whether instructional materials that stress the history, culture, and positive contributions of a specific group would improve the self-concept and achievement motivation of that particular group. The participants were African
American students in grades 9-12. The study population in each school was divided into an experimental group or a control group. The treatment received by the experimental groups was curriculum and instruction that stressed the history, culture and positive contributions and achievements of African Americans. No statistically significant difference was found in the improvement of self-concept or achievement motivation between the two groups. The results indicated that cultural studies alone were not effective in raising the self-concepts and achievement motivation of the African American students in this study. An analysis of the data revealed a negative response to each of the questions, and the null hypotheses failed to reach the .05 level of statistical significance.

Mueller (1997) reported that though praise for ability is commonly considered to have beneficial effects on motivation, but contrary to this popular belief, six studies have demonstrated that praise for intelligence had many more negative consequences for children's achievement motivation than praise for effort. Overall, praise that attributed good performance to intelligence, but not praise for effort, appeared to teach fifth-graders (aged nine to twelve years) that they could measure a permanent ability from how well they did. This orientation led children to maladaptive achievement aims and post-failure behaviors. First, children praised for ability were found to care more about their performance relative to learning than children praised for hard work (Studies 1-4). Next, children whose success was attributed to their intelligence after failure displayed lower task persistence, less task enjoyment, more low ability attributions and worse task performance than children praised for their effort (Studies 1-6). Finally, praise for ability led children to define intelligence differently than praise for effort: Children praised for their intelligence came to see it as a fixed trait, while children praised for hard work believed intelligence to be subject to improvement (Studies 4 and 6). Overall, the studies provided strong evidence that praise that links performance to intelligence has more negative consequences for later achievement than praise that focuses on effort. These findings have important implications for the ways in which children are currently encouraged to achieve by their parents and teachers.

Wilden (1997) dealt with the relationship between achievement motivation and interpersonal styles. The concepts achievement motivation (from a humanistic point of view) and assertiveness, responsiveness and versatility (from a behavioristic
point of view), were described. The results were processed by using correlation and regression (simple and multiple) techniques. The correlation analysis showed significant statistical correlation between achievement motivation and assertiveness. The single regression analysis indicated that assertiveness, responsiveness and versatility have an influence on achievement motivation. The correlation and regression analysis showed that responsiveness and versatility impact negatively on achievement motivation. The possible prediction model for achievement motivation was developed due to the integrity of the results being doubtful.

Garza-Perez (1998) investigated the difference in the obtained attitude scores of urban high school students regarding their motivation toward academic achievement. Additionally, the researcher examined the relationship between the variables ethnicity, academic status, grade level, and academic achievement motivation. Urban secondary students from a large metropolitan school district were the identified population used in this investigation. There were non-significant results pertaining to the relationship between students' ethnicity, academic status, grade level and academic achievement motivation scores. Thus, the students' ethnicity, academic status, and grade level were not related to their achievement motivation scores.

Husman (1998) examined the viability of the conceptual separation of two types of instrumentality, endogenous and exogenous instrumentality. It was proposed that a task is exogenously instrumental when success on that task is artificially related to a future goal (doing well on a test in physics is exogenously related to becoming a doctor) and a task is endogenously instrumental when success on that task is intrinsically related to obtaining a future goal (i.e., learning organic chemistry is endogenously instrumental for becoming a good organic chemist.) Further, it was proposed that, although exogenous instrumentality may harm intrinsic interest in a task, endogenous instrumentality will, in fact, encourage intrinsic interest. Using an experimental design, this study examined the application of vector concepts under conditions designed to stimulate exogenous or endogenous instrumentality for the task. The results lend very partial support for the hypothesized conceptual framework. Further research is needed to refine the interactions between and among instrumentality and intrinsic motivation.
Brickman (1999) conducted study titled “How perceptions of the future influence achievement motivation”. The research was guided by a theoretical model which depicts future goals and the plans to reach them as impacting self-regulation for present achievement. To investigate the knowledge upon which plans for the future develop case study methods were used. Data sources included: interviews, historical data, autobiographical reports, surveys tapping students' present classroom goals, cognitive engagement and self-regulation and repeated observations. These data supported that knowledge about the future is represented as plans and that much of this knowledge was the result of socio-cultural experiences. Also contributing to the development of plans were the students' school experiences. The students' plans consisted of relationships between the students' past, present and reported future goals. As predicted by the model, plans were found related to achievement through perceived instrumentality. Students' present level of achievement and self-reported regulation were consistent with the types of present goals they reported on surveys, which were consistent with what they reported in interviews as instrumentally related to reaching their future goals. Data revealed that future goals provided incentive value through the generation of a plan of sub-goals, and influenced self-regulation of academic behaviors toward their future through the perceived instrumentality of the present task.

Pelletier (1999) stated that attributional retraining (AR) is an intervention for changing maladaptive causal attributions to adaptive ones. While the therapy shows promise as a remedial technique for assisting at-risk students, differences exist in its efficacy which appear to be due, in part, to individual student characteristics. Mastery and performance orientations represent attributional preferences for explaining achievement as due to effort or ability respectively, and can be construed as contributing to the effectiveness of the intervention. However, while mastery-orientation exists as a unidimensional motive, performance-orientation may consist of both approach and avoidance components, linked to the student's success perceptions. 328 college students were evaluated on their goal orientation and success perceptions at the beginning of the academic term, after which half of the sample received AR, with the other half served as a control. Goal orientation and perceived success interacted with attributional retraining such that when compared to the control group, AR had little influence on the dependent measures for mastery-oriented students, and
differential effects for the two performance-orientations depending on their perceived success. Discussion focused on acknowledging the self-worth and ego-protective motives as influential in the success of attributional retraining, with suggestions for reconciling the effort/ability dichotomy to make the therapy beneficial for the student population at large.

Stone (1999) in the study titled “The effects of theories of intelligence on the meanings that children attach to achievement goals” makes reference to the earlier models of achievement motivation according to which children's beliefs in the fixedness or malleability of intelligence (entity or incremental theories) induce the adoption of performance versus learning goals. Selection between these goals has been demonstrated to influence achievement behavior, particularly under conditions of challenge or failure, where performance goals have been associated with negative self-attributions of intelligence, deteriorating affect, and task-avoidant behavior, while learning goals have been linked with sustained or heightened affect, persistence, and strategic thinking in the face of adversity. In this study, beliefs (theories) about intelligence were hypothesized to influence not only the selection of distinct goals but also the meanings attached to the same goals, leading to different cognitive, affective, and behavioral responses in their pursuit. With regard to the performance task, all of the children, regardless of theory, embraced performance goals and believed that the task would measure their level of skill; however, only the entity theorists believed that it would also measure their global intelligence. With regard to the learning task, entity theorists’ pervasive concerns about their ability undermined their focus on learning and drew them toward performance goals, while incremental theorists remained oriented toward learning. These differences emerged despite the fact that children of both theories had attached high importance to doing well on the performance task and to learning from the learning task when asked to rate the importance of these goals independently. These results suggest that theories of intelligence do predispose children to attach different meanings to achievement goals with consequences both for goal selection and for the manner of their pursuit. They illuminate the link between beliefs and behavior, and they also suggest that simply polling endorsement of achievement goals may be less informative about underlying motivational differences than exploring the meanings attached.
Menserole (2000) designed the study to assess the influence of various types of feedback on subsequent reactions within different goal conditions. 81 sixth- and seventh-grade students (M = 12.53 years) participated. There were nine experimental conditions: task instructions highlighting the value of a performance goal, the value of a learning goal, or no goal instructions, crossed with one of three types of feedback (process failure, outcome failure, success). The four dependent variables included task persistence/performance, task choice, affect, and expectancies for future performance. The task consisted of four-dimension, two-choice discrimination problems. Children who received success feedback chose harder tasks than children who received either outcome failure or process failure feedback. Children who received success feedback reported more positive affect than children who received either outcome failure or process failure feedback. Children who received process failure feedback reported more positive affect than children who received outcome failure feedback. Children who received success feedback believed they would perform better the next time they performed a similar task than children who received either outcome failure or process failure feedback. The study demonstrates that not all types of failure events exert a negative influence on children's subsequent reactions. These results document the importance of distinguishing between types of failure events, and support the contention that not all types of failure events have the potential to negatively impact children's achievement motivation.

Ross (2000) examined the relationship among academic achievement motivation, motivation orientation, and ability-achievement differences in reading. The ability of these motivation variables to predict reading achievement and ability-achievement differences in reading was also investigated. Seventy-one 4th and 5th grade students participated in the study. Individual testing of cognitive ability and reading achievement was conducted with each student; each student also completed a self-report measure of motivation orientation in reading. Teacher completed a report of academic achievement motivation in reading regarding each student as well. Motivational, cognitive, and achievement variables were generally found to be significantly positively correlated. Ability was found to be the best predictor of reading achievement; teacher report of academic achievement motivation in reading and student report of motivation orientation in reading also contributed to the variance in reading achievement. Teacher report of academic achievement motivation in
reading accounted for a significant amount of the variance in ability-achievement differences, as well, specifically when achievement was higher than predicted based on ability. An assessment of motivation variables would allow school psychologists to provide a more complete picture of the students whom they evaluate and would help shape interventions to confront motivation/achievement deficits.

Coffman (2001) in “A cross-cultural investigation of achievement motivation” tried to extend the understanding of the inter-relations between experiences in the home and students’ achievement motivation by examining the relation of cultural values to parenting style and achievement orientation. Self-reports of cultural background, interactions with parents, endorsement of traditional cultural values (e.g., independence, interdependence), and achievement motivation were examined for congruence with the extant literature on the negative relation between authoritarian parenting and achievement. In particular, Euro Americans reported significantly higher grades than Latino Americans, as well as significantly higher intrinsic motivation than Asian- and Latino Americans. Differences were not found for the composite measure of extrinsic motivation. However, measures of various aspects of motivation did reveal differences that may have a cultural basis. For example, Asian Americans reported significantly higher levels of concern about evaluations and meeting others’ expectations than Latino- and Euro Americans.

Regression analyses were conducted to test how parental control, cultural self-construal, and ethnic membership contribute to explanations of achievement motivation. Results indicated that an independent self-construal and parents’ controlling behaviors explained significant amounts of the variance in achievement motivation. It was expected that Asian Americans, who reported the highest levels of parental control, would not report the negative relation between parental control and achievement motivation previously observed in Euro American samples. However, the results indicate that self-construal did not influence the relation between parental control and achievement motivation differently for Asian-, Latino-, or Euro Americans. For all groups, parental control was negatively related to achievement motivation.

Harpell (2001) investigated individual difference variables in relation to achievement motivation of seventy-eight students from grades five through seven. The framing of a challenging goal (in terms of either a positive or negative outcome
focus), was expected to affect a number of cognitive factors which, in turn, would impact on testing performance. Participants were given either no specific goal, a positively framed challenging goal, or, a negatively framed challenging goal. Next they were asked to indicate level of Expectancy, Valence, Goal Choices, Approach, and Avoidance prior to attempting to achieve the goal on a matching task. Results demonstrated a negative impact of framing on Expectancy and Goal Choices. No relationship between framing or any of the cognitive variables and performance was determined. Moderating effects of Expectancy and Valence in high vs. no goal conditions may partially explain the findings.

Miller (2001) carried a naturalistic inquiry into perceptions of motivation in developmental mathematics students at a community college. The purpose of this study was to describe motivation in developmental mathematics students with a particular focus on the low achieving students. The data generation began with emergent interviews of developmental mathematics faculty members who were asked to describe the motivation of developmental mathematics students, continued with the primary data generated by student learning journals, and concluded with emergent interviews with developmental mathematics students who were not successfully completing their courses. The findings are reported in view of achievement motivation theories including goal theories, extrinsic and intrinsic motivation theories, and attribution theories. Most low achieving students fell into one or more of the categories that were (1) mathematics anxious, (2) overloaded by job, classes, and/or family and/or (3) lacking perceptions of the relevance of mathematics. Many students allowed emotions or attitudes to influence their motivation to learn mathematics. However, with early success in their mathematics classes or instilled beliefs that mathematics was useful or interesting, many students began to move beyond the barriers by constructing new motivations. The primary finding connects cognition with motivation. It was found that motivation was not necessarily a precursor to understanding. Rather, understanding mathematics seemed to enhance students' motivation to learn mathematics.

Taylor (2001) conducted study with the objectives: (i) to identify the intrinsic motivational attributes of students in elementary grades (one through five) and how these attributes compare with those identified by previous educational researchers. (ii) to identify the motivational classroom structures and strategies used by teachers in
elementary grades (one through five) and how these compare with classroom structures and strategies identified by educational researchers. Specific themes included motivational parental involvement, motivational portrait of a school, motivational classroom structures, and motivational teacher strategies. Findings suggested that parental involvement in education is the first crucial and most enduring ingredient for the continuing motivation of students. A caring and supportive school climate focused on empowering both students and staff through effective monitoring, accountability, school wise activities, and positive recognition was also determined to be important in student motivation. Further results indicated that classrooms that effectively motivated students tended to be constructivist in nature, for example they were more project-based, active, high-interest, and meaningful to students than traditional classroom settings. Finally, it was reported that individual teachers were able to foster achievement motivation in students through reflective practice, adjusting teaching methods to student needs, allowing student’s choices, providing a forum for discovery, enhancing self-esteem, and creating a caring, respectful, and trusting classroom environment based on positive communications.

*Da Fonseca et al (2004)* studied the implicit theories of intelligence and school achievement goals. An entity theory of intelligence is the belief that intelligence is a fixed trait, a personal quality that cannot be changed. In contrast, an incremental theory of intelligence is the belief that intelligence is a malleable quality that can increase through efforts. In the present research, researchers assessed among 695 boys attending five French schools perception of competence, implicit theories about intelligence in addition to the three achievement goals to identify the profiles underlying each goal type in academic situations. Regression analyses modeling possible predictors of each goal showed that (i) Performance-approach goals were positively associated with perception of competence, Entity beliefs about intelligence, and negatively associated with Incremental beliefs about intelligence; and (ii) Mastery goals were positively associated with perception of competence, Incremental beliefs about intelligence. Also, (iii) Performance-avoidance goals were positively associated with Entity beliefs about intelligence and negatively associated with Incremental beliefs about intelligence and perception of competence. Perceptions of competence are presumed to orient the individual toward the possibility of success or the possibility of failure. Adolescents with high perceptions of competence are
oriented toward success and consider academic situation as an attractive activity. Consequently they tend to endorse approach goals like Mastery or Performance approach goals. On the other hand, those with low perceptions of competence are oriented toward failure and try to avoid this activity. Consequently they tend to endorse Performance-avoidance goals.

CONCLUSION

Theories of intelligence predispose children to attach different meanings to achievement goals (Stone, 1999). Not all types of failure events have the potential to negatively impact children’s achievement motivation (Meserole, 2000). There exist positive linear relationship between concept formation and achievement motivation (Jain, 1983). Children with good general ability and children with high SES level possess significantly higher level of achievement motivation (Mansuri, 1986). It has high correlation with intelligence and achievement (Tripathi, 1986). Parental control has negative correlation with achievement motivation (Coffman, 2001).

The practices involving praising students and offering autonomy to students are very helpful in motivating students (Fernandez-Fein, 1997). However, Mueller (1997) cautions that praise for intelligence had many more negative consequences for children’s achievement motivation than praise for effort.

STYLES OF LEARNING

Nussbaumer (1998) believed that the success of the solution to a design problem depends on the designer's ability to solve problem. Problem solving requires visualization skills. Some students have little difficulty visualizing solutions to problems while others struggle. Students' visualization skills may relate to learning styles. Learning style is a means by which individuals learn, and theories show that individuals learn in different ways. The purpose of this study was to examine the relationship between learning styles and visualization skills among interior design students. This study also examined influencing factors of visualization skills. These factors included year in current major, pre-professional experience, and cultural background. A convenience sample of 71 interior design students from the University of Minnesota completed a biographical data sheet, Kolb's Learning Style Inventory,
and Isham's visualization test. Results of this study revealed that there was no relationship between learning styles and visualization skills.

**Pirkle (1998)** examined the rationale for developing a more effective and efficient means of providing leadership instruction. Learning styles and leadership styles were investigated and their relationships studied. The study included 41 doctoral students in education at Spalding University, Louisville, Kentucky. The Learning Style Measure was administered to the research subjects to determine preferred learning styles. The Leadership Style Behavioral Matrix was used to ascertain preferred leadership styles. Results of the study indicated a relationship existed; however, most outcomes were not at a statistically significant level. In some specific instances, the results did indicate statistically significant results.

**Williams (1998)** – in his research – used learning styles and culture as a framework. This study had three purposes: (i) to identify and describe learning styles of African American children, (ii) identify teaching practices that are appropriate for African American children's learning styles and which are used successfully by urban teachers, and (iii) to develop and disseminate an appendix of the successful practices. The study procedures were: observing teachers and students, developing individual case studies on each teacher, conducting interviews, and presenting the cross-interview analysis. The study was conducted at five elementary schools, with five teachers and students from the five selected classes. Data obtained through observations and teacher interviews were analyzed using the case study and cross-interview analysis methods. The findings suggest that teachers who use teaching practices that accommodate the preferred styles of learning of children will see improvement in the academic performance of children.

**Bonaccio (1999)** assessed the preferred learning styles of undergraduates enrolled in a physical education core curriculum course. Subjects consisted of 603 undergraduate students enrolled in an introductory health course. All subjects' preferred learning styles (visual, auditory, bodily-kinesthetic, individual and group learner, oral and written expressive learner, sequential and global learner) were measured using the Computerized Assessment and Prescription Styles of Learning (CAPSOL) learning style inventory. The results showed that students use more than one preferred learning style. The three most preferred learning styles were visual.
(60.4%), individual (57.7%) and bodily kinesthetic (39.0%). Recommendations were provided for teaching strategies to reinforce the preferred learning styles.

Carry (1999) conducted study with the purpose to describe how learning styles awareness and knowledge of teachers, models affected the study habits of college students at risk for academic failure. For 10 weeks 5 students met with the researcher on a weekly basis. They recorded their experiences in experimenting with a variety of learning styles, completed both learning-styles and locus-of-control assessments, and discussed their learning-styles preferences and teaching models. The data were collected and analyzed using a multiple-case-study approach. The findings from this study showed that students were able to change some of their study habits as their awareness of their own learning styles and understanding of how university instructors used teaching models was enhanced.

Lindsay (1999) determined teaching and learning styles and analyzed the effects of the use of emerging educational technology with student achievement and satisfaction. The dependent variables in this study were student achievement and student satisfaction. The independent variables were teaching style, learning style and the type of educational technology used. Also investigated in this study was if a match or mismatch in teaching and learning style affected a change in learning style over time in academic settings with varied uses of educational technology. The study findings indicated that a match between learning style and teaching style revealed increases in student achievement and satisfaction. Study findings indicated no support for teaming styles changing over a period of time when teaching and learning styles are mismatched.

Shih (1999) analyzed the relationships between student achievement and the following variables: attitudes, motivation, learning strategies, patterns of learning, learning styles, and selected demographics. It was a population study that included 99 students. Seventy-four (75%) students completed a learning style test, an on-line questionnaire, and received a grade by the end of the semester. The on-line questionnaire consisted of four scales (attitude, motivation, learning strategies, and patterns of learning), whose pilot-test reliabilities ranged from.71 to.91. The selected demographic variables were gender, class level, previous experience in subject area, hours per week studying and working, computer access, and types of students as off-
campus, on-campus, or adult students. Over two-thirds of the students taking the Web-based courses were field-independent learners; however, there were no significant differences (.05 level) in achievement by learning style. Also, different backgrounds of students with different learning styles learned equally well in Web-based courses. Motivation and learning strategies were the two significant factors that explained more than one-third of student achievement measured by class grade. Educators should assist students in mastering different motivational and learning strategies to help them become self-regulated learners.

Cerezo (2000) examined problem-based learning and how students and teachers in the middle grades math and science classroom perceive its effectiveness. This case study identified key components related to the success of problem-based learning and females at-risk. Examination of these components in relation to middle grades teachers' and students' perceptions of changes in students learning processes and self-efficacy was completed. The researcher used problem-based learning student and teacher surveys, structured interviews, and informal observations to understand these perceived changes. Data revealed that teachers' and students' perceptions indicated problem-based learning helped students learn more about a topic, and created a feeling of excitement about coming to class. Teachers and students tended to perceive problem-based learning as a catalyst for students' motivation and overall success. Participants indicated students' self-efficacy had risen, and that all students benefited from problem-based learning in one way or another. The results of this study indicated that problem-based learning enhances group dynamics and its effects on students-at-risk. Teachers and students noted positive changes in students' self-confidence. Participants believed their improvement in study habits were a direct result of problem-based learning. Participants suggested that the emphasis of problem-based learning on collaboration and not competition directly affected the student's success. Problem-based learning has strong potential, offering students useful tools for learning throughout life.

Fouts (2000) in study titled “Psychological types, learning styles, and types of intelligences of successful alternative and traditional high school students” reported that nearly 11% of students drop out before completing high school creating severe economic and social impact. Dropout studies generally identified behavior, situations, and events rather than learning traits. Reasons given by students leaving school before
completion were failure in school and failure to keep up with studies. Past studies indicate characteristics of the learning environment must match individuals' learning traits to maximize learning. Many students in danger of dropping out of traditional programs enroll in alternative programs and succeed in achieving their diploma. This suggests learning characteristics of successful students in the two education environments may differ. This descriptive study included 234 (9th through 12th grade) students. Results support the premise of significant differences in learning characteristics between students in alternative and traditional high school programs. Combinations of characteristics for the two groups were different. Significant different learning style preferences were temperature, time of day, motivation by parent/teacher, mobility, intake, perceptual preferences, and routine. Identification of learning characteristics for all students and provision for enrollment in programs meeting individuals' learning characteristics needs may provide more opportunities for achievement and decrease dropout rates.

King (2000) conducted a learning style inventory in which ninth grade students identified their primary learning style. The inventory collected information regarding how students learn best in the following categories: visual language, visual numeric, auditory language, auditory numeric, and auditory/visual/kinesthetic. The predominant learning style of each student was correlated to the student's academic success. The study further investigated teaching modalities. A survey was distributed to all ninth grade teachers to identify understanding of learning styles and their application in the classroom. Significant relationships were found to exist between learning styles and academic success. There was a positive relationship between academic success and auditory language learning style. Student success was also attributed to group learning and written expressive learners. Teachers exhibited a strong understanding of learning styles and believed learning styles make a difference in how teachers teach. The faculty presented strong comprehension of learning styles and instructional modalities supporting learning styles. The identification and correlation of subject area categories according to science/math and language/humanities presented strong instructional relationships according to learning style. Science/math teachers utilized visual numeric and auditory numeric learning style instruction; while language/humanities instructors utilized visual language, auditory language, and auditory/visual/kinesthetic learning styles in lesson design.
Mitchell (2000) investigated the effect of matching teaching style with learning style on achievement and attitudes for women in a web-based distance education course. Four websites were designed. Students completed three achievement tests and completed a course survey that considered usefulness, personal enjoyment, motivation or intellectual interest, and logical organization. The results of the study indicated both achievement and attitude scores for women who received web-based instruction which utilized a teaching style that matched their learning style were higher when compared with the achievement and attitude for women who received instruction which did not match their learning style. Overall, the study indicated that students had superior achievement and a more positive attitude, when the teaching style matched their learning style. The significance of the study includes a heightened awareness of the impact of learning style on both achievement and attitude.

Heath (2001) determined whether the independent variables academic status (gifted and non-gifted) and learning style preferences (environmental, sociological, perceptual, and physical), separated and combined, influenced the academic performance of sixth- and seventh-grade students on the dependent variable of reading and mathematics. Two hypotheses were developed: (i) There is no significant difference in student performance on the reading by academic status, learning styles, ethnicity, gender, and the interaction effect of academic status and learning styles. (ii) There is no significant difference in student performance on the mathematics by academic status, learning styles, ethnicity, gender, and the interaction effect of academic status and learning styles. The results of the two 4-way (Analysis of Variance) indicated that there was significant differences by academic status in reading and mathematics. Gifted students scored higher on the reading and mathematics than did their non-gifted counterparts. In addition, the results indicated that there were significant differences by gender and ethnicity on reading achievement. Female students scored significantly higher on the reading tests than male students. There were no significant differences by learning styles on gender, reading or mathematics achievement.

Jones (2001) examined community college students' preferences across four subject area disciplines to determine if learning styles vary by subject-area, gender, or academic performance using the Kolb Learning Style Inventory (LSI). Basic
descriptive statistics as well as a series of ANOVAs were used to determine the extent
to which community college students' learning preferences vary by subject, gender, or
academic performance. The results of this study revealed statistically significant
differences in the students' learning preferences by subject-area and academic
performance, but not by gender. The findings indicate that different subject area
disciplines such as English, math, science, and social studies tend to invoke different
learning preferences among community college students. These students, regardless
of gender differences, were able to adapt their learning preferences to the learning
demands of the target disciplines. These findings have important implications for
research and instruction within the community college context.

Joyce (2001) studied the temperaments of 80 children, ages 8 – 17, 40 with Conduct Disorder (CD) and 40 with Oppositional Defiant Disorder (ODD). The dependent variables in this study were four temperament dimensions (extraversion-introversion, practical-imaginative, thinking-feeling, and organized-flexible), measured through the use of the Student Styles Questionnaire (SSQ). Differences between children with CD and ODD on Extraverted-Introverted, Thinking-Feeling, and Organized-Flexible styles were not significant. Differences between children with CD and ODD were significant on Practical-Imaginative styles. Children with ODD displayed a stronger preference for Practical styles than did children with CD. In addition, four classroom scenario questions were administered to determine children's perception of combinations of high or low conformity and high or low emotional responsiveness. Children with a preference for either flexible or organized styles indicated a stronger preference for classrooms with high responsiveness regardless of whether the class required high or low conformity.

King (2001) conducted study with the overall purposes to: (a) review the literature on learning styles and at-risk students; (b) review the literature on the Accelerated Reader Program and report concerning its use; (c) assess the effectiveness of the Accelerated Reader Program (d) gain input from other teachers who have been using the Accelerated Reader Program; (e) assess selected students' learning styles and develop instructional strategies based on their learning styles, and (f) assess the effectiveness of intervention through periodic tests of students. The methodology used in this research was action research. Interventions included the use of different skills and methods. Skills included word recognition, vocabulary, word analysis,
punctuation, sound, and computer skills. The methods used included discussions in groups, individual assignments, cooperative learning, The Accelerated Reader books, and classroom textbooks. As a result of changes in teaching style, students' test scores improved. In this study there were many factors that influenced the learning styles of children.

Malinsky (2001) explored the relationship of matched teacher/student learning styles to the achievement and self-esteem of students. Using an ex post facto research design, 126 fifth and sixth grade students, and six teachers of two public elementary schools were administered learning style inventories. Students took the Learning Style Inventory (LSI), and teachers were given an adult version, the Productivity Environmental Preference Survey (PEPS). A one-to-one correspondence was set up between the first 20 elements of the test to form matched teacher/student learning style pairs. Students were also given the Self-Esteem Inventory. Achievement grades for students were assigned by their respective teachers, and were collected at the end of the nine week period of study. F ratios indicated significant differences between the mean scores of the matched and mismatched groups for the dependent variables of general self-esteem, social self-esteem, home/parents self-esteem, and school self-esteem. There was no significant difference, however, between the mean scores of the matched and mismatched groups for the dependent variable of achievement grade.

McColgin (2001) examined the effects of a match versus mismatch between learning styles and teaching methods on a student's academic performance, amount of perceived learning, and course evaluations. A review of past research supported the inclusion of the following student characteristics: age, previous academic performance, and amount of effort put into the course work. In addition, the teaching methodology used by the faculty member was included as an independent variable. The findings suggest that faculty need to design and utilize instructional strategies that actively engage students in the teaching learning process. In addition, students must be made aware of the academic and the personal benefits from assuming a more proactive role in their learning. Finally, the study points to the need to further understand the myriad of variables that impact on student learning and students' perceptions of effective instruction.
Parker (2001) holds the view that teacher awareness of their own learning style and those of their students can impact student attitudes toward learning. A learning styles project entitled TEACH (Teachers Encourage Achievement, Cooperation, and Honesty) was implemented at a large, urban, middle school in north-central Texas. Thirty-four seventh-grade teachers participated in staff development based upon the Dunn, Dunn, and Price Learning Styles Model. Awareness of their own learning styles impacted teacher participants primarily in two ways: more empathy and tolerance for students who learn differently, and implementation of environmental strategies in classrooms in the form of lighting, temperature, and seating arrangements. The majority of the students at the middle school campus were Mexican-American with identified learning preferences requiring hands-on materials with peer interaction. When such learning preferences were addressed, students attended class and participated in activities more often, and stated they liked class. Teachers reported more cooperation and less behavior problems.

Shuford (2001) examined the learning styles and strategies of first-year college students and their relationships to active learning, academic success, race, and gender. For the purposes of this study, the aspect of learning style being investigated was deep and elaborative learning, which served as a measure of the participants' preferred style. The actual strategies used in a production task were also examined. The active learning practices of participants were also examined. Relationships among preferred learning style, used strategies, and active learning practices were also examined, as well as the relationships of these variables to academic success, race, and gender. Both measures of preferred learning style were significantly related to several of the active learning practices items. Academic achievement was also significantly related to the used strategies of participants; participants who used higher levels of cognitive complexity in their writing also had higher academic achievement. Group differences by race were found on preferred learning style, used strategies, and academic achievement measures. This research links a number of concepts related to student learning to complex thinking and academic achievement in college students.

Williams (2001) – using the Kolb Learning Style Inventory and the Myers Achievement Motivation scale – examined the relationships of learning style, achievement motivation, gender, and ethnicity/race. 112 students were surveyed and
of the 103 valid responses received, 49 (47.6%) were males and 54 (52.4%) were females. Sample mean age was 24.7 years for males, and 23.7 years for females. The results of the study showed no significant differences, correlation, or association between learning styles and gender, learning styles and ethnicity/race, or achievement motivation and learning styles. Differences were noted, however, in the learning mode characteristics between men and women and between the different ethnic/racial categories measured by this study. A correlation between achievement motivation and learning modes was also noted.

CONCLUSION

Students use more than one preferred learning style (Bonacci, 1999) and the teachers who use teaching practices that accommodate the preferred styles of learning of children see improvement in the academic performance of the children (Williams, 1998). A match between learning style and teaching style increases student achievement and satisfaction (Lindsay, 1999). Therefore, when learning preferences were addressed, students attended class and participated in activities more often, and stated they liked class (Mitchell, 2000; Parker, 2001). Teachers and students tend to perceive problem-based learning as a catalyst for students’ motivation and overall success (Cerezo, 2000).

A significant relationship exists between learning styles and academic success, and also, positive relationship exists between academic success and auditory language learning style (King, 2000). However, Nussbaumer (1998) reported no relationship between learning styles and visualization skills.

STYLES OF THINKING

Panda (1985) conducted research with the to study the role of the cognitive style (field independence, field dependence) and adjunct question in relation to learning and retention of prose materials in a series of studies. The study adopted 2 x 2 x 2 factorial designs. The findings of the study were: (i) Field-independent students learn and retained prose significantly more than field-dependent students. (ii) Students who read the text with adjunct questions learn faster and retained longer than those who used the traditional reading style without any interspersed question. (iii) Post-adjunct questions produced better learning and retention scores than pre-adjunct
questions in prose learning. (iv) The specific adjunct post questions produced significantly better learning and retention than the general adjunct post questions. (v) The level-I (simple recall, knowledge level), and level II (paraphrase, conceptual, etc.) questions led to significantly better retention than the level III (higher order, presuppositional) adjunct post questions. (vi) Delayed retention scores were significantly more than immediate retention scores, which was also evident for the field-independent students. (vii) Field-independent students proved to be significantly superior to field-dependent students in processing and comprehending scientific textual materials, at all levels of questions, and at both the retention tests.

Saxena (1985) conducted study to find out whether advantaged environmental conditions facilitated and disadvantaged environmental conditions interfered with the development of logical thinking ability of children. The environmental factors included for this study were parents’ education, occupation and income, and the provision of certain physical facilities to the children in their schools. The main focus of the study was on logical thinking ability but, in addition to this, three other reasoning abilities, namely, additive classification ability, logical reasoning ability and creative thinking ability were also studied. The study was conducted on 400 students by including equal numbers of boys (N = 200) and girls (N = 200) studying in classes III to VI and in the age range of 8 to 11 years. The significant findings and conclusions of the study were: (i) Logical Thinking Ability (LTA) was found to be correlated with Additive Classification Ability (ACA), Logical Reasoning Ability (IRA) and Creative Thinking Ability (CTA). (ii) The LTA, CTA and LRA were predicted by the home environmental variables. (iii) Environmental handicaps significantly differentiated the advantaged and disadvantaged children in respect of their LTA, ACA was found to be in favour of the advantaged group. (iv) No significant sex differences were found between the advantaged and disadvantaged groups with respect to their LTA, ACA and CTA. (v) The variables of home and school, when condensed into three factors by varimax rotation were found to be differentiating the advantaged group for the variables of maturity, creativity, motivation, male dominance, from the disadvantaged group.

Cakan (2000) investigated the interaction of cognitive style and assessment format {multiple-choice (MC) and performance-based assessments (PBA)} in second language proficiency. The participants consisted of 258 eighth-grade students. The
study also examined study habits and attitudes of field-dependent (FD) and field-independent (FI) students toward the two assessment formats. The study utilized a sequential mixed-model design, consisting of both quantitative and qualitative methods. Phase I consisted of a quantitative study investigating performance difference between FD and FI students on different test formats. Phase II consisted of a qualitative study to investigate assessment preferences and study habits of FD and FI students. Results revealed that cognitive style had a statistically significant effect on student performance whereas the effects of gender, ethnicity and socio-economic status of the students were not significant. A two-factor split-plot analysis revealed a significant interaction of cognitive style and test format. FI students outperformed FD students in the MC, but no indication of such difference was observed for the PBA. Furthermore, FD students scored better on the PBA than they did on the MC. The FI students scored better on the MC. Overall, the study indicated that compared to multiple-choice format, the performance-based assessment of second language proficiency is less impacted by student attributes such as cognitive style, gender, ethnicity, and socio-economic status. Qualitative interviews with students and their teachers revealed that there are differences between study habits of FD and FI students, but no difference was observed in terms of their assessment.

Proctor (2000) investigated whether students’ cognitive styles affect performance on two distinct types of tests: a standardized, multiple-choice test of language skills (Iowa Test of Basic Skills; ITBS), and a state-developed performance assessment of writing skill (FLORIDA WRITES!). The measure of cognitive style was the Thinking Style Inventory (TSI; Sternberg & Wagner, 1991), a self-report instrument based on Sternberg’s theory of thinking styles. Participants were 154 8th and 9th grade students. Multiple regression analyses were conducted, with thinking style and Raven’s Standard Progressive Matrices (SPM) as independent variables, and ITBS and FLORIDA WRITES! as dependent variables. Results of multiple regression analyses demonstrated that SPM was the only variable to correlate significantly with either ITBS or FLORIDA WRITES!. Cognitive style was not found to correlate with either dependent measure. An exploratory factor analysis of the TSI performed at the subscale level did not support Sternberg’s five-factor structure; rather, a two-factor model was the best fit for the data. Some relationships between subscales were
consistent with Sternberg’s theory, whereas others were not supported. Finally, the relevance of cognitive style to students' academic success was considered.

_Caldwell (2001)_ used a sample of 168 high-risk adolescents who were on probation with the juvenile justice system, examined an exploratory hypothesis that the cognitive functioning of an adolescent would be a positive correlate of the adolescent’s level of delinquent behavior. The results revealed that an adolescent’s level of family involvement was positively associated with their level of self-esteem. An adolescent’s cognitive style was found to be a positive correlate to level of delinquency. This study provides preliminary support for the conclusion that an adolescent’s cognitive patterns and distortions are related to risk of delinquency.

_Gollmar (2001)_ in the study titled “An investigation of attention deficit/hyperactivity disorder, creativity, and cognitive style: Interaction and impact on school success” reports that Attention-Deficit/Hyperactivity Disorder (ADHD), creativity, and cognitive style have, individually or in pairs, been the subject of single factor research that suggests an impact on student learning. As an exploratory study, ADHD and non-ADHD participants in a middle school setting were administered Sternberg's Thinking Styles Tasks for Students, and the Torrance Test of Creative Thinking, Figural Form A, Iowa Test of Basic Skills scores in reading and math were obtained from student records, and teachers reported semester grades in reading and math. Results show students to be more similar than dissimilar in cognitive style preferences. Students with combined rather than distinct style preferences tend to have slightly higher ability scores and slightly higher mean scores on creativity and school success measures than did other groups. Creativity measures show fluency, originality, and elaboration as relative strengths for ADHD students. ANOVA results are significant for math ITBS and GPA, with the ADHD group having lower performance. As a set, creativity variables are predictors of ITBS scores in math and reading, and of math GPA. Fluency and Originality contributed to math ITBS performance, as did Abstractness of Titles, which also contributed to math GPA.

**CONCLUSION**

On the one hand, the research findings revealed that cognitive style has significant effect on student performance (Cakan, 2000) and on the other, it was not found to correlate with the performance on writing skills (Proctor, 2000). However,
students with combined rather than distinct style preferences tend to have slightly higher ability scores; slightly higher creativity and school success (Saxena, 1985). Field-independent students prove to be superior in processing and comprehending scientific textual material as compared to field-dependent students (Panda, 1985).

SELF-ESTEEM

Sarwat (1982) conducted a study to examine the relationship of self-concept measures with adjustment, values, academic achievement and socio-economic status of boys and girls. A quota random sample of 840 students (420 boys and 420 girls) of class IX from 14 schools under the Delhi Administration was selected. The major findings were: (i) The boys' self-concept was positively and significantly related to social adjustment, while the girls' self-concept was positively and significantly related to home, health, social, emotional, school, as well as total adjustment. (ii) The boys' self-concept was positively and significantly related to political and religious values, while the girls, self-concept was not related to any of these values. (iii) Only intellectual self-concept was positively and significantly related to academic achievement in both the sexes. (iv) Boys and girls differed significantly on total self-concept and its physical, social and moral dimensions. Girls were found to be higher on all these dimensions.

Measelle (1998) conducted research titled “The self-perceptions of young children: Developing the means to understand the family determinants and behavioral significance of four- to seven-year-old’s views of self”. This dissertation comprised of two separate studies. The aim of the first study was to report on the Berkeley Puppet Interview (BPI; Ablow & Measelle, 1993), an age-appropriate method that uses puppets to interview and assess the perceptions of young children. In addition to describing the BPI’s development, the study presents construct validity data on six BPI scales designed to measure 4-7 year olds’ perceptions of their academic competence, achievement motivation, social competence, peer acceptance, depression-anxiety, and aggression-hostility. Results showed that 4-to-7-year-olds possess a multi-dimensional self-concept that can be reliably measured and that the BPI is sensitive to normative changes and individual differences in young boys’ and girls’ views of themselves. In this study, the concordance between young children’s self-reports and parallel ratings by teachers or mothers were consistently as strong as,
if not stronger than, the concordance between mothers’ and teachers’ ratings of the child.

The second study investigated the role played by early family factors in predicting children’s preschool self-perceptions, which, in turn, help to predict children’s social and academic adjustment to kindergarten. This study used structural modeling techniques to examine the diverse pathways by which family functioning during the preschool period was linked with children’s adaptation to kindergarten. The data revealed that (i) parents’ views of themselves and of their children, (ii) the quality of parent-child and marital relationships, and (iii) children’s own self-perceptions during the preschool period play a joint role in helping to predict children’s social and academic adaptation to kindergarten. The findings suggest that data from multiple domains of family life can provide a picture of the complex family factors that may enhance or diminish children’s ability to cope with the start of elementary school.

*Linehan (1999)* investigated how young adults’ conceptions about ability might be related to individual differences in academic achievement motivation. A body of research on conceptions of ability has shown two orientations toward ability. Students with an Incremental orientation believe ability (intelligence) to be malleable, a quality that increases with effort. Students with an Entity orientation believe ability to be nonmalleable, a fixed quality of self that does not increase with effort. In the present study, conceptions of ability were shown to be more domain specific, at least in math, art, and English, than was previously acknowledged in the literature. In factor analysis, math, art, English, and global conception of ability items clearly formed four distinct factors. In the present study, Incremental orientations were associated with higher grades and higher academic engagement, among other positive, adaptive outcomes. Entity orientations were associated with less adaptive behaviors and outcomes. Results suggest conceptions of ability may be redundant to the variables value, confidence, and self-efficacy in predicting individual differences in achievement behaviors.

*Accordino (2000)* studied the effects of perfectionism, depression, and self-esteem on adolescent achievement and achievement motivation. He remarked that perfectionism has been found to have a profound impact on achievement and aspects
of mental health. Participants were 123 tenth through twelfth grade students from eight high schools in Pennsylvania and Virginia. Results indicated several significant findings. Students’ personal standards and their feelings of not meeting such standards (high discrepancy) were significant predictors of academic achievement. Students’ personal standards also significantly predicted achievement motivation (work orientation). Gender was found to be a significant predictor of academic achievement and achievement motivation (competitiveness). Students with positive aspects of perfectionism differed significantly on measures of self-esteem and depression from students possessing negative aspects of perfectionism.

Lipkowitz (2000) measured the relationship between sensory disabilities and student adjustment levels for self-determination, self-esteem, cultural/disability identification, inclusion preferences, and academic achievement. The four disability groups that participated were students who were deaf, hard of hearing, blind or visually impaired. Results indicated that there were significant differences between the sensory groups on self-determination, self-esteem, and academic achievement, and significant placement differences on academic achievement, disability identity, and student preferences for inclusive education.

Resendez (2000) in the study titled “Self-esteem and reaction to events” investigated the role of self-esteem in people’s reactions to positive and negative outcomes. Individual differences in two aspects of self-esteem, amount (high or low) and the importance of specific facets were hypothesized to affect people’s reactions. Participants completed the Rosenberg Self-Esteem Scale (to determine their amount of self-esteem), and they rated the importance of ten facets. After reading one of three different scenarios, which were relevant or irrelevant to their importance ratings, they rated the strength of their cognitive, affective, and behavioral reactions. As hypothesized, both aspects of self-esteem were significantly related to the reactions.

Thurman (2000) examined the relationship between self-esteem, academic self-concept, and academic achievement among African American students. Findings revealed that although African American students in this study reported high self-esteem at each grade level, self-esteem did not increase across grade levels as hypothesized. Self-esteem scores of students in grade 5 were higher than middle and high school students. The hypothesis that elementary students would have a stronger
relationship between academic achievement and self-esteem scores was not supported. No correlation existed between academic achievement and self-esteem at any grade level. The hypothesis that high school students would have a stronger relationship between their academic self-concept scores and achievement than middle and elementary students was partially supported. Students in grade 10 showed a significant correlation between academic self-concepts scores and achievement whereas no significant correlation between academic self-concept and achievement was obtained at grade 7 or grade 5. An important finding from student interviews revealed that academic self-concept of ability may produce a more positive correlation between academic achievements than global self-esteem.

Zwiers (2000) conducted study with the purpose to describe children’s conceptions of pride in the anticipation that knowing about these conceptions would help indicate ways for counsellors to intervene. Using phenomenography, a descriptive research methodology that emphasizes conceptions of things experienced, child participants in Grades 2, 4, and 7 were interviewed to determine their conceptions of pride. The children were invited to talk about pride, mainly by telling stories of experiences with pride. The resulting narratives were analyzed to sift out all qualitatively distinct categories of meaning for pride, mapping the general domain of the emotion. Eight distinct conceptions emerged, including three active or ‘doing’ conceptions (achieving, acting ethically, and acting independently) and five ‘having’ conceptions (possessing, having a desired attribute or ability, belonging, having special status, and pride by association). All conceptions were represented in all three grades sampled, with no outstanding age- or gender-related differences. Research results contribute to our knowledge of how children experience and comprehend pride, and point toward educational and psychological implications for those who parent, educate, or counsel children.

Apple (2001) addressed school climate and self-esteem through the eyes of 1271 eighth grade students in rural, suburban, and urban public school settings. This was a descriptive study, qualitative and quantitative in design. Eighth grade students had been forthright in expressing their viewpoints on school environment, their own achievement, and their feelings about school, about dropping out or graduating, and most importantly, the role teachers played in their academic success or lack of success. In the analysis of the quantitative data of the two instruments, several
populations of eighth grade students perceived moderate to weak correlations between school climate and self-esteem, while other populations indicated very little, if any, correlation.

*Caldwell (2001)*, using a sample of 168 high-risk adolescents who were on probation with the juvenile justice system, examined the hypotheses that family versus peer involvement would moderate an adolescent’s level of self-esteem and that both family versus peer involvement and self-esteem would moderate level of delinquency. It was also hypothesized that differences would exist between males and females. The results revealed that an adolescent’s level of family involvement was positively associated with their level of self-esteem. Second, an adolescent’s level of family involvement was negatively related to severity of delinquent behavior. Third, an adolescent’s level of self-esteem negatively correlated with severity of delinquency. Results also showed no significant relationships between an adolescent’s level of peer involvement to self-esteem and to level of delinquency. In addition, gender differences were not found. These findings indicate that family involvement interacts with an adolescent’s emotional adjustment and level of delinquency.

*Enright (2001)* assessed the relationships between self-esteem scores and several family variables; child-perceived family satisfaction, parental acceptance, psychological control, lax discipline, parent-reported self-esteem, family satisfaction, and parenting self-esteem; among gifted and non-gifted sixth-graders. Canonical analyses were conducted to explore the relationships between children’s variables (self-esteem, family satisfaction, and parental acceptance) and parents’ variables (self-esteem, family satisfaction, and parenting self-esteem). Thirty-three gifted and thirty-four non-gifted sixth-graders, and their parents, comprised the pool of respondents. Results indicated that gifted and non-gifted sixth-graders’ self-esteem scores did not differ significantly. Gifted children's perceptions of family satisfaction and parental acceptance were positively related to their self-esteem levels. Among non-gifted children, perceptions of family satisfaction were positively associated with their self-esteem scores. Children's perceptions of paternal psychological control were inversely correlated with their self-esteem scores across groups. Maternal self-esteem, children's group status, and child-perceived family satisfaction were significant predictors of children’s self-esteem scores. Only gifted children's response-bias measures were significantly associated with their self-esteem scores.
Ingram (2001) examined the impact of a comprehensive psychological assessment on individuals' self-perceptions. Participants were 58 college students (30 males) who sought psycho-educational evaluations due to academic difficulties. Participants completed several questionnaires designed to measure self-liking, perceived self-competence, psychological distress, self-reported cognitive abilities. Results showed that, after testing alone, level of distress decreased, global self-liking and self-competence increased, and these improvements were maintained at follow-up. Academic self-image improved after feedback. Accuracy of self-reported cognitive abilities did not change as a result of the assessment process. Participants' level of discomfort during the assessment was predictive of level of distress and self-liking at completion whereas congruence of feedback with participants' experiences was predictive of level of self-competence. Results suggest that global self-perceptions are impacted first by assessment, followed by changes in perceptions about more specific types of abilities.

Laszlo (2001) examined the effect of the Girls' Circle, a support group designed to promote self-esteem in adolescent girls through encouragement of verbal expression, creative expression, and group discussion of gender-relevant topics. Participants were female students in grades six and seven. A single case experimental design with multiple baselines across groups was used. Each group consisted of six girls who met one time weekly for six weeks. The experimenter facilitated both groups and introduced the Girls' Circle curriculum during the meetings. Trained observers completed behavior checklists that yielded a self-esteem score throughout the course of the study based on their observations of the girls in their student homes and at school. Visual inspection of the plotted self-esteem scores based on student home observations indicated an upward trend line. On a self-report measure of self-esteem, scores improved overall from pre-test to post-test. Qualitative data based on participant feedback indicated that the girls valued the group process and inherent support and camaraderie as well as the skill acquisition portions of the curriculum.

McKee (2001) analyzed individual items from the Children's Self-View Questionnaire (Eder, 1990) to examine the factor structure of 5- and 7-year olds' self-perceptions. Participant data for this study were drawn from a longitudinal investigation of vulnerability and resiliency in children from low income families. At age 5, three coherent factors (Sociable/Obedient, Isolated/Dejected, and Passive/Easy
Going) were found. Three factors (Sociable/Secure, Aggressive/Alienated, and Fearless/Risk Taker) were also found at age 7. Children’s self-perceptions were compared with adult observations. Generally, relations between self-perceptions and adult observations were weak and sporadic. A modest positive relation was found between teachers’ reports of achievement motivation and scores on the Fearless/Risk Taker factor. Scores on the Sociable/Secure factor were also modestly related to adult ratings of sociability and achievement motivation.

McMaken (2001) evaluated task resolution for Erikson’s first four psychosocial stages, and overall psychosocial maturity, as predictors of risk in elementary school children. Sample groups consisted of children already identified by their schools as being at-risk, and children from the same schools identified as not-at-risk. Subjects completed a revised version of the Erikson Psychosocial Inventory Scale measuring trust, autonomy, initiative, and industry, as well as measures of self-esteem and school commitment. The not-at-risk group had substantially higher mean scores than the at-risk group in all the subscales. Correlation coefficients indicated strong relationships between psychosocial task resolution and predictors of risk, with overall psychosocial maturity explaining 66% of the shared variance for self-esteem. Discriminant analyses revealed that measures of psychosocial maturity were strong predictors of risk for children.

Peterson (2001) examined the relationship between conflict resolution skills and self-esteem in preschoolers (ages 3 – 5). Some models suggest that aggression puts one at risk for peer rejection. Others suggest that aggressive children have inflated self-esteem. Forty-three preschoolers were interviewed to assess their self-esteem, conflict resolution skills, and peer – group status. No significant relationships were found linking aggression with either low or high self-esteem. The data revealed that teacher-rated acceptance and peer-nominated ‘liked least’ were negatively correlated, whereas teacher-rated acceptance and peer-nominated ‘liked most’ were positively correlated. The child’s self-reported level of acceptance was negatively correlated to the number of peer fight nominations. Interestingly, significant positive correlations were found between teacher-rated and parent-rated peer acceptance and children’s competent responses to social situations.
Schimel (2001) pointed out that a good deal of research findings suggest that high self-esteem individuals cope with failure by engaging in self-serving biases that allow them to deny the negative implications of failure. To test this notion, high and low self-esteem participants took a test of creativity and were given feedback that they were either creative or non-creative. Following this procedure, the ease of denial of the feedback was manipulated by telling the participants that the creativity test was either highly valid or invalid. It was expected that high self-esteem participants would generally make more self-serving evaluations of the test than low self-esteem individuals, and as a result, experience more pleasant affect and view themselves more positively on creativity than low self-esteem individuals following negative feedback. However, it was also expected that if the negative feedback was easy to deny, low self-esteem individuals would be just as self-serving as high self-esteem individuals in their evaluations of the test and experience a similar increase in positive mood, and rate themselves higher on creativity. The results did not support these predictions. Both high and low self-esteem individuals made self-serving evaluations of the test regardless of the ease of denial manipulation.

Scott (2001) – quoting the previous researches – stated that taking into account the event-related fluctuations in state self-esteem (SSE), which is designated as labile self-esteem (LSE), better explains the role of self-esteem in depression than SSE alone. Researcher used path analysis in this study to clarify the relationships among attributional style, LSE, SSE, and depression. One hundred and thirty-one student volunteers completed the Attributional Style Questionnaire, the Beck Depression Inventory-II, and the Rosenberg Self-Esteem Scale. The latter was administered 14 times (i.e., twice a day over 7 consecutive days). The results indicated that (i) SSE mediates global negative attributions and has both direct effects and indirect effects (through LSE) on depression, and (ii) internal negative attributions influence depression directly. Gender by age interactions were found for both SSE and depression but because there were many more women than men, this finding should be regarded as tentative.

Soriano (2001) explored the relationship between levels of self-esteem in young adolescents and their emotional reactions to success and failure in a challenging task situation. This study found that self-esteem generally had very little effect on how adolescents dealt with positive feedback. With very few exceptions,
adolescents embraced success and felt good when they did well. Self-esteem was most significant when adolescents confronted negative outcomes. Negative results made adolescents with low self-esteem feel more ashamed and embarrassed and they generalized these reactions to other non-related domains. In addition, low self-esteem individuals exhibited greater self-handicapping and less task persistence after the experience of failure. Based on the results of this study, important implications for interventions designed to help low self-esteem adolescents were noted. Considerable further research is needed to determine the best way to help those with low self-esteem deal with experiences of failure and make such experiences less debilitating.

Ssebikindu (2001) conducted a study which focused on the effectiveness of English as a Second Language (ESL) program in enhancing self-esteem, social interaction, and educational attainment in grades 3 – 6. Students participating in this study were from three urban elementary schools. Since the U.S. school population is bringing to the classroom more students with limited English proficiency and more immigrants, teachers in the United States are working with far more heterogeneous classrooms than ever before. The results of the study, however, showed that there was no significant difference between the ESL speakers and the native speakers on both the Hare Self-esteem Scale (HSS) and the index of Peer Relations (IPR). There was a significant interaction between the ESL speakers and native speakers and achievements changes.

Talbot (2001) conducted study with the purpose to determine the effectiveness of an adventure-based education program that was incorporated into a high school curriculum. Fifty-six high school students attending Futures, an alternative track for at risk students, were randomly assigned to either an experimental group who participated in the adventure-based education program or a non-treatment control group. Pre- and post-tests were administered to both groups to determine changes in levels of self-esteem (Coopersmith Self-Esteem Inventory). Academic achievement records were acquired from accumulated semester grades of all students before and after intervention. Although most results were statistically insignificant, post-test scores did reveal an upward trend in self-esteem by the experimental subjects in the SEI Subscale School-Academic.
Trzepacz (2001) examined the impact of gender and race on specific dimensions of self-perception and on the relationships between peer acceptance and dimensions of self-perception. The data included 466 children between the ages of 7 and 15. Girls reported lower self-perceptions than boys on the dimensions of Athletic Competence and Physical Appearance, but higher self-perceptions for Behavioral Conduct. No gender differences were found for Global Self-Esteem or perceptions of Scholastic Competence or Social Acceptance. Peer acceptance was positively correlated with perceived Social Acceptance and Global Self-Esteem. There were no significant main effects of gender or race for any of the correlations between peer acceptance and dimensions of self-perception. A significant interaction effect was identified for the relationship between peer acceptance and perceptions of Physical Appearance.

CONCLUSION

A variety of psychological theories have attempted to explain the origins of self-esteem, its definition, its function, and its consequences in the everyday lives of children. In addition, a vast amount of research literature has characterized self-esteem as an important variable in both the attainment of a variety of positive outcomes for children having high self-esteem and associated a variety of children’s clinical problems for those having low self-esteem.

Sarswat (1982) and Accordinno (2000) reported significant positive relation between intellectual self-concept and academic achievement and that boys and girls differ significantly on total self-concept. On the other hand, Linehan (1999) and Thurman (2000) concluded that conceptions of ability may be redundant in predicting individual differences in achievement behaviours. Apple (2001) found moderate to weak correlations between school climate and self-esteem.

While there is some agreement about self-esteem’s basic attributes, there is less agreement about its functions and its relevance to people’s thoughts, feelings, and behavior. Within the self-esteem literature, there has been mixed empirical support for the relationship between self-esteem and performance.
STUDY HABITS

Hess (1997) holds the view that an important contributing factor to academic success in college is the presence of adequate study habits that allow students to learn independently. According to previous research, optimal classroom performance is achieved when learners exhibit a variety of useful study habits, use deep and surface level processing of information, and effectively monitor their own reading comprehension. The results supported Hypotheses: (i) Individuals who employ a greater number of productive study habits achieve higher levels of academic success than those who employ fewer; those who use more deep level study than surface level study will achieve higher levels of academic success than those who primarily rely on surface level study. (ii) Individuals who employ a greater number of productive study habits will achieve higher levels of reading comprehension than those who employ fewer; those who use more deep level study than surface level study will achieve higher levels of reading comprehension than those who primarily rely on surface level study. (iii) Individuals who employ a greater number of productive study habits will achieve higher levels of metacomprehension than those who employ fewer; those who use more deep level study than surface level study will achieve higher levels of metacomprehension than those who primarily rely on surface level study. However, the hypothesis that individuals who employ more metacomprehension will comprehend what they read better than those who use less metacomprehension, was not supported by the data. Because of instrument unreliability, the link between metacomprehension and reading comprehension was not well tested in the current investigation.

Mullen (1997) studied to determine the difference in study habits and study attitudes between two groups of college students. Group one consisted of students participating in an experiential learning program using the portfolio assessment method of evaluation. Group two (control group) consisted of students not participating in such program. One-hundred and ninety students offering experiential learning programs using the portfolio assessment of evaluation were surveyed for this study. Of those tested, ninety-two students were participating in an experiential learning program and ninety-eight students were not participating in such program. An analysis of the data revealed that a significant difference in study habits and study
attitudes exists between students participating in an experiential learning program using the portfolio assessment method of evaluation and students not participating in such program. Students participating in experiential learning scored significantly higher than students not participating in experiential learning across seven dependent variables: delay avoidance, work methods, study habits, teacher approval, education acceptance, study attitudes, and study orientation. The data further revealed that a significant difference in study habits and study attitudes exist between students across three age groups. Group one consisted of students in age eighteen to twenty-four, group two consisted of students in age twenty-five to thirty-four, and group three consisted of students in age thirty-five and above. Mean scores for students in age thirty-five and above were higher than mean scores for students in age eighteen to twenty-four and students in age twenty-five to thirty-four on each of seven dependent variables: delay avoidance, work methods, study habits, teacher approval, education acceptance, study attitudes, and study orientation.

Mungai (1998) investigated the effect of two family factors (financial, social capital) on students' study habits and achievement. The researcher also examined the study strategies of high and low achievers to determine if they would differ in the quality of their information processing. One hundred eighty-two, seventh-grade female students from nine schools in Muranga district, Kenya, were studied. Qualitative methods were also used to analyze the interviews and the students' written data such as notes, summary, jottings that were generated while they studied the article. The researcher found that each of the two family factors (financial and social capital), and the school factors had an independent and significant effect on student achievement and study habits. The results indicated that a student's academic achievement is positively influenced by the education level of both parents. The researcher also found that the father's education had positive influence on the study habits of the females and that the higher the education of the father the fewer chores the females were assigned at home, probably because parents who had a higher socio-economic status could afford to buy books and also could afford to employ house helpers. The information derived from the interview analysis provided the same evidence confirmed in the questionnaire.

Pelufo (1998) conducted the study with an aim to improve the study habits of the students in the first year at university. Researcher made an analysis on the
methodology of the tutorial action and the concept of study habits along with variables that take part in the learning process. The programme consisted of eight sessions with the course tutors. The goal of the sessions was to teach the students the methodological strategies of the tutorial action as well as the techniques and the necessary knowledge to give support to the development of the programme. In each session of work, the cards were given to students in which they found the objective, the activities and the material to be used; besides there were other sessions with students. Researcher found that those students who had followed the programme: (a) they had improved their attitudes in class and in their studies, (b) the conditions had also improved giving rise to a better study situation as a result of major self-control. Furthermore, we have achieved an important improvement in this intellectual capacity especially in the Abstract Reasoning.

**Ingram (1999)** conducted research with the purpose to initiate a common bond between the parent and the teacher. Twenty kindergarteners comprised the target population. They were all given the Brigance test. Ten students were selected to serve as the experimental group to receive the parental guide. The guide was to aid the parents at home with what was given at school. The results indicated that experimental group obtained significantly higher scores in learning the pre-reading reading skills than the control group. While results for the control group indicated an increase in the area of pre-reading, these results were not as broad an increase as the experimental group. These findings lend further support to the literature review that if a parent and a teacher come together on common ground about what and how to teach a child, the results will be seen in the study habits and school work of the student.

**Carter (2000)** conducted study to determine the relationship of study habits, attitude, and motivation to academic achievement. The Learning and Study Strategies Inventory (LASSI) and the Student Demographic-Information Questionnaire (SDIQ) were administered to 191 students to gather data on the predictor and moderator variables. Academic achievement was measured by the students’ final grade in the course. The multiple linear regression analysis and the Pearson product-moment correlation coefficient were conducted to test the hypotheses. Analysis of data revealed that there is a statistically significant relationship between study habits and academic achievement. No statistically significant relationship was found between attitude and motivation and academic achievement.
Franklin (2000) observed that the schools with high Asian populations show significantly higher scores on national percentile tests than schools with high European-American populations. Assuming comparable intelligence between the two cultures, an investigation of factors influencing scores seemed reasonable. Perceiving study habits as a common variable, this study asks: In what ways do reports of study habits differ in interviews of Asian males and European-American males enrolled in Communication classes? An interview of 12 open-ended questions inquiring into study habits was administered to 15 male students in each culture enrolled in Communication classes. The Chi-square analysis showed three significant differences: (a) Asian students would not seek help from an instructor; (b) Asian students seek to understand the instructor's expectations, and (c) Asian students study in advance for tests. Researcher recommended that schools include courses of study habits in their curricula.

Stewart (2000) conducted this descriptive study to investigate the perceptions of current sixth and seventh grade students and their parents on the transition from elementary to middle school, concerns they had about it, and suggestions on how to make it smoother. The study took place in a middle school located in a small multicultural, multiethnic community. The subjects consisted of 124 sixth and seventh graders and their parents and were ethnically representative of the school population. The methodology employed for this study involved the examination of surveys collected from current sixth and seventh graders and their parents. Seventy-eight percent of the students and 82% of the parents responded that they were nervous about the elementary to middle school transition. Using good study habits and making the effort to get along with others were identified as essential to students in order for them to be successful at the middle school level.

CONCLUSION

Using good study habits and making the effort to get along are essential to students in order for them to be successful at school (Stewart, 2000). Family factors and school factors have significant effect on study habits and student achievement (Mungai, 1998). Parents and teachers, if come together on common ground about what and how to teach a child, may result in the improved study habits and school work (Ingram, 1999).
Since study habits have statistically significant relationship with academic achievement (Carter, 2000) the schools should, therefore, include courses of study habits in their curricula (Franklin, 2000).

ACADEMIC ACHIEVEMENT

Gupta (1983) conducted study on a sample of 310 ninth class boys and 312 ninth class girls which was chosen randomly from four high schools of Patiala. The findings of the study were: (i) Over-achieving boys were less expedient and less shy and had less undisciplined self-conflict than the underachieving boys. (ii) Over-achieving girls were less affected by feelings and more emotionally stable, less shy and more vigorous and zestful and had less undisciplined self-conflict than the underachieving girls. (iii) Among boys, the high motivated group and average motivated group were found to be more sober, less happy-go-lucky, and had less undisciplined self-conflict than the low motivated group. (iv) Among girls, the high motivated group was more intelligent and less expedient than the low motivated and average motivated groups, and was less shy and had less undisciplined self-conflict than the low motivated group. The high motivated group did not differ significantly from the average motivated group in shyness and undisciplined self-conflict. (v) There was significant interaction in academic achievement and achievement motivation both in the case of boys as well as girls in the case of personality factor.

Prasanna (1984) conducted study with the main objective to identify the mental health variables which discriminated between high and low achievers among the total sample and sub-samples classified on the basis of sex, and area of residence. The sample was made up of 1050 pupils (567 boys and 483 girls) of Std. IX, selected by applying the proportional stratified sampling technique. The main findings were: (i) All the mental health variables studied discriminated between high and low achievers in most of the groups studied; (ii) High achievers had higher mean scores than low achievers for all the 16 mental health variables studied. The findings of the study indicate the need (a) to avoid threats which caused disequilibrium in children, (b) to provide for guidance-oriented teaching, (c) to organize extension lectures for parents and community leaders, (d) to form parent-teacher associations, and (e) to encourage pupils to participate in extra-curricular activities and institutional guidance.
Quinn (1997) examined the effects of goal setting and self-regulated behavior on reading achievement and study time. 128 fifth grade students in two public schools participated. All students received instruction on the advantages of goal setting and strategies for monitoring their progress. Additionally, students’ self-efficacy, level of procrastination, and their parent’s level of involvement in their goal setting plans were assessed. Students in the treatment group were required to set goals related to improving their reading comprehension and monitored their progress and study time in a pre-printed booklet for five weeks. Students in the control group read a case study and examined the behavior of a student with poor reading and study habits. Control group students were given the option of setting goals and were also required to monitor their progress and study time in a booklet of pre-printed forms. Results showed no significant differences on reading achievement. Students in the treatment group did spend a significantly greater amount of time studying. A significant three-way interaction was found between treatment, procrastination, and self-efficacy with study time. Qualitative analysis of parent’s level of involvement showed that high levels of parental involvement were related to student’s likelihood of completing the five weeks of treatment.

Wills (1997) reviewed the literature which revealed that the personality variables of self-concept, locus of control, introversion-extraversion, and achievement motivation have all been examined and found to be repeated predictors of academic success among students. The study investigated the differences between disadvantaged college students who were succeeding and those who were not succeeding with respect to the following personality variables: self-concept, locus of control, introversion-extraversion, and achievement motivation. Participants were classified as succeeding (GPA of 2.65 and above on a 4.0 scale) or not succeeding (GPA of 2.60 and below on a 4.0 scale) based on their cumulative GPA at the end of the last academic semester completed. Results of the multiple discriminant analysis indicated that none of the four personality variables: self-concept, locus of control, introversion-extraversion, or achievement motivation significantly discriminated between those disadvantaged college students who were succeeding and those who were not succeeding. These results are not consistent with previous research findings that have repeatedly found a positive correlation between these personality variables
Foster (1998) examined the relationship between SAT scores, self-concept, study habits and attitudes, and college adjustment for student-athletes and non-athletes. Much has been written concerning the academic inferiority of student-athletes but little scholarly research has been conducted in the field. GPA’s of student-athletes were found to correlate highly with pre-college admission test scores, study habits and attitudes, global self-concept, and with academic and goal attainment subscales on a college adjustment inventory. The combination of independent variables studied did little to improve prediction of either academic achievement or adjustment to college. Analysis of variance revealed few total differences between the two populations across all of the various independent variables utilized in this research.

Hernandez (1998) explored the relationship among several non-cognitive variables and academic achievement among Latino public high school students. The variables examined included self-concept of ability, achievement motivation, perceived support from family, friends, and school, acculturation, language proficiency, educational aspirations, and socioeconomic status. Academic achievement was defined as the average final grade in four major subjects including Math, Science, Social Studies, and English for the 1996-1997 academic year. Findings revealed the best predictors of academic achievement were self-concept of ability and educational aspirations. High achievers reported higher self-concept of ability and educational aspirations compared to achievers and persisters. A discriminant analysis revealed that self-concept of ability was the best predictor of achievement group status. No support was found for the other variables including achievement motivation, perceived support (i.e., family, peers, and school), acculturation measures or language proficiency. Of the background variables examined, including number of days absent, history of retention and number of classes cut, support was only found for number of days absent. Higher achievers had significantly fewer days absent than the persisters. One of the major limitations of this study was that the overall sample was predominately low achievers.
Bouldin (1999) – through this study – provides parents, educators, and decision makers with descriptive insight into family practices that facilitate student achievement from the perspective of high achieving students. These students described family practices that facilitated their academic achievement during a series of focus group interviews. The student demographics were diverse, thus descriptions provided many perspectives on facilitative practices. Illustrative student quotes were reported in five themes: (a) parental academic aspirations and expectations, (b) parental participation in school programs and activities, (c) home structures that support learning, (d) parent-child communications, and (e) gender differences in facilitative practices. The study describes how parents facilitated academic achievement by expecting and recognizing the students' best effort. Students also described how their parents offered encouragement and acceptance. The participation of parents in school activities enhanced their abilities. Further, student descriptions of their homework practices emphasized the important role of family routines and structures in developing appropriate study habits. Students identified the most facilitative practices as (a) home support of studying, (b) expectation of best effort, (c) spending time together, (d) family reading, (e) acceptance and encouragement, and (f) religious faith and training. The researcher suggested that appropriate parental control and relationship practices systemically affect all family involvement themes. Because parent-child communications has a systemic effect on parental involvement, parents, educators, and decision makers are encouraged to provide parents with information and training on how to appropriately supervise and relate to their children.

Mistral (1999) investigated school and individual factors that high school students perceived as important to their academic achievement, and a possible relation between this perceived importance and their academic achievement. The school factors selected included school climate, classroom environment, and language of instruction. The individual factors were achievement motivation and social goals. Academic achievement data were obtained from students' records. Analysis of data to identify relations between school and individual variables, and student academic achievement rendered no statistically significant correlations. The conclusions of the study were: (i) Students across levels of achievement perceived school safety, participation in school life, feeling valued by school staff, and school beliefs as very important to their academic achievement. (ii) Participants regarded communication
with students and teachers answering challenging questions, studying topics in depth, and applying learning in life outside school as important factors in the classroom and related to their academic achievement. (iii) Participants’ motivation to go to school was based on their belief that education was the means to attain employment, the respect of others, and economic advancement. (iv) Participants perceived friends as influential in helping or interfering with the participants’ goals.

Call (2000) determined the effects of the Program Achieve curriculum on the psychological characteristics associated with student achievement (achievement motivation, confidence, persistence, organization, getting along, trait anxiety, trait anger) as well as on student achievement (class grades). The research sample of 60 seventh-and eighth-grade students identified as underachievers was randomly assigned to a treatment and control group. The brief intervention consisted of weekly lessons selected from Program Achieve that were taught over a four-week period (six hours total instruction). For the treatment receiving Program Achieve, results revealed statistically significant increases in academic intrinsic motivation, confidence, persistence, organization and getting along. While no overall effect of Program Achieve was obtained for student achievement, students in the treatment group who demonstrated positive changes in achievement also demonstrated positive changes in a variety of different psychological characteristics.

DiPerna (2000) tested a model featuring student variables as predictors of academic achievement. Several leading educational researchers have proposed theoretical models to explain direct and indirect influences on students’ educational outcomes. The models proposed by these researchers have focused primarily on the impact of home and classroom variables on academic achievement. Researcher focused on models of academic achievement including student variables (i.e., prior achievement, motivation, interpersonal skills, study skills, participation, and problem behaviors). Data was collected for a total of 102 children across Grades 3 through 5. Structural equation modeling (SEM) was used to test the fit of the hypothesized student model with the data. Results indicated that the hypothesized student model did not fit the data particularly well; however, the best-fitting model was developed with the revision of a few pathways in the hypothesized model. Within this best-fitting model, only motivation and prior achievement demonstrated large total effects with current academic achievement. Of the remaining four variables, study skills and
participation demonstrated small total effects, and interpersonal skills and problem behaviors demonstrated negligible total effects. The best-fitting student model demonstrated acceptable fit across males and females, but it demonstrated poorer fit across students distinguished by disability and minority status. Finally, the model of academic achievement including home and student variables demonstrated acceptable fit with the data.

*Perry (2000)* examined the effect of specified demographic and psycho-social variables on the academic achievement of 8th and 9th grade students. Psycho-social variables considered in this study included perceived discrimination, time management and a host of home and school factors. Results indicate that psycho-social factors are significant predictors of academic achievement when demographic variables are controlled. Psycho-social variables were found to account for more of the variance in achievement with locally situated students as compared to immigrant adolescents. Shared psycho-social predictors among both groups included perceived discrimination and time management. There were also differences found between the groups with some predictors being significant with the immigrant populations (i.e., achievement motivation, self-esteem, and number of friends) that were not found to be significant for the locally situated population. Differences based on urban versus rural school setting were also suggested.

*Sims (2000)* reports steady progress in identifying the effects of school climate. Research from the 1960’s through the 1990’s has progressed from stating no relationship between school climate and academic outcomes to revealing a strong relationship between the two. Nine school climate variables were investigated: Fairness, Order and Discipline, Parental Involvement, Sharing of Resources, Student Interpersonal Relations, Student-Teacher Relations, Achievement Motivation, School Building, and the General School Climate. Additional variables included ethnic status, achievement level, and grade level. Results indicated that students felt that the appearance of the school building, student-teacher relations and fairness were the most positive aspects; students with grades of 85 and above generally had more positive perceptions of the school than did students with grades of 80 or below; and student interpersonal relationships and the general school climate were perceived as very positive aspects of the school's climate for the higher achieving students in all individual academic subjects. For the students extracurricular activities were the most
favorite aspect of the school throughout every grade level, and in all ethnic groups. In the wake of multiple incidences of school violence; students' perceptions of their school, their feelings of alienation, poor, relationships with teachers, and their feelings of academic hopelessness are extremely important to study and monitor.

Vaslow (2000) examined the relationship between stressful life experiences, motivational patterns, study behaviors, and academic achievement. The expectancy-value model of achievement motivation was utilized in an attempt to characterize motivational factors that influenced students' academic performance and use of study strategies and self-regulatory behaviors. It was found that students, despite having experienced a number of stressful life events, earned higher course grades and reported using more study strategies and self-regulatory behaviors when they adopted appropriate motivational beliefs. Although strategy use was not found to be a significant predictor of educational resiliency, self-regulatory behaviors were significant predictors of educational outcome after controlling for the effects of stressful life events. In particular, persistence was a strong predictor of each academic outcome.

Bensted (2001) examined the effects of using inattentive or low-achieving students as peer supports for students with moderate to severe disabilities in general education classrooms. Students serving as a peer support assisted students with disabilities by adapting curricula, supervising assignments and facilitating socialization. An ABAB single-case design was used to determine the effects on supporting peers. In addition, follow-up data were gathered for some peers. It was concluded that serving as a peer support person positively affected the academic engagement of inattentive or low-achieving students who were enrolled in inclusive classrooms. Some changes in homework completion behaviour and self-esteem were also noted. The introduced peer support intervention was suggested as an example of an instructional system that could be applied in heterogeneous general education classrooms to improve the participation of some students.

Custodio (2001) conducted qualitative study which was designed to follow a group of adolescent immigrants through one school year, focusing on the main issues which impacted their academic achievement. The study grouped those issues into four broad categories: academic, social, physical, and emotional. Limited English
proficiency and below grade level reading ability led to poor grades, a high retention rate, frequent absence, and low academic performance. Low self-esteem resulted and students became potential dropout risks. Lack of parental support and cultural barriers increased the gap between ability and success. The difficulties involved with creating a curriculum to meet the needs of a widely divergent population are discussed.

**Ekrem (2001)** examined the effects of active, meaningful, and explicit spelling instruction on students in a first grade classroom. Documentation was gathered through the administration of developmental spelling tests, anecdotal field notes, and classroom artifacts. The results indicated that through the implementation of effective instruction, the first grade students made significant growth in the developmental process of spelling. In addition, their motivation to write increased markedly, as did their self esteem.

**Evans (2001)** investigated students' perceptions of the affective consequences of grade retention and to uncover possible social and academic effects of grade retention on students' subsequent elementary school experience. The participants were kindergarten through eighth grade students who had been retained for at least one year. Information was collected through semi-structured qualitative interviews and the data were analyzed inductively using constant comparative analysis procedures. As a result of the analysis of student interview data, 10 areas of influence emerged related to students' perceptions of the retention process. The areas of influence were categorized into six thematic areas: (a) Conditions of Acceptance; (b) Importance of Timing in the Decision to Retain; (c) Negative Consequences of Retention for Older Children; (d) Lack of Preparation for the Retention; (e) Inadequacy of Support Services After the Retention; (f) Far-reaching Effects of Retention. Based on the findings, the investigator reached the following conclusions: (i) Regardless of their initial reaction to the retention decision, most students eventually accepted the decision. Parental involvement and support was wanted and needed. (ii) Retention appeared to be an appropriate intervention for students whose problems stemmed from being chronologically and/or developmentally behind their classmates. (iii) Retention appeared to be least appropriate for students who were dealing with behavior problems, learning disabilities, or other problems in their lives. (iv) School personnel rarely prepared the child for the retention decision and rarely provided services to make sure the repeated year was successful. (v) Retained students
socialized well with other students, but the retention process had negative effects on students' self-esteem and attitude toward school. New approaches to curriculum development, school restructuring, and individualized student instruction should become the focus of efforts to improve student success, and ensure that no child is left behind.

*Fraser (2001)* made an attempt to address the problem of academic underachievement by providing precise definitions and by using objective statistical procedures, as well as subjective (self-identification) methods to determine whether there are any meaningful differences among the various groups of subjects accordingly identified. Additionally, this study attempted to determine whether meaningful differentiations can be made between Academic Underachievers and Low Achievers. The sample consisted of 581 high school students (312 males and 269 females) from four high schools. Subjects were administered the Achievement Motivation Profile (AND), a self-report measure of intra-psychic, interpersonal, and work characteristics. In addition, they were administered the Matrix Analogies Test, a measure of non-verbal reasoning. Subjects' grade point averages (GPA) were also obtained, and a regression formula was generated and used to categorize subjects into groups of achievers, underachievers, and low achievers. Subjects were also classified as one of three types of self-categorized underachievers based on their own perceptions of their achievement status. Significant differences were observed among the self-categorized groups on one characteristic (Work Habits). Specifically, subjects who perceived themselves as underachievers but who were not identified as underachievers by the regression formula, reported having better work habits compared to subjects who perceived themselves as underachievers and who were identified by the regression formula as underachievers. Similarly, subjects who were identified as underachievers by the regression formula, but who did not perceive themselves as underachievers, reported having better work habits compared to subjects who perceive themselves as underachievers and who were also identified by the regression formula as underachievers. There were significant differences between underachievers and achievers in terms of intra-psychic and interpersonal characteristics as well as work habits. Compared to Underachievers, low achievers reported more intra-psychic tension and better interpersonal skills. Compared to Underachievers, low achievers reported more intra-psychic tension and better
interpersonal skills. There were also significant differences between underachievers and low achievers with regard to their intra-psychic and interpersonal characteristics.

Thompson (2001) examined the effect of playing strategic board games upon academic performance, performance on visual perceptual tasks and self-esteem of pre-adolescent children. The treatment presented in this pretest, post-test control group design study was an eight session program utilizing strategic board games presented to students. The results of a Repeated Measures ANOVA showed that there were significant differences (p = .05) amongst the group who did and did not play strategic board games on the self-esteem scales in the areas of peer and home. Significant effects were noted amongst grade levels in the areas of spelling, effects were achieved amongst gender groups in the ability to analyze and to home issues. These results indicate that playing board games has a notable effect upon the academic achievement and visual perceptual skills of children. This study confirms psychological theory and pervious research that use of board games develops a child's ability to make use of anticipatory images. Playing board games develops a child's strategic and visual thinking skills by training them pay attention to detail.

CONCLUSION

Lack of parental support and cultural barriers increase the gap between ability and success (Custodio, 2001) and also, mental health variables discriminate between high and low achievers (Prasnna, 1984). The psycho-social factors are significant predictors of academic achievement (Perry, 2000). The best predictors of academic achievement, as per Hernandez (1998), are self-concept and educational aspirations. DiPerna (2000) reported that motivation and prior achievement demonstrate total effects with current academic achievement.

Significant relationship exists between school climate and academic outcomes. Children with high grades generally have more positive perceptions of the school than the students with low grades (Sims, 2000). Significant differences exist between underachievers and achievers in terms of intra-psychic and interpersonal characteristics as well as work habits (Fraser, 2001).