CHAPTER - II

REVIEW OF LITERATURE

The study of related literature provides a background for the development of the study. Although there has been a history of research on LD in higher education, there is very limited empirical research on the impact of training the faculty on LD in the UAE. Therefore, western literature and researches have been considered as the criteria in identifying key areas of concern in LD and training faculty. With earnest effort, the researcher has examined the various aspects of training faculty on LD in higher education and has carefully gathered literature. In order to present the current research work in a proper empirical perspective, and to appreciate the evidence that has already been collected by previous research, the following review of related studies are grouped under the primary constructs and presented in a chronologically descending order.

2.1. LD in higher education

2.2. Problems faced by students having LD

2.3. Inclusive practices in mainstreaming students with LD

2.4. Barriers towards inclusion and student support

2.5. Role of faculty in supporting students with LD

2.6. Faculty as mentors for students with LD

2.7. Accommodations and support services for students with LD

2.8. Influence of demographic factors on faculty knowledge, willingness, attitude and interaction towards students with LD

2.9. Importance of training and professional development for faculty
2.10. Training on knowledge of LD

2.11. Training on willingness towards providing accommodations

2.12. Training on attitudes, beliefs and perceptions towards students with LD

2.13. Training on improving interaction towards students with LD

2.14. Overview

2.1. LD in Higher Education

Students with LD are increasing in number with every passing year and represent the fastest growing population of college students with disabilities (Henderson, 2001). Since their disability is invisible, they are less supported when compared to students having visible disabilities. Students with LD enrolled in universities and colleges face many challenges and obstacles. They have difficulty competing successfully and completing their graduate programs. The following reviews report the diagnosis, perspectives towards LD students and the kind of options and challenges students with LD have in higher education.

Raben, Eaves, Dunn, and Darch (2013) studied the satisfaction, employment and postsecondary education outcomes of students with LD. Results suggest that both education or training and employment are importantly influential in postsecondary satisfaction among individuals with LD as they transition from school to post-secondary activities.

Rima (2011) investigated the prevalence of dyslexia in the UAE among female students attending the UAE University during the academic year 2007-2008. The findings suggested that the prevalence of features consistent with dyslexia is 17.6%
among female Emirati University students, that they experience these difficulties in both English and Arabic, and that they tend to choose courses that are more job oriented.

Cawthon and Cole (2010) studied the postsecondary students’ perspectives who have LD on accommodations, access and obstacles, available services, and self-advocacy strategies. Results indicated that this student population might not have used the University resources to the extent that they were available, pointing towards a potential need for greater awareness of campus resources.

Alison and Stone (2010) explored the possible reasons for low self-identification rates among undergraduates with LD. For the study, 38 with LD, 100 without LD responded to a questionnaire designed to assess stereotypes about individuals with LD and conceptions of ability. Consistent with past findings, the most frequent meta-stereotype reported by individuals in both groups related to generally low ability. As a whole, the study's findings have implications for the understanding of factors that influence self-identification and self-advocacy at the postsecondary level.

Montoya (2009) conducted a study on the educational supports needed and provided for undergraduate and graduate students with LD in higher education. Bronfenbrenner’s ecological systems theory served as the theoretical framework for this study. The types of educational supports assessed were as follows: (a) instructional, (b) examination, and (c) administrative. The findings demonstrated that students with LD are a heterogeneous group and, therefore, have individual learning profiles. As a result, it is suggested that students with LD become knowledgeable about their strengths and weaknesses as well as the educational supports offered. Results also indicated that cooperation among institutions, disability services, faculty, and students are necessary for providing educational supports that benefit students with LD.
Covington (2004) reviewed moving beyond the limits of learning: implications of LD. The heterogeneous nature of LD has led to confusion regarding their definition and their intervention. Although the law protects adults with LD both in the workplace and classroom, it provides only a broad definition that has been subject to many interpretations. There is a paucity of longitudinal research on LD. Cross-sectional research suggests that a wide variety of teaching techniques is necessary for classroom success. This research serves to inform adult educators of the dynamic concept of LD as well as classroom interventions that are currently effective.

Heiman and Precel (2003) compared 191 college students with LD and 190 students without LD in four main areas such as academic difficulties, learning strategies, functioning during exams and students’ perception of factors that help or impede their academic success. Findings on LD students include additional oral explanations or visual explanations, and were concerned about lack of time. They experienced stress, nervousness, frustration, helplessness, or uncertainty during examinations.

Cantu (2002) studied the higher education options for young adults with LD. The study found that students are assisted by mentors who help them determine their own realistic goals, discover which learning techniques work best for them, enhances their abilities and explores their potential. Students are provided with access to tutors, counselors and psychologists. Students thus develop a strong sense of self-esteem, self-awareness and lifelong learning or work strategies. These institutions present a holistic approach to learning in higher education and emphasize the “goodness of fit” with cognitive strengths usually leading to employment or higher education for students with LD.
Greenbaum, Grahamand, and Scales (1995) reviewed various studies investigating the outcomes for students with LD in higher education, and overall, the results report that the graduation rate for people with LD was only 30% compared to 50% for students without LD and a graduation rate of 37% for students with LD from a college that provided highly coordinated support services. Findings thus reveal that students with LD continue to experience difficulties into their postsecondary education years, although ultimately, many do graduate.

The above reviews embark on how students with LD are addressed in higher education, diagnostic assessments, the need to provide special arrangements and the challenges they encounter in graduating compared to the students without LD. In view of providing support for students having LD in postsecondary institutions, it is important to throw light into the research pertaining to the problems of students having LD.

2.2 Problems of Students with LD

This section reviews empirical evidence related to the problems faced by students having LD. The problems associated to students having LD are multifold. There are academic issues related to identifying students with LD, problems associated to reading, writing, problem solving, mathematics, concentration, remembering, distraction, test anxiety, frustration, unrealistic career ambitions, effects of comorbid conditions, as well as psychological problems like low self-esteem, motivation and procrastination.

Hojati and Abbasi (2013) compared self-efficacy and hope in 30 elementary school (sixth grade) children with LD and 30 their peers without LD. An ex post facto design was used. Statistical population comprised of all students in elementary schools (sixth grade) in, Harsin, Iran, during the 2012-2013 academic year. Results revealed that students with LD typically experience more social, emotional, and motivational problems.
than students without LD. Students with LD are often caught in a vicious spiral of school failure. Their learning difficulties lead to slower development of academic skills and abilities, which in turn impedes new learning. As a result of the repeated cycle of failure, they fall farther and farther behind. Since learning is difference students tend to lower self-efficacy. Self-efficacy beliefs provide students with a sense of agency to motivate their learning through use of self-regulatory processes as self-monitoring, goal setting, self-evaluation, and strategy use.

Chanock, Farchione, Paulusz, Freeman, and Giudice (2010), in search of a simple assessment instrument for identifying dyslexia for university students, trialed an alternative instrument based on the York Adult Assessment developed in the UK. The aim was to enable university staff in disabilities and academic skills units to identify students with dyslexia quickly, easily and at no cost to the student and to recommend a limited range of appropriate accommodations based on the result. The trial produced significant group effects, but unacceptable false negatives; the instrument was recommended. Therefore, there is the need for reliable alternative instruments.

Landerl and Moll (2010) explored the comorbidity of learning disorders. Prevalence and gender ratios of specific learning disorders in arithmetic, reading, and spelling and their co-occurrence were assessed in a large (N = 2586) population-based sample of elementary school children and in a subsample of 293 children with at least one learning disorder. Findings indicate that the rates of deficits in arithmetic, reading, or spelling were four to five times higher in samples already experiencing marked problems in one academic domain compared to the full population. Thus, comorbidity of learning disorders was confirmed in a fairly standard school population. The study concluded that
comorbidities of learning disorders are not artificial. They are the result of a complex interplay between both general and disorder-specific aetiological factors.

Peleg (2009) studied the test anxiety, academic achievement, and self-esteem among Arab adolescents with and without LD. A series of one-way analyses of variance were run to check for differences between the two groups. On the whole, students with LD reported higher levels of test anxiety and lower levels of self-esteem than their nondisabled peers. Their intense distress can be expected to impair their academic performance.

Klassen, Krawchuk, Lynch, and Rajani (2008), examined the procrastination and motivation of undergraduates with LD. The purpose of this mixed-methods article was to report two studies exploring the relationships between academic procrastination and motivation in 208 undergraduates with (n = 101) and without (n = 107) LD. In Study 1, the results from self-report surveys found that individuals with LD reported significantly higher levels of procrastination, coupled with lower levels of metacognitive self-regulation and self-efficacy for self-regulation than those without LD. Procrastination was most strongly (inversely) related to self-efficacy for self-regulation for both groups, and the set of motivation variables reliably predicted group membership with regard to LD status. In Study 2, individual interviews with 12 students with LD resulted in five themes: LD-related problems, self-beliefs and procrastination, outcomes of procrastination, antecedents of procrastination, and support systems.

Wierzbicki and Tyson (2007), intended to provide a summary of evaluations for learning and attention problems. Over a five year period, a university clinic performed psychological evaluations of 102 adults (including 85 college students) who reported that
they were experiencing learning or attention problems. Of 92 persons who completed the evaluation, 40 (43.5%) received no diagnosis, 7 (7.6%) received the diagnosis of Attention Deficit Hyperactivity Disorder (ADHD), 29 (31.5%) received the diagnosis of LD, 2 (2.2%) received the diagnoses of both ADHD and LD, and 14 (15.2%) received the diagnosis of some other disorder, such as depression. Finding indicates that those diagnosed with ADHD and/or LD were similar in terms of demographic characteristics, academic history, and most psychological test scores. Those diagnosed with ADHD and/or LD differed significantly from those diagnosed with another disorder or no disorder on high school Grade Point Average, the Working Memory and Processing Speed Index scores of the WAIS-R/WAIS-III, and several academic achievement subscales of the WJA-III (diagnostic tools to measure LD).

Kerka (2002) analyzed the special challenges for people with LD with regard to the process of career development. Research on high school and college students with LD shows that a multifaceted career development program is needed. Many lacked clear understanding of their disability and its impact on career choices and ability to perform a job; many youth with LD had unrealistic or no career ambitions; and a large number were not actively engaged in career development and believed they had little control over career decision making. A model for career success of adults with LD is comprised of these seven factors: internal decisions (powerful desire to succeed, clear sense of goal orientation, reframing the LD experience) and external manifestations (persistence, goodness of fit, learned creativity, social network providing support). Practices to assist persons with LD to gain and maintain employment are accurate self-knowledge; world-of-work knowledge; self-efficacy enhancement; self-advocacy skills; job search skills; and development of personal qualities.
Lancaster, Mellard, Hoffman, and Kansas Univ (2001) investigated the experiences of students with disabilities. Student questionnaires were administered to 61 students with disabilities currently enrolled in community colleges in Kansas (n=20), Minnesota (n=23), and California (n=18). The most frequently reported disability type was LD, affecting approximately half of the students. Given this high proportion of LD, more analyses were conducted to compare the students having LD to students having other disabilities. Results of the questionnaires showed that students' greatest difficulties were with mathematics, concentration, frustration, distraction, test anxiety and remembering. The most sought after accommodations and services were extended testing time, quiet testing rooms, note takers and tutors. Generally, students appeared satisfied with the accommodations they received.

Based on the above reviews, it is evident that students with LD face many problems academically and psychologically. While some are diagnosed many are not. The findings suggest there is a need for appropriate diagnostic instruments to be designed for young adults having LD in higher education, accurate self-knowledge, self-efficacy enhancement, self-advocacy skills, development of personal qualities, increase motivation of students and special attention to increase the knowledge and attitude of service providers. Thus a glimpse into the existing inclusive practices in mainstreaming the students with LD will help design best practices and interventions for the future.

2.3 Inclusive Practices in Mainstreaming Students with LD

Inclusion is an educational practice based on a notion of social justice that advocates access to equal educational opportunities for all students regardless of the presence of disability. Inclusion represents the belief that students with special educational needs should be fully integrated into general education classrooms and
schools and that their instruction should be based on their abilities, not their disabilities (Al Zyoudi, 2006; Forlin, 2004), an emphasis that is becoming more prevalent (Ivey & Reincke, 2002; Hanwi, 2003; Abdallah, 1998). Over the past three decades, significant progress has been made for the inclusion of persons with disabilities in postsecondary education. Training teachers to accommodate all students has also undergone a major pedagogical shift in recent years.

This has indeed provoked many researchers to intervene and understand the inclusive best practices toward students with disabilities and the pedagogical shift of providing training and development for faculty to improve their beliefs and attitudes toward providing support.

A sizable number of studies have sought to understand teachers’ attitudes toward inclusive education (e.g. Arif & Gaad, 2008; Jung, 2007; Al Zyoudi, 2006; Avramdis, 2001; Reusen, Shosho, & Bonker, 2000; Choles, 2000; Gordon, 2002; Kgare, 2000; Bothna, 1998; Staden, 2001; Hyan 2001; Makunga, 2002; Siebalak, 2002; Alkhateb 2004; Alkhatani, 2003).

Khochen and Radford (2012) conducted a study in the Arabic region and found that the drive towards inclusive practices in mainstream schools is at a relatively early stage. The findings indicate overall positive attitude towards the inclusion of students in mainstream schools. However, participants expressed reservations about including all students, especially those with social, emotional and behavioral difficulties. Further the participants expressed training, availability of specialist teachers and high cost for supporting inclusion as challenges faced by them. From this research it could be derived that additional studies regarding inclusive education are warranted in the Middle East.
Walker (2012) examined the elements that may influence teacher attitudes in a positive manner toward including students with special needs. The results revealed that principal support, in the form of emotional, instrumental, and informational support, and professional development had a positive impact on teachers’ attitudes toward including students with special needs. It is recommended that future research is needed to further investigate these two areas.

Nisreen (2012) studied the pros and cons of inclusive education from the perceptions of teachers in the UAE. The main findings of the study indicated that the participating teachers agreed in principle with the goals of inclusion, however, they were generally unsatisfied about the current practices of inclusion in their schools. The teachers reported that the schools had insufficient equipment, resources and services, limited number of certified education personnel, lack of proper training for teachers in mainstream classrooms, lack of guiding policies, insufficient knowledge of senior-level administrators. Further, these teachers expressed concerns such as teachers’ time taken away from the rest of the students, class size, and safety of children with special needs. Such teachers’ concerns might be justified as inclusion is relatively a new educational philosophy practiced in the country.

A study conducted by Zyoudi, Sartwai, and Dodin (2011) investigated the effect of gender and nationality on the general beliefs of pre-services teachers in Jordan and the UAE towards inclusive education, and their perception regarding the availability of resources and teacher preparation in relation to gender and nationality. A questionnaire developed by the researchers was used as a measuring instrument. Results indicated that Jordanian teachers tended to have more positive attitudes towards inclusive education than their UAE counterparts; the results also indicated that there were no significant
differences due to gender. Furthermore, the results indicated that there were significant
differences due to teacher preparation and availability of resources. The study suggested
that in most instances pre-service teachers have more positive attitudes towards people
with disabilities and inclusion, when they have had additional training and knowledge
pertaining to people with disabilities.

Ann and Sara (2009) examined literature of 38 research based articles related to
universal design and inclusive practice at the postsecondary level. The five primary
themes were identified and discussed in relation to their supporting literature: backward
design, multiple means of presentation, inclusive teaching strategies, learner supports,
inclusive assessment, instructor approachability and empathy. According to the literature
findings, on the affective variables that measure the instructor’s approachability and
empathy, in 12 of the 38 studies, instructor behaviors was seen as a powerful contributor
to perhaps even determinant of, the quality of students with disabilities experiences in
postsecondary education. Universities need to offer opportunities for faculty improvement
with regard to techniques.

Sharma, Forlin, and Loreman (2008), assessed the impact of training teachers
regarding the education of students with disabilities and the effect of that training on their
attitudes and concerns. The results of their study indicate that a significant change took
place in all participants’ attitudes regarding inclusion, except for the participants from
Singapore. It indicated that the teachers felt inadequately prepared to actually implement
inclusion, despite their support for the practice. Lastly, the study indicated that a
significant change was not present in their personal attitudes towards people with
disabilities in general.
Jung (2007), Elhoeris and Alsheik (2006) conducted a study on attitudes of teachers and pre-services teachers towards the integration of children with special needs into regular schools in the UAE. Their studies indicated concerns such as teachers’ time taken away from the rest of the students, class size, lack of training and resources and that teachers are not prepared to meet the needs of students with significant disabilities. The studies concluded serious recommendations for future practice focusing on initial teacher education.

Zyoudi (2006) examined teacher’s attitudes towards inclusive education in Jordanian schools and the factors that influenced such attitudes. Qualitative research was used to gather information from all general education and special education teachers. The sample consisted of 90 teachers at 7 schools. The results of the study showed that teachers’ attitudes were found to be strongly influenced by the nature and severity of the disabling condition presented to them, the length of teaching experience and training.

Lambert, Curran, Prigge, and Shorr (2005) investigated initial pre-services educator dispositions toward inclusion of students with disabilities. Results indicate statistically significant differences on all pair wise comparisons of inclusion process on attitudinal items and on including students with 13 specific disabilities in the general education classroom. Elementary pre-services educators were found to have more favorable attitudes towards inclusion than secondary pre-services educators. A significant difference was found in comparing the level of change from pre-survey to post-survey, with pre-service secondary educators reporting greater gains in favorable attitudes towards mainstreaming.
The above studies focused on attitudes of teachers towards students with LD in mainstream classes. Firstly increasing the knowledge on disabilities particularly the hidden disabilities such as LD is important in order to meet the specific learning needs of students. As recommended by researchers in the above studies, faculty training, community mobilization and advocacy work are needed for the UAE population to be able to adapt into this new concept of inclusive education. In order to best understand inclusion in higher education it is important to have an understanding of the various barriers towards inclusion and support in mainstream classrooms.

2.4. Barriers towards Inclusion and Student Support

Students with disabilities face multiple barriers in pursuing and succeeding in postsecondary education (Dowrick, Anderson, Heyer, & Acosta, 2005; Gregg, 2007). Some of the barriers include gaps in services and supports between K-12 public schools and in postsecondary settings (Madaus & Shaw, 2006; Newman, 2005; Wagner, Newman, Cameto, Garza, & Levine, 2005) gaps between the instructional needs of students with disabilities and the instructional practices of postsecondary faculty (Burgstahler, Duelos, & Turcotte, 1999; Ouellett, 2004) and negative or inaccurate attitudes and perceptions among faculty regarding the capabilities of students with disabilities in postsecondary setting (Reed et al., 2003; Vogel et al., 1999). An attempt has been made in tandem, to understand the barriers that hinder the participation of students with LD in higher education which have been briefly accounted for in the following studies.
Goodrich and Ramsey (2013) examined the attitudinal differences between students having LD and physical disabilities. Finding revealed that people with physical disabilities had a greater feeling of exclusion, pride and social activism, whereas people with LD had a greater tendency to value treatment assistance from doctors. Attitudes of people with physical disabilities were different from those with LD, a distinction that requires understanding, acknowledgement, sensitivity and appropriate interaction.

Marshak, Wieren, Ferrell, Swiss, and Dugan (2010) conducted a study on exploring barriers to college students’ use of disability services and accommodations. In this qualitative study, 16 college students with disabilities at a medium-sized state university were interviewed. From the data analysis, five major categories were identified as the main barriers for the students not seeking to more fully utilize the accommodations and disability services available: (a) identity issues, (b) desires to avoid negative social reactions, (c) insufficient knowledge, (d) perceived quality and usefulness of services, and (e) negative experiences with faculty. Suggestions for office of disability services personnel to eliminate institutional barriers and to help students overcome personal barriers were provided.

Canadian Council (2009) examined the various strategies for overcoming barriers to training and education for Canadians with disabilities. Respondents to the Independent Learning Resource Center (ILRC) community outreach project made several recommendations to assist in addressing the physical and societal barriers they face. Several common themes emerged, including the importance of: (a) securing funding accessible to learners with disabilities; (b) providing accessible transportation and building/classrooms; (c) providing alternative formats for learning and testing; (d) creating peer support networks and services for adult learners with disabilities; and (e) establishing disability awareness training for educators.
Denhart (2008) investigated barriers to higher education faced by 11 college students labeled with LD using their voice as the primary data. The data collected was analyzed and interpreted using the perspective of disability theory and it revealed that barriers faced by the students stemmed mostly from external social causes than individual pathology. Barriers included being misunderstood by faculty, being reluctant to request for accommodations for fear of invoking stigma, and having to work considerably longer hours than non-labeled peers. Findings indicated barriers could be overcome through raising faculty awareness about LD issues, engaging in assistance of the college LD specialist, and participation in a LD democratic empowerment community on campus.

Moriarty and Skinner (2007) have identified a number of barriers to the adoption of inclusive postsecondary practices. The study indicated that faculty willingness to provide accommodations (one facet of inclusive pedagogy) differed by academic discipline. Further research is needed to determine how “academic adjustments can be considered within the context of differences in skills and competencies needed for specific disciplines” (Skinner, 2007).

Moriarty (2007) highlights the lack of time available or designated for instructional improvement. It takes time to self-assess, to design improved courses, and to obtain necessary professional development. Only when institutions of higher learning recognize the inherent value of such activities and provide adequate support for their execution will widespread progress in equity, access and inclusion be made.

Dowrick et al. (2005) found that students with disabilities experience difficulty obtaining basic accommodations and supports in postsecondary settings. Included among their major findings, was that the disability policy does not necessarily lead to practice. Students in this investigation expressed the need to self-advocate for basic
accommodations and described encounters with faculty members who were unwilling to accommodate or lacked knowledge about disability law. However, students also reported that, when fostered, faculty mentor relationships were among the most valuable types of supports available.

Rao (2004) examined the attitudes towards persons with disabilities in four different parts: attitudes as a construct, views on attitudes towards disabilities, measurement of attitude towards disabilities, and studies done in colleges and universities with faculty. It was concluded that faculty at institutions of higher education need to be better informed about disabilities and students with disabilities to improve their attitudes. Possible impact of faculty attitudes on faculty willingness to provide accommodations and students’ success needs to be explored.

Bradshaw, Lydiatt and Tennant (2004) in their article, provided a brief background about the educational system in the UAE and the various types of programs and services offered in the country with respect to individuals with special needs. The study concluded that the United Arab Emirates continuously subjected to dramatic changes in education and for the success in education attitudes and anxieties of the major stakeholders need to be investigated.

West et al. (1993) noted that barriers mentioned most frequently are lack of understanding and cooperation from class instructors, professors, and other school personnel regarding accommodations and modifications, students or the coordinator had requested.

Bourke et al. (2000) investigated the behaviors of faculty members and institutional support, and sought to identify institutional factors that facilitated or hindered
the instructional support process. The results of the study indicated that if faculty believed strongly that educational supports helped students with LD succeed, they had greater understanding for the need of the educational supports. Additionally, findings indicated that the faculty who perceived they had support from disability services and their departments were more willing to provide (a) un-timed tests, (b) proctor exams, (c) additional time to complete assignments, and (d) alternative types of exams.

From the above studies, the variables that are delved for any relevance with regard to barriers in dealing with students having LD are self-advocacy in students, funding, non-practice of disability policy but more importantly are insufficient knowledge, negative experiences, lack of understanding, reluctance to provide accommodations on the part of faculty, attitudes of major stakeholders, disability training, and avoiding negative social interactions. Through the above studies, it is clear that the faculty are the primary conduits and have a critical part to play in the inclusion of students and their success.

2.5. Role of Faculty towards Students with LD

Faculty plays a very critical role in providing support for college students with LD. The role of faculty is to teach and mentor these students. Based on the learning needs of students, the faculty participate in the process of determining the support, students require ranging from classroom support, examination support, psychological support to leadership and decision making. The following studies on faculty role would facilitate further appropriateness of the present study.

Lewis (1998), in his article, highlighted the role faculty play in “integrated inclusive excellence” where faculty is regarded the epicenter of change. According to
him, the reflection should consider one’s location (race, gender, sexual orientation, age, social status, religion, language and mental / physical ability) when regarding one’s approach to teaching, learning and scholarship.

Baker and Griffin (2010) in their article, offer for faculty the role of developers in their relationships with students. According to them, given that learning is a social process, relationships, especially those with faculty are powerful tools that aid in students’ personal and professional development. Mentorship requires a student and a faculty or staff member to choose one another to engage in an ongoing series of interactions. Mentorship involves an emotional commitment that extends beyond sharing academic information; mentoring relationships are rooted in a mentor’s long term, caring about a student’s personal and professional development. Interpersonal and networking skills are no longer a luxury but a necessity, and learning how to navigate such processes at the undergraduate level is critical. The authors conclude that, while each role is of critical importance, they reinforce their call to students, faculty and staff to attend to the different forms of relationships in which they can engage, choosing the type of relationship that best meets their needs, interests and abilities. Though a small but crucial step that can result in greater benefits and fewer frustrations as faculty, staff and students work together.

Sussan, Ojie-Ahamiojie, and Kassira (2008) examined the role of faculty as leaders in higher education and questions if they can be leaders within their institution. The faculty plays a vital role in the life and professional development of everyone that goes through a higher institution. The researchers conclude that faculty “are the stewards of campus leadership and decision making” (Kezar, Lester, Carducci, Gallant, & McGavin, 2007, p.14). According to the authors, for a faculty to become a leader he / she
has to actively participate in campus and community activities, cultivate a relationship with senior faculty and department heads, and create relationship with their peers, by getting support from the institution and peers.

Hartman, Hall, and Haaga (2002) studied student reactions to hypothetical scenarios in which faculty reacted positively and negatively to a request for an accommodation. The researchers found that negative reactions from faculty negatively affected students’ decision to seek future assistance, whereas positive reactions from faculty led to greater willingness to seek future assistance. Similar comparisons for hypothetical reactions from peers were not significantly associated with student’s willingness to seek additional support, suggesting that faculty play a particularly crucial role in influencing student’s willingness to seek additional support for their LD.

Scott and Gregg (2000) analyzed the role of faculty in providing access for college students with LD. To examine the issue, the evolving role of faculty was discussed and practices in faculty education pertaining to college students with LD were reviewed. Discrepancies between the evolving faculty role and current faculty education practices were examined. They concluded that college and university faculty are the primary conduits and integral to the provision of accommodations through which students gain access to knowledge in university environments, and faculty are directly responsible for determining how competent students are in their acquisition of that knowledge.

Walker and Symons (1997) noted that, in order to develop a sense of self-efficiency in college teaching, it is important to provide training for instructors early in their careers. This general development of teaching competence and confidence in college faculty may suggest useful strategies in LD training.
Murphy (1992) reported that individuals with LD appear to be keenly aware of the personal attention and goodwill needed from faculty to attain the qualitative aspects of accommodations.

Resting on the above literature, it is no doubt that faculty can make a huge impact in student retention and success. The role of the faculty should be to create a humane and supportive relationship with students and provide all the possible opportunities to help and empower students with LD to succeed. A faculty’s positive approach can help students achieve what they want to do and discover the skills necessary to succeed. The researcher has given careful review of the incidences for her subsequent expedition of the idea and concludes that it is important to highlight the importance of faculty mentoring to support students with LD in succeeding academically.

2.6. Faculty as Mentors for Students with LD

Since students with disabilities often enter college unprepared (Getzel, 2005), mentorship programs may increase their likelihood of success (Stumbo, Blegen, & Lindahl-Lewis, 2008).

Mentoring is a close relationship between a mentor and protégé that includes care and guidance. Adopting one-to-one mentoring programs or models show successful results in students’ development. Effective intervention and mentoring are the methods or ways to lead to success and retention. Indeed faculty engagement and interaction with students are keys to forming strong relationships. Several higher educational institutions have developed mentoring models that pair students with faculty members or outside experts in supporting them in their studies. The mentoring relationship provides professional support. (Khalil, 2008).
Shawn and Roger (2013) studied faculty mentorship and transition experiences of students with disabilities. This study found that for many students with disabilities, having a faculty mentor was helpful support during their transition to college.

Tee and Cowen (2012) conducted a study on supporting students with disabilities and promoting understanding amongst mentors in practice. The researchers concluded that implementing reasonable adjustments in practice requires a close working partnership between higher education institutions and mentors who appreciate support in understanding the development and application of coping strategies to overcome disabilities. Effective preparation of mentors is essential to ensure that opportunities for disabled students to succeed are maximized.

Clifford (2009) conducted an exploratory study to examine the types of mentoring relationships that exist among college student affairs professionals, using Q methodology. The profession of college student affairs can use mentoring relationships to help recruit, train, develop, and retain high quality individuals. The results indicate that personal interaction between a protégé and a mentor is a valuable part of a protégé’s career. Additionally, the results indicated that mentoring relationships in college student affairs are balance positive and that mentoring relationships in college student affairs are highly developmental.

Blalock (2008) conducted a study on the perceived impact of mentoring on teacher mentors within a university/school district teacher mentor partnership program. The research study employed the use of in-depth interviews of both primary and secondary informants as well as document analysis. The findings pointed towards two primary themes such as ‘collaboration’ and ‘growth’. Data from this study revealed that teacher mentors worked collaboratively to support the program’s students and grew in relation to (a) their professional teaching skills, (b) their professional opportunities, and (c) how they recognized their own skills and abilities.
Pinkston (2008) investigated the characteristics associated with successful mentoring and induction programs of new teachers. Teacher involvement, administrative support, resources/materials availability, university preparation programs, and staff development/teacher training was identified and examined. The finding from interviews and questionnaire indicated that teachers who entered the mentoring program felt a sense of support from the system and the mentor.

Nora and Crisp (2007) exploring the dimensions associated with mentoring that assisted students in adjusting to college life and becoming fully engaged in and out of the classroom, found three factors that contributed to adjustment and engagement: educational/career goal setting and appraisal, emotional and psychological support, and academic subject knowledge that aimed at advancing a student’s knowledge relevant to their chosen field. Mentors can engage mentees in discussions to explore ideas they have not considered related to the student’s goals, provide encouragement, act as a support system, and provide students with specific knowledge related to their field of interest.

Markle (2007) and his colleagues at Ball State University created a faculty mentorship program that reported success not only with students but with faculty members as well. This mentor group consisted of approximately 40 faculty members from a range of programs and departments. The faculty mentors participated in professional development workshops that focused on instructing students with disabilities and met regularly with students with disabilities on an individual basis. The observed outcomes for students working individually with a faculty mentor were higher grade point averages and a higher retention rate. Faculty members reported increased instructional self-efficacy and awareness of services for students with disabilities.
Fresko and Wertheim (2006) conducted a study on “Learning by Mentoring: Prospective Teachers as Mentors to Children At-Risk”. Results revealed that mentoring taught prospective teachers about the world of children, increased their sensitivity to children at-risk and to children as individuals, and improved their ability to cope with difficult situations. Mentoring was particularly beneficial for mentors majoring in special education, when viewed as a professional development opportunity, and when guidance was provided that aimed at connecting between academic studies and mentoring experiences.

Similarly, Covington and Linda (2004) in their study recommend that the educators must realize that LD is not a disease, that no package, no curriculum, and no best practice is suitable for all learners, that teaching and learning include emotional practices, as well as cognitive ones and last, educators and their administrators – must realize that teaching is a profession that demands training, thoughtful planning, a positive attitude, and constant analysis.

Campbell and Campbell (1997) found participation in faculty mentorship resulted in gains in academic performance and retention.

Thus, based on the above reviews, it is construed that while students with learning difficulties are faced with additional difficulties due to their disability, studies have proved the importance of student-faculty interaction, faculty mentoring and the transition to college (Getzel, 2005; Halawah, 2006; Madaus, 2005; Pascarella & Terenzini, 1977,1978; Tinto,1987,1993; Shawn & Roger, 2013). As faculty members are viewed as primary conduits in the educational process it is relevant to throw light in to the various forms of accommodations and support that they can provide.
2.7 Accommodations and Student Support Services for Students with LD

As more number of students with LD are getting enrolled into colleges, there will be a simultaneous increase in the level of accommodations and support services provided to them. The increase in the students with LD has also been attributed to additional factors such as support services on campuses (Burgsthaler & Doe 2006). The success of students with LD particularly depends on the faculty knowledge, attitudes and willingness to provide accommodations and support services. Although there is pertinent research on support services for students having LD which are cited below to only make it a beginning, further exploration is still warranted in this area.

Obaid (2013) studied the impact of using multi-sensory approach for teaching students with LD on the sixth grade students' achievement in mathematics at Jordanian public schools. To achieve the purpose of the study, a pre/post-test was constructed to measure students' achievement in mathematics. The test consisted of twenty items on mathematics. The findings of the study indicated that there were statistically significant differences in the post-test between the control and the experimental groups in favor of the experimental group. The researcher proposed some recommendations to enhance the importance of parental involvement on students' achievement in English language such as conducting further studies on other populations and for a longer time.

Barnard-Brak and Lechtenberger (2010) investigated the accommodation strategies of college students with disabilities. College students with disabilities develop and utilize strategies to facilitate their learning experiences due to their unique academic needs. The study revealed three underlying themes common to the accommodation-seeking strategies of the participants who were academically successful college students.
with disabilities. These themes include: scripting disclosure of one's disability, negotiating accommodations with faculty; and downplaying one's disability status.

Leyser and Greenberger (2008) investigated the faculty attitudes and practices regarding students with disabilities in teacher education. Participants were 188 faculties in seven colleges, in Israel, who responded to a survey instrument about attitudes and practices. Faculty reported personal contact and extensive teaching experience with students with all types of disabilities - mainly those with LD, yet many had no training in the area of disabilities. A large majority reported both willingness and actual provision of classroom accommodations. More technological accommodations than instructional and testing accommodations were noted.

Alghazo (2008) explored the disability attitudes of postsecondary faculty members and perspectives regarding educational accommodations at two mid-sized postsecondary institutions, the Mu’tah University – Jordan and Southern Illinois University at Carbondale (SIUC) in the US. Findings indicated that for Mu’tah University, none of the independent variables like rank, academic discipline and prior contact with persons with disabilities explained variance in the faculty attitudes toward persons with disabilities, but were significant predictors of SIUC faculty attitudes towards persons with disabilities.

Rooney (2002) conducted a study on providing support services for college students with LD who are not native English speakers: The challenge of the LD/ESOL student. The Program for Advancement of Learning (PAL) program for multilingual students at Curry College, Milton, Massachusetts, provides multi-focused support for student with LD who are not native speakers of English. An evaluation of PAL revealed lessons that will be helpful to other institutions wishing to serve this population of students. Motivation, emotional stability and early identification of at-risk students were
shown to be the key factors for successful students. It was apparent that IQ scores are not solid indicators of persistence or success. Many factors should be considered in admitting a student; test scores often are not a reliable indicator of academic success. Students with a range of skill levels had been successful in PAL when they receive strong academic advising and mentoring, with easily accessible help that meets the needs of the students. Students had identified support, understanding, and respect as three important characteristics of the program.

Orr and Hammig (2009) examined 38 research- based articles related to universal design and inclusive practice at the postsecondary level. The five primary themes that were identified and discussed were backward design, multiple means of presentation, inclusive teaching strategies and learner supports, inclusive assessment and instructor approachability and empathy. The implications of the study indicate that postsecondary faculty expressed a desire for pedagogical training regarding disability instruction techniques. Universities need to offer opportunities to faculty improvement with regard to techniques.

Burgstahler and Moore (2009) conducted a study on making student services welcoming and accessible through accommodations and universal design. Results of the study support professional development approaches that provide guidance for proactively designing accessible services, providing accommodations for specific students, and addressing issues relevant to specific student service units (e.g., software access in computer labs). It is recommended that training be offered to increase student services office (SSO) personnel sensitivity toward disabilities, especially invisible disabilities, as well as knowledge and skills regarding legal issues, reasonable accommodations, universal design strategies, communication between students and staff, available resources, and coordination between the disability services office and the SSO. As in
training faculty, teaching the application of universal design offers an approach for addressing the needs of students with disabilities in a way that potentially reduces the need for individual accommodations and benefits all students. Since staff needs and preferences vary widely, campuses are encouraged to offer a variety of training options tailored to specific units—short and long presentations and workshops, online training and web resources, video presentations, and printed materials with varying levels of detail.

Bourke et al. (2000) conducted a study on faculty members' provision of instructional accommodations to students with LD. The results indicate that beliefs about the helpfulness of and need for instructional accommodations were associated with the provision of the accommodations. Also, a perception of support from the University influenced the ease of providing instructional accommodations. A significant difference was found between the behavior of tenure-track faculty and non-tenure-track faculty.

Vogel et al. (1999) examined the faculty background knowledge about LD and the relevant legislation, their firsthand experience teaching such students, their willingness to provide accommodations, and their judgment of the fairness of providing accommodations vis-à-vis students without disabilities. Results revealed that there were a variety of factors affecting willingness to provide accommodations. Faculty indicated slightly greater willingness to provide teaching accommodations as compared to examination accommodations. Continual education for faculty members regarding changes in laws, affecting education of students with disabilities was included in the recommendations for practice.

Brinckerhoff (1991) studied establishing LD support services with minimal resources. The purpose of the study is to assist postsecondary LD service providers who
are in the process of developing support services with minimal resources. Practical suggestions are offered on how to define service eligibility, provide reasonable accommodations, establish diagnostic testing procedures, maximize existing ancillary services on campus, and measure program effectiveness. The focus is to highlight the key areas that warrant consideration and advanced planning in launching LD support services at the postsecondary level.

The above reviews embark on the various support services that faculty can provide which is contingent upon their knowledge and awareness about LD and their attitudes, beliefs and perceptions towards students having LD. Although faculty members are exposed to an increased number of students with LD in higher education and are faced with the challenge of providing appropriate accommodations and support, there are several factors that influence their ability to support them. This calls for a closer observation of the various factors that influence their ability to mentor students with LD in and out of the classroom.

2.8 Influence of Demographic Factors on Faculty Knowledge, Willingness, Attitude and Interaction towards Students with LD

The variables such as gender, age, previous experience in teaching students with disabilities, academic rank of the faculty, academic discipline where faculty worked, knowledge of legislation and the type of disability that the students had, is reported by researchers to have an influence on the support provided to students having LD. A brief review of the studies based on the influence of socio-demographic variables on faculty are cited below.
Studies that assessed effect of gender on attitudes (Askamit, Morris, & Leunberger, 1987; Benham, 1995; Kleinsasser, 1999; Rao, 2002) found that gender had a statistically significant effect on faculty attitudes towards persons with disabilities. Female faculty had a more positive attitude than the male faculty.

Sideridis, Antoniou, and Padeliadu (2008) investigated the presence of teacher biases with regard to identification of students with LD. Factors related to teachers' gender, age, and experience, along with children's gender, were investigated. Results suggested that teacher gender is associated with biases with regard to identification of LD by a factor of 2:1. In other words, every child who is rated by female teachers as having an LD (who actually has LD) corresponds to two children when rated by male teachers. Students' gender, on the other hand, did not differentially predict identification rates. Furthermore, teacher age and experience did not contribute significantly to student identification rates.

Wilson (2004) pointed out that actual experience working with or having direct experience with individuals with disabilities increases positive attitudes towards them. Even though the research indicates that exposure to students with disabilities helps faculty to improve their attitudes towards those students, there are a number of factors which affect faculties’ attitudes toward integrating them into the university mainstream, among them issues such as the experience held by the instructor, the instructor’s level of experience, prior contact with students with disabilities, levels of education, gender, amount of training received, the support of administration, class size (Dupoux, Wolman, & Estrade, 2005) and willingness of the instructor to accommodate (Fitchen, 1998; Kjellerson, 2009).
Shaila, Barbara, and Gratin (2003) examined 245 university faculties in the study on attitudes of university faculty toward accommodations to students with disabilities. The influence of gender, professional rank, department affiliation, experience teaching students with disabilities, personal contact with persons with disabilities and legislative knowledge on attitudes toward providing accommodations were assessed. The findings indicated that the department affiliation, previous teaching experience, and legislative knowledge significantly impacted willingness to provide accommodations according to the study.

Whisenhunt (2001) and Zello (1994) investigated university and community college faculty attitudes and willingness to provide accommodations for students with LD. The two studies differed on the issue of gender. Whisenhunt reported that female university faculty members were more willing to provide accommodations to students even when the students did not have proper documentation for the accommodations while Zello found that there was no difference between women and men when it came to accommodations for LD students.

Bigaj and James (1995) conducted a study on accommodation strategies for postsecondary students with LD. The relationship between faculty attitudes toward and self-reported use of accommodation strategies was examined. Results suggested that training had a positive effect on faculty attitudes and use of accommodation strategies and gender was also a significant predictor of attitudes.

Bagget (1994) attempted to study the faculty awareness on disability. Many faculties noted that they could identify only students who disclosed their disability. To gain a better understanding of students with disabilities, faculty preferred such resources and interventions as a directory of services, faculty handbook, and campus newspaper
articles, rather than workshops and open houses by service providers. Gender differences were also identified. Analysis of the data indicated that respondents lack experience teaching students with disabilities, are unfamiliar with disability rights laws, and are unfamiliar with University services for students with disabilities.

Studies reviewed (Aksamit et al., 1987; Bagget, 1993; Benham, 1995; Fonosh & Schwab, 1981; Kleinsasser, 1999; Rao, 2002) included ‘experience’ as a variable in their study which reported a significantly more positive attitude of the experienced faculty.

Fonosh and Schwab (1981) studied the effect of faculty academic rank that included professors, associate professors, assistant professors, instructors and adjuncts. The surveyed faculty did not include teaching assistants. The researchers found that professors and instructors scored lower (with more negative attitudes) than associate and assistant professors.

Contrary to the above studies that witnessed influence of socio demographic factors, a study by Kraska (2003) revealed that no statistically significant differences in perceptions existed based on gender, age, years of teaching, and contact with students with disabilities. Statistically significant differences in perceptions were found for academic rank and academic unit. Such research is useful to help develop and implement policies for serving students and to identify areas in which training programs may enhance faculty knowledge and sensitivity toward students with disabilities.

In lieu of the significant influence the variables like gender, age, rank, experience and knowledge of legislation on the faculty in dealing with students having LD, the researcher in the current study has aimed at investigating the impact of these variables on supporting students with LD in higher education. Besides the influence of socio-
demographic factors, all literature leads on to highlighting the importance and need for training for faculty which is profoundly essential in increasing the psychological and student support services for students with LD. This forms the true basis of the current investigation.

2.9 Importance of Training and Professional Development for Faculty

The skills that take to be a professor is equally the same as it takes to a leader. The institution and faculty members need to realize this, and “institutions need to be more intentional about developing these skills in their faculties” (Boylan, 2002). Improving the skills of faculty to effectively teach students with diverse learning needs could markedly improve post-secondary education and career outcomes for students with disabilities. Faculty members rarely receive formal training in pedagogy (Weimer, 1990) or in strategies for creating inclusive classrooms (Burgstahler, Duclos, & Turcotte, 1999).

Capps, Henslee, and Gere (2002), in their article on LD within postsecondary education address some of the issues post-secondary educational staff and faculty members come across when dealing with the adult learning disabled population. Suggestions include training to improve knowledge of the legal rights and responsibilities towards students with LD that enables clear understanding to the faculty to provide structure in the class. Also suggest that, with an adequate team of disability support service members and open, approachable instructors, the LD student can experience academic success.

Murray, Lombardi, and Wren (2011) investigated the effects of disability-focused training on the attitudes and perceptions of university staff. This investigation examines the relationship between prior disability-focused training and university staff members’
attitudes toward students with LD. Analyses of training type indicated that staff who had previously participated in disability-related workshops and coursework reported the most positive attitudes, followed by staff who had participated in other forms of training (i.e., reading books and articles or visiting websites). The total number of training types experienced, time spent in training activities, and the amount of time elapsed since training experiences predicted different aspects of staff members’ attitudes and perceptions as well as their satisfaction with prior training.

Similarly, Male (2011) studied the impact of a professional development program on teachers' attitudes towards inclusion. Forty-eight teachers who were enrolled on a master's program in special and inclusive education were surveyed via a questionnaire at the beginning and end of a ten-week introductory module. The results indicated overall attitudinal shift for four categories of inclusion to suggest more positive attitudes at the end of the module, compared with at the beginning.

Marsha (2010) conducted a study to determine if a need exists for faculty training to improve accommodation for students with disabilities enrolled in electronically delivered courses at a statewide university system. Results indicated that there is a substantial need that exists for instructors to be aware of and to be able to provide accessible materials and instruction. The results of the survey showed that only few respondents had been trained on how to accommodate students with disabilities.

Izzo and Lamb (2002) conducted two sequential studies on the applicability and use of universal design in higher education and to examine faculty members’ experiences, perceptions, instructional practices, and training needs with regard to students with disabilities.
a) In study one, the instructional climate for students with disabilities was assessed through a survey of 271 faculty members and teaching associates (TAs) and focus groups with 92 additional faculty members and TAs.

b) In Study two, a review of FAME (Faculty and Administrator Modules in Higher Education) by 98 faculty members and administrators supported the value of on-demand, multi-modal professional development in universal design. Ninety-two percent of respondents reported increased comfort in meeting the instructional needs of students with disabilities as a result of using this curriculum.

The results from faculty surveys and focus groups revealed, faculty members wanted online training, information about Universal Design in Learning (UDL) and other effective instructional strategies. Faculty who receive on-demand, multi-modal professional development in UDL practices and climate assessment report that they are better able to meet the needs of students with disabilities in their classrooms.

Willie (2009) investigated the teachers and specialists’ views of the impact of the inclusion model of instruction on students with LD in secondary education. The investigation seeks a deeper insight of teacher perceptions, values, ideals and understanding about instruction and learning for students with LD. Findings from this study indicated that there are areas that need improvement as related to inclusion. Training was indicated as necessary for all educators to target the needs of students having LD and to change the attitude of teachers to implement an inclusive model successfully.
Burgstahler and Doe (2006) attempted to study improving postsecondary outcomes for students with disabilities and designing professional development for faculty. Increasing the knowledge and skills that faculty have in accommodating learners with disabilities has the potential to improve the postsecondary educational and career outcomes of students with disability. The results of this study emerged with professional development programs for faculty. Finding revealed that the faculty was willing to make minor accommodations but they had more resistance if accommodations required more extensive efforts. As for students, it was lack of understanding about LD and breaches of confidentiality.

Junco and Daniel (2004) conducted a study on improving the campus climate for students with disabilities though the use of online training. The project opportunity and access online training program was administered to change the attitudes of faculty and student affairs staff. Results revealed that attitudes were significantly better for those individuals who took the training program, although gender appeared to be a mediating variable. Based on the findings, it was concluded that online training can provide a cost-effective means for improving the campus climate for students with disabilities in higher education.

Rohland, Erickson, Mathews, Roush, Quinlan and Smith (2003) implemented a project called ‘Changing the Culture’ (CTC) that included 103 faculty from 45 departments at 7 different colleges and universities in Rhode Island. Faculty were recruited to participate in a four-day training that was designed to promote disability awareness, an understanding of legal issues, and an understanding of supports for students with hearing, vision, learning, attention, and emotional disabilities. The training participants also discussed and developed strategies for serving as “disability mentors” in
their home academic units. Thus, the goal of this project was to develop institutional resources and supports by training individuals who would then serve as mentors for other faculty. Findings from an analysis of trainee perceptions prior to and following the CTC training activities indicated that trainees had greater confidence in meeting training objectives, and were satisfied with the training materials at the end of the training sessions.

In another online training program, Pollock (2009) investigated the impact of online training on college faculty attitudes and knowledge of students with disabilities. Data revealed that the largest increase in identified disabilities of incoming college freshmen are in the area of LD. Results revealed no significant differences between groups, and that the online training led to slightly improved scores on both the post scale of attitudes toward disabled persons and the post disability knowledge questionnaire. Qualitative data revealed that many faculties were willing to provide accommodations to assist students with LD, but were cautious about any changes that would jeopardize the integrity of the course content. Faculty also identified the need for students with LD to be more proactive when requesting accommodations.

Resting on the above literature, it can be concluded that training programs are essential for faculty members and further experimental research should be explored to design and implement training programs that can bring about desired changes in faculty which will reflect in mentoring and supporting students having diverse learning needs. Hence further investigation for assessing the various dimensions that is required for building a training program is carried out in the present study.
2.10 Training on Knowledge of LD

The education gap between students with and without disabilities is partly due to faculty members lacking the knowledge and skills to teach students with disabilities. Despite the legal mandates to teach and accommodate equal educational access to students with disabilities, many administrators, faculty members, and graduate teaching assistants report that they do not know how to accommodate students with disabilities (Bourke et al., 2000; Dona & Edmister, 2001; Hindes & Mather, 2007; Izzo & Lamb, 2002). The success of postsecondary students with disabilities depends upon a variety of factors (Wilson, Getzel, & Brown, 2000), which include faculty knowledge about students with disabilities, legal mandates, and campus services, as well as faculty willingness to provide accommodations (Baggett, 1994; Doña & Edmister, 2001; Fichten et al., 1988; Fonosch & Schwab, 1981; Leyser, 1989; Leyser et al., 1998; National Center for the Study of Postsecondary Educational Supports, 2000b; Satcher, 1992; Thompson, Bethea, & Turner, 1997; Vogel & Adelman, 1992, 2000; Vogel et al, 1999). Thus knowledge is found to be a precondition for whether or not faculty provides students with LD the best support possible.

To understand the importance of training faculty on improving their interaction towards students with LD, psychological concepts such as social discomfort, empathy, vulnerability and fear has been in light to evaluate the best practices in the design and implementation of the training program.

Dapudong (2013) investigated the knowledge and attitude towards inclusive education of children with LD in public primary schools in Nonthaburi Province, Thailand in the school year 2011-2012. The respondents had partial knowledge on the provision of legislation and exhibited moderate knowledge on the symptoms of LD. The
Thai public primary school teachers had a favorable attitude towards inclusion of LD children in regular classrooms in terms of their beliefs, feelings and actions. There is a need for Thailand to open up more training and qualification advancement programs to improve the knowledge and attitude of the Thai teachers.

The Times Educational Supplement (2009) published an article titled “All Geek to me” in which Ms. Edwards at Notley Greene provided teachers with training in Dyslexia. The training included making classrooms dyslexia friendly, mind maps, dicta-phones, checklists, copying worksheets in a range of colors and using more visual information, use of color in interactive whiteboards etc. The challenges teachers experienced were in identifying the symptoms of dyslexia - such as problems differentiating between right and left, and difficulties with word retrieval and learning the alphabet - it is often hard to imagine what this means for the child. The toughest step, according to Ms Edwards, was getting the teachers to put themselves in a dyslexic child's position.

DeRhonda (2011) conducted a study on faculty attitude, knowledge, and comfort towards students with disabilities. The study examined the faculty attitudes towards students with disabilities, their comfort with providing accommodations, and their knowledge regarding laws that govern services to students with disabilities in higher education. Data was collected from 93 faculty from a community college through an online survey designed to investigate three variables. Results indicated all four faculty groups demonstrated a positive attitude towards students with disabilities. Data also suggested all four faculty groups were comfortable with providing accommodations and all four faculty groups were unknowledgeable of the laws pertaining to students with disabilities in higher education.
Zhang et al. (2010) studied the university knowledge, beliefs, and practices in providing reasonable accommodations to students with disabilities. The purpose of this survey was to identify the influential factors through a structural equation modeling model. Findings indicated that faculty personal beliefs have the most direct influence on provision of reasonable accommodations. Knowledge of legal responsibilities and perceived institutional support also directly influence personal beliefs. The study recommended the need for training programs and interventions to improve the faculty personal beliefs and enhance their provision of accommodations and support to students with disabilities.

Susan (2009) examined mislabeled reading and LD assessment and treatment for reading difficulties in students with LD. In this study, the relationship between reading and LD, the characteristics of students with LD and their struggles in reading, and the issue of mislabeling are being examined. Treatment and assessment advice to teaching, reading to students with LD is offered by the author. The author concludes that for teachers it is critical to teach the students the basic fundamentals of reading so that they can advance and fully function in society and that it is not solely the strategies that help a student with LD to learn, but also the time spent incorporating the strategies through instruction and practicing basic skills.

Cook, Rumrill, and Tankersley (2009) attempted at expanding the extent of knowledge base by examining the priorities and understanding of 307 faculty members at an 8 campus university system regarding university students with disabilities in the following areas: legal, accommodations-willingness, accommodations-policy, universal design for instruction, disability characteristics and disability etiquette. The participant’s rating indicated that (a) accommodation policies and disability etiquette were viewed as
highly important and were being addressed satisfactorily; (b) issues related to law, universal design for instruction, and disability characteristics were important but were not being addressed satisfactorily; and (c) issues related to willingness to provide accommodations were neither highly important nor being addressed satisfactorily. The study concluded that it is critical for university faculty members to make every reasonable effort to provide students with disabilities opportunities to succeed. Implications for faculty training by providing the resources and organizational support are discussed.

Leyser et al. (1998) in their study, examined experience, knowledge and attitudes towards accommodations for students with disabilities for a large sample of 420 faculties. Participants responded to a 35 item survey questionnaire. A survey instrument titled "A Faculty Survey of Students with Disabilities" was used in the study. Findings revealed that many faculties had limited experience and contact with individuals with disabilities and limited training and knowledge of disability legislation. About two thirds of faculty reported having limited contacts with individuals with disabilities. A large majority also noted that they had little or no contact or experience in teaching students with disabilities. Those who had teaching experience with students with disabilities reported having more experience with students with LD and students with visual, hearing, and orthopedic impairments. Most faculties had expressed willingness to make classroom accommodations and reported that they have made various teaching adaptations for students with disabilities.

The above reviews embark on bridging the gap between students entering postsecondary education having LD and the faculty members’ lack of knowledge and skills to teach these students. The researchers have investigated the teacher’s knowledge and attitudes towards students having LD and many of the studies have revealed the lack
of knowledge of faculty have in dealing with students having LD. It can be concluded from the above studies that knowledge of LD should be included while designing a training program for faculty in supporting this growing group of students with disabilities.

2.11 Training on Willingness towards Providing Accommodations

Faculty at institutions of higher education need to have a good understanding about disabilities, to be able to effectively support the students having LD. Cross-sectional research suggests that faculty willingness is necessary for success of students having LD. The studies below serve to highlight the significance of faculty willingness in providing effective classroom interventions through a variety of teaching techniques as well as innovative positive ideas that are effective.

Malangko (2008) examined the attitudes and willingness of California Community College public safety (police, fire and emergency medical services) faculty to provide accommodations for students with LD. The study surveyed 238 full time faculty members using the ‘Attitudes Toward Disabled Persons Scale’, and ‘The Faculty Willingness to Accommodate Students with Learning Disabilities Scale’ to compare the attitudes and willingness of academic and vocational education faculty to provide accommodations for students with LD. Faculty reported a positive attitude towards persons with disabilities. No significant relationship was found between faculty attitudes and willingness to provide accommodations, or a willingness to accommodate students with LD as a function of faculty group. Faculty members who had contact with disability services professionals were more likely to accommodate students with LD than faculty members who did not. More than half of the respondents in the current study reported they received no training in working with students with disabilities.
Clara, Carmen, Figueroa, and Judy (2004) carried out a study on “The Accommodation of University Students with Disabilities Inventory (AUSDI)”: An instrument was constructed to assess faculty attitudes toward university students with disabilities and accommodations in the United States and México. Faculties in both countries were very similar in their willingness to accommodate most types of students with disabilities and to become friends with people with disabilities.

Houck, Asselin, Troutman, and Arrington (1992) investigated the faculty and student perceptions regarding university students with LD. Results reveal that faculty desired more information on LD, the referral process and the support procedures. They reported a willingness to make certain course-related accommodation for students with LD and believed that such accommodations are fair to other students. Faculty had a general sensitivity to the special needs of students with LD; however it is clear that further research is needed in this area. Together these findings indicate a need for efforts to generate increased faculty awareness and sensitivity to the needs of students with LD.

Dodd, Hermanson, and Fischer (1990) examined the faculty willingness to provide accommodations to students with LD. It was recognized that tribal colleges presently are accomplishing a great deal, even with limited resources. However, they do not have the same kind of access and opportunity other students with LD have.

Most studies reveal faculties were willing to provide support to students with LD and that the faculty willing to provide support to LD students reported to have more positive attitude towards them. Faculty members have shown better willingness to provide support and accommodations such as instructional support rather than administrative support and greater willingness to provide teaching support when compared to examination support. Thus training on willingness to provide support is considered an important dimension in building a training program to enhance the knowledge and skills of faculty.
2.12 Training on Attitudes, Beliefs and Perceptions

Faculty members at higher educational institutions are an integral part of learning system. They play a major role in teaching students with LD. Researchers have noted that faculty attitudes play a very important role in the educational experience of the student which ranges from instruction to support during examination on college campuses (Benham, 1997; Dupoux, Wolman, & Estrada, 2005; Hengst, 2003; Kleinsasser, 1999; Leyser et al., 2000; Rao, 2004; Vogel et al., 1999). The purpose of this review is to examine literature on the importance of training on faculty attitudes towards students with disabilities in general and students with LD in particular in postsecondary institutions. While some of the studies have pertained to a student of specific impairment, others examined the faculty attitude toward students with disabilities as a homogenous group (Hengst, 2003).

Barbara, Leigh, and Timothy (2011), studied the faculty attitudes and knowledge towards promoting self-determination and self-directed learning for college students with and without disabilities. The purpose of the study was to survey faculty attitudes, knowledge, and teaching skills of self-directed learning for college students, with and without disabilities. Results revealed significant differences (N=218) across gender, departments and academic ranks. Findings could serve as the foundation for future research on how institutional resources could be utilized to facilitate faculty in enhancing pedagogical best practices in promoting self-determination for all students before they graduate.

Lombardi (2010) studied measuring faculty attitudes and perceptions toward disability. The cross validation study was conducted using exploratory and confirmatory factor analysis. The findings show minimal differences between faculty according to
gender but significant differences according to faculty rank (e.g., tenured, tenure-track, and non-tenure) and department. In addition, group differences emerged according to prior disability-focused training, where faculty who had previous disability focused training had greater positive attitudes and perceptions toward students with disabilities than did faculty without such training. These results will inform the field about important constructs to consider in instrument development for measuring faculty attitudes and perceptions toward disability, including knowledge of legal mandates and accommodations and knowledge of and willingness to adjust instruction according to the tenets of universal design. The results also indicate that the four-year college and university administrations should target interventions for faculty members in disability awareness training.

Zuniga, Ruth, Fischer, and Jerome (2010) attempted to provide a framework for understanding the relationships among culture, emotional intelligence and attitude towards people with disabilities. Results indicated significant differences among students' educational levels and their attitudes toward people with disabilities: In addition, significant differences were found between females from both groups and their male counterparts. Implications include the possibility of enhancing clients' emotional intelligence to assist in their coping and to increase individual's positive attitudes toward people with disabilities.

Barbara, Hong, and Himmel (2009) examined variables concerning faculty perceptions of (a) Personal time constraint, (b) performance expectations of students with disabilities, (c) believability of students’ disabilities, (d) willingness to accommodate, and (e) general knowledge of campus disability resources and legislation. Knowledge was found to be the precondition for whether or not faculty will have a positive experience.
working with students with disabilities. The study supported a large amount of research that showed that faculty in any size institutions were willing to support students with disabilities despite their lack of knowledge about specific mandated legislation requirement. Recommendations for promoting faculty awareness of disability issues and related professional development in pedagogical best practices for non-traditional learners are addressed.

Abercrombie (2009) conducted a research on the effects of institutional variables, teacher background variables, teacher preparedness, and teachers' performance drivers on teachers' attitudes toward students with LD in the inclusive classroom”. Teacher attitudes toward inclusion were the focus of the investigation. The results highlighted that central to successful implementation of inclusion is teacher attitude. Teacher attitude has a powerful impact on the students’ educational experience and classroom opportunities. (Cook, 2002). Students with LD need general and special education teachers that have positive attitudes toward them and seek to provide instruction that allows the student to reach his or her academic potential. It was concluded that the overall success of any inclusion program center on the teachers training, extent to which these supports are made available, basic understanding of various types of disabilities and knowledge of accommodations, modifications and behavior management.

Murray, Lombardi, Carol, and Keys (2009) studied the faculty attitudes, beliefs and practices with regard to students with LD. An instrument was designed to measure attitudes and administered to all faculty members who were subjected to an exploratory factor analysis; results indicated that the instrument contained 12 reliable factors. Further, correlational analysis provided preliminary support for the instrument’s construct validity by showing that major constructs were associated with each other in expected directions.
Descriptive analysis indicated that faculty generally had positive perceptions about students with LD and were willing to spend time supporting students with LD. Consistent with prior research; faculty expressed greater willingness to provide minor, rather than major accommodations. Group comparisons by faculty gender, academic unit and rank were reported.

Murray et al. (2008) investigated university staff members’ attitudes towards students with LD at the postsecondary level. A survey instrument was administered to approximately 300 staff members at a large private university and resulted in 70 responses. The survey contained items pertaining to knowledge about LD, willingness to provide accommodations, understanding of available support services, and need for professional development. Findings indicated that staff generally had positive attitudes towards students with LD and were willing to provide accommodations. However, a substantial number of respondents indicated a need for training and professional development regarding students with LD in general as well as strategies to support students with LD in postsecondary settings.

Suzanne (2007) investigated the perception of students with disabilities and the findings revealed that pre-service teachers had a more negative attitude towards people labeled with mental disabilities, and a more positive attitude toward people labeled with physical disabilities or toward people whose type of disability was not specified. The findings also revealed that elementary education pre-service teachers had a more positive attitude toward people with disabilities (regardless of the descriptive label) than did secondary education pre-service teachers.

Subban and Sharma (2006) pointed out that if teachers leave from the university with negative attitudes then those attitudes are difficult to change. Consequently, positive
attitudes can and need to be fostered through both training and positive experiences with students with disabilities. Thus, intervention programs should target psychological skills training besides knowledge of LD to improve the attitudes, perceptions, beliefs, practices and interaction of faculty members in higher education.

Foley and Nancy (2006) attempted to highlight the importance of adequate preparation for higher education of students with LD in their study “Preparing for College: Improving the odds for students with LD”. This includes appropriate prerequisite courses, study and time management skills. Students with LD must possess an array of additional non-academic skills and attributes to ensure success in the college environment. Development of these nonintellectual skills, specifically those associated with self-advocacy, better equip students to meet the greater demands for independence and individual responsibility associated with higher education environments.

Sowers and Smith (2004) trained nursing faculty using a brief two-hour training curriculum that contained four main components designed to (a) enhance the perceptions of faculty regarding the capabilities of nursing students with disabilities, (b) provide strategies for accommodating students with disabilities during instruction and supervision, (c) provide information pertaining to laws (Section 504 & ADA), and (d) provide faculty with information regarding the costs associated with providing accommodations. In an evaluation of changes in nursing faculty perceptions prior to and following training, these researchers found that the training led to improvements in faculty members’ perceptions of the capabilities of students with disabilities, and decreases in perceived concerns about having students with disabilities in nursing programs.
Busch, Pederson, Espin, and Weissenburger (2001) investigated the perceptions of a first-year teacher of students with LD. The teacher describes her first-year challenges and successes; presents her views on assessments, accountability, and inclusion; and makes recommendations for new teachers entering the field. Some of the recommendations include assertiveness of teachers in finding necessary supports, mentorship programs, save material developed in training programs, locate good “individual education plans” and make their own. The researchers describe the teacher as an energetic, enthusiastic, talented, positive person who was very hard working and dedicated to educating the students.

Avramidis, Bayliss, and Burden (2000) examined how experience affects attitudes. This training also boosted teacher confidence levels in meeting “individual education plan” requirements. Within the training sub-section, the authors found that external training had more of a positive effect on attitudes then did school-based training. The educators surveyed indicated a need for support, training and material resources as areas of need for including students with special needs into their classrooms.

The above literature discusses the importance of improving faculty attitudes towards providing support to students having LD. Researchers conclude that teachers should be prepared, positive and dedicated to educating students.

2.13 Training on Improving the Interaction of Faculty

University students with disabilities not only have to deal with negative attitudes held by their peers (Gething, 1994; McDougall, DeWit, King, Miller, & Killip, 2004), but also those of the faculty (Brinker & Thorpe, 1985). Several factors have an impact on faculty attitudes. Researchers suggested that discomfort, lack of empathy, approachability
and communication towards students with LD are some of them. Discomfort could be as a result of fear, the stigma attached to a disability, the apprehension of ever becoming disabled, (Davies 2000) social proximity to people who are disabled (Fitchen, Amsel, Robillard, Sabourin, & Wright, 1997). Recent theoretical and empirical evidence suggest that increased interaction with students with disabilities will have an impact on attitudes exhibited by faculty. Increasing the understanding of faculty is possible through focused training on LD.

Jackson, Stebleton, and Laanan (2013) conducted a study to determine how teaching in learning communities (i.e., courses that are linked or intentionally integrated in terms of learning objectives and shared assignments) affected the perspectives and work of community college faculty members. Interviews with 14 faculty members who taught in learning communities at a Midwestern community college indicated that the benefits of participation included greater empathy for and awareness of students, the development of authentic relationships with students, enhanced engagement in the larger campus community, and active collaboration and professional development with faculty colleagues across disciplines.

Goldstein and Winner (2012) carried out studies on enhancing empathy and theory of mind in which social cognitive skills such as empathy and theory of mind are crucial for everyday interactions, cooperation, and cultural learning, and deficits in these skills have been implicated in pathologies such as autism spectrum disorder, sociopathy, and nonverbal learning disorders.

Firth, Greaves, and Frydenberg (2010) studied the coping styles and strategies of adolescent students with and without LD. The results suggested higher use by students aged 12 to 13 years who had LD of an overall nonproductive coping style and in
particular of the nonproductive strategies of ignoring the problem and not coping. Although there was no difference in overall productive or nonproductive coping style for 14- to 15-year-olds, the students in this age group who had LD reported higher use of the strategies of not coping and ignoring the problem. These findings are discussed in relation to a need for interventions, that give students who have LD, strategies that address the risk of a passive coping style.

Myers and Bastian (2010) attempted understanding communication preferences of college students with visual disabilities. The purpose of the qualitative study was to determine the preferences in communication styles and techniques of students with visual disabilities in their interactions with others within the higher education setting. The results of 35 interviews indicated respect for others, comfort during interactions, and awareness of disability issues are key factors leading to effective communication between persons with and without visual disabilities.

Stewart (2010), in her article discussed how her students have challenged her to acknowledge both her physical and pedagogical weaknesses. All teachers have areas of vulnerability that they can benefit from sharing and discussing with students. This doesn't mean making the totality of their personal lives or pedagogy fodder for student scrutiny, but it does mean openness to honest conversations with students. The willingness to see their students' challenges to them as opportunities for growth and conversation, rather than threats, allows teachers to model for them the ways in which the challenges of their own lives can be opportunities for growth and reflection.

Kjellerson (2009) conducted a study on faculty attitudes toward students with disabilities at two mid-western universities. The purpose of the study was to determine whether a significant difference existed in faculty from two mid-western universities
regarding attitudes toward students with disabilities. Faculty attitudes were scored on the Interaction with Disabled Persons survey instrument and six variables (gender, age, rank, college where faculty taught, years’ experience in higher education, and years’ experience accommodating students with disabilities). Variables were analyzed for each university, and then between the two universities. Though, no significant relationships were detected between and among the universities analyzed, a higher level of social discomfort when interacting with individuals with disabilities was observed. Having higher levels of social discomfort around individuals with disabilities included faculties in their 20’s and 30s and faculty nearing 70; faculty with fewer than five years’ experience and older faculty with over 26 years’ experience in higher education; and inexperienced faculty with less than a year of experience and older faculty with 26 plus years’ experience in accommodating students with disabilities.

Melissa (2007) investigated the impact of faculty-student interaction outside of the classroom on faculty members’ perceptions of engagement, satisfaction, and retention. Findings revealed that interaction outside classroom between students and faculty promote high levels of satisfaction and engagement with the institution. Faculty also perceived that their teaching skills are positively impacted through their interactions with students outside of the classroom. The “Faculty Fellows Program” includes regular interaction among the participants, and this interaction promotes significant levels of collegiality and a sense of community.

Long, MacBlain, and MacBlain (2007) conducted a study on supporting students with dyslexia at the secondary level. Findings suggest that appropriate strategies can empower learners and raise standards and highlight the importance of teacher empathy in enhancing the quality of the learning environment. Results indicated that although study
skills are being taught, teachers may lack approachability and empathy. Findings are discussed in the context of the role of teachers in promoting student engagement and enhancing self-efficacy. Strategies are suggested for empowering learners, promoting self-esteem, and modifying the learning environment to provide student-centered, affective, and social-academic pathways.

Cook, Rumrill, Camarata, Mitchell, Newman, Sebaly, Steuernagel, Cook and Hennessey (2006) studied the impact of professional development institute on faculty members’ interactions with college students with LD. One potentially fruitful avenue for improving the quality of the college experience for students with LD is to increase understanding and awareness among faculty members. The professional development program and its impact on the interactions with students having disabilities were rated positively by the participants.

Mohay and Reid (2006) conducted a study on the inclusion with a disability in child care. The Interaction with Disabled Persons Scale (IDP) was used to measure the level of discomfort experienced when interacting with people with disabilities. Training for working with children who have a disability was associated with positive attitudes toward people with a disability. Finding reveal that training and experience appeared to increase feelings of control over the provision of services for children with a disability.

Gourneau (2005) in his article “Five Attitudes of Effective Teachers: Implication for Teacher Training” examined the effective attitudes and actions employed by teachers that can make a positive difference on the lives of students. The five frequently discussed attitudes and actions include: a genuine caring and kindness of the teacher, a willingness to share the responsibility involved in a classroom, a sincere sensitivity to the students
diversity, a motivation to provide meaningful learning experiences for all students and an enthusiasm for stimulating students creativity.

Continuing to investigate faculty practices at institutions of higher education, Sweener, Kundert, May, and Quinn (2002) studied faculty members’ comfort with providing educational supports to students with LD. The results of this study revealed that 3-9% of faculty indicated feeling comfortable with providing tape recorded lectures, use of note takers, additional time to complete assignments, and use of calculators and spelling dictionaries during class and exams. Conversely, a greater number, 21-36% of faculty indicated feeling uncomfortable with providing extra credit assignments, increased frequency of examinations with less content, substitution of an elective course in lieu of a required course, and withdrawal of a course after the cut-off date. The findings of this study suggested that faculties were reluctant to provide educational supports that demand additional time and effort. Also, faculty level of comfort in providing instructional supports exceeds their comfort level in providing administrative supports.

Forlin, Fogarty, and Carroll (1999) conducted a study on the “Validation of the factor structure of the Interactions with Disabled Persons Scale”. It was designed to measure attitudes towards people with a disability. Factor analysis of the 20-item scale has identified six relatively stable and correlated factors tapping different aspects of discomfort during contact with people with disabilities (Gething, 1992, 1994). Analysis of subscales formed from these factors showed that scores were weakly related to gender, previous contact with people with disabilities, and length of full-time employment prior to commencing study.
The above reviews envisaged upon the various aspects of interaction towards students with disabilities in general and LD in particular. The section included orientation to the concept of discomfort, empathy and vulnerability which by researchers is regarded very critical in improving the interaction towards students with LD taking into consideration the myriad of dimensions to providing student support.

2.14 Overview

The review of literature presented in this chapter indicates the significance of studying the various dimensions in devising a training program for the faculty members to improve their knowledge, willingness, attitudes and interaction towards students with LD. Through the cited studies, past and recent research on LD in higher education and faculty knowledge and attitudes, there is seen a tremendous scope to develop the training module based on studies presented. Most of the studies so far have persisted on the premises and conclusions that providing training on the knowledge of LD will improve the attitudes of the faculty members towards students with LD. However, there is very little research that focuses on studying the importance of implementing a training program that includes psychological skills training intended specifically, to improve the faculty attitudes towards students with LD along with providing training on knowledge of LD.

The review of literature contributes insights into identifying the potential need for an appropriate intervention program for faculty in teaching and mentoring students having LD in postsecondary education.
There is evidence in the studies cited that there are several barriers that hindered the success of students having LD in postsecondary education. Lack of knowledge, training and attitudes are seen as the most important conduits to mentoring students having different learning needs.

Although most of the studies found that faculty generally were willing to support students, faculty attitudes and training emerged as a powerful factor in the success or failure of students. Thus, the psychological factors that impact the formation and change of attitudes and evolving roles of faculty should be scrutinized.

Based on the review of previous literature, the present study focused on devising and implementing a training program for faculty (who are primary mentors to students having LD), in psychological skills along with training on knowledge of LD and further study the impact of the training.

Thus, the above aspects were taken for final security after adopting systematic methods and procedures of research, which are well presented in the following chapter.