EFFECTS OF METACOGNITIVE STRATEGY AND ACHIEVEMENT MOTIVATION TRAINING ON DISSERTATION EFFICACY AND ANXIETY AMONG DOCTORAL STUDENTS IN SOUTHWESTERN NIGERIAN UNIVERSITIES.

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ABSTRACT

The importance of dissertation writing towards sustaining academic and intellectual culture cannot be overemphasised. However, the dissertation processes are often fraught with certain inhibiting factors such as low efficacy and anxiety. Hence, there is the need to build in the students a minimum level of confidence and efficacy through cognitive therapies such as metacognitive strategy and achievement motivation training. Previous studies on successful completion of doctoral dissertations in Nigerian universities particularly in Southwestern, have focused more on opinionated than intervention studies using cognitive therapies in enhancing such accomplishment. This study, therefore, examined the effects of metacognitive strategy (MST) and achievement motivation training (AMT) on dissertation efficacy and anxiety of doctoral students. It further ascertained the moderating influence of emotional intelligence (EI) and gender.

The study adopted pretest-posttest and control group experimental design with a 3x2x3 factorial matrix. The samples consisted of 84 doctoral students purposively selected from three universities in South-western Nigeria. Participants were assigned to three experimental groups (MST, AMT and control). Three instruments used for data collection were: Dissertation Self-Efficacy Scale (r=0.88); Dissertation Anxiety Scale (r=0.93); and EI Scale (r=0.78). The administration of treatments lasted eight weeks for the experimental groups. Fourteen hypotheses were tested at 0.05 level of significance. Data were analysed using Analysis of Covariance.

There was a significant main effect of treatments on participants' dissertation efficacy [$F_{(2,65)}$= 35.47, $p<0.05$; (η^2=.52)]. Participants who were exposed to Metacognitive Strategy ($\bar{x}$ =109.60) performed better than those in AMT group ($\bar{x}$ =103.80) and the control group ($\bar{x}$ =91.37) on measure of dissertation efficacy. Emotional intelligence had a significant moderating main effect on participants' dissertation efficacy [$F_{(1,65)}$=7.63, $p< 0.05$; (η^2=.19)]. Participants with high EI recorded the highest mean score in dissertation efficacy (106.70); followed by participants with moderate EI ($\bar{x}$ =100.68) and then participants with low EI ($\bar{x}$ =96.06). However, there was no significant main effect of gender on dissertation efficacy. The interaction effects of treatment and EI on dissertation efficacy were not significant. Likewise, the three-way interaction effects of treatments, EI and gender were not significant. The treatments had a significant main effect on dissertation anxiety [$F_{(2,65)}$=3.81, $p<0.05$; (η^2=.10)] of the participants. Metacognitive Strategy group also had the lowest anxiety mean score ($\bar{x}$ = 78.91) compared to Achievement Motivation Training group ($\bar{x}$ =85.59) and Control group ($\bar{x}$ =92.92). Participants with high EI recorded the least mean score ($\bar{x}$ =84.34) when compared to their moderate ($\bar{x}$ =86.46) and low EI ($\bar{x}$ =88.08) counterparts on measure of dissertation anxiety. The interaction effects of treatment and EI on dissertation anxiety were not significant. Likewise, the three-way interaction effects of treatments, EI and gender were not significant.

While the Metacognitive Strategy and Achievement Motivation Training enhanced dissertation efficacy and reduced dissertation anxiety, the former was more effective. Therefore, doctoral students should be exposed to Metacognitive Strategy and Achievement Motivation Training to facilitate completion of the doctoral programme as scheduled.

Key words: Dissertation efficacy, Dissertation anxiety, Emotional intelligence, Metacognitive strategy, Achievement motivation

Word count: 477

DEDICATION

This study is dedicated to the glory of the Almighty God who was, is and forever be the Alpha and Omega of all.

And to the memory of my late father, Samuel Oluwafemi Ayeni who encouraged me to aim for high academic achievement as early as aged 11 and to my mother, Mojisola Awele who gave all that was necessary for me to live as a child.

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CERTIFICATION

I certify that this work was carried out by Joseph Olabode **AYENI** under my direct supervision in the Department of Guidance and Counselling, Faculty of Education, University of Ibadan, Ibadan, Nigeria.

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CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

The importance of dissertation or thesis in the educational experience of the postgraduate students cannot be underestimated. It is arguably the most important piece of work a student produces on completion of any postgraduate programme (Hines, 2006) and it is seen as traditional capstone of educational programmes. It is one of the culminating achievements in academia and a part of the rite of passage to independent scholarship which provides opportunity for the students to contribute to literature under the guidance of a superior and or a professorial committee. The dissertation process enables students learn how to develop analytical mind premised on data generated (Garcia, 2007). Unlike the elaborate study strategies students develop in order to pass comprehensive examinations, dissertation writing will enable students develop in valuable research and writing skills such as thinking analytically, synthesising complicated information, writing well and organising personal time. These skills are central to building a career in academia. The systems of support, research strategies, work schedules, and writing techniques that help in the dissertation process are relevant tools in writing books, articles and lectures for many years to come as the candidate makes progress in academia. This perception has recognised the doctoral students as the most academically capable, most academically successful, most stringently evaluated, and most carefully selected in the entire higher education system (Golde, 2000).

Dissertation is not a one-shot deal. Students seeking to be certified as graduates of any doctoral programme must complete a structured and complicated process that not only requires participation in prescribed coursework, internships and examinations, but must ultimately result in preparing and defending a dissertation. Successful completion of dissertation is fundamental to the development of intellectuals and an indication of a great advancement in academic achievement. Universities accord it more weight than course works because it affords students an avenue to contribute to their fields and to demonstrate competency. This is due to the fact that dissertation is designed to offer students a new learning experience where they demonstrate skills they learnt during undergraduate and postgraduate studies (Rowley & Slack, 2004). In addition, the process has a strong interpersonal component: students have the chance to develop professional bonds with their supervisors and dissertation committee members or directors who acculturate them into the ways of scholars.

As a key academic activity, dissertation has been a challenging experience for all students, because it is a major self-directed research project. According to Garcia (2007), it involves conducting research, and also a rigorous writing process. Completing a dissertation is an engaging and tough experience that requires academic skill, stamina, perseverance, and focus. Besides, there are many pressures inherent in the research process for the dissertation which makes it inevitable that a certain number of students will not complete it (Grosjean, 1995). Studies (Griffin, n.d; Lovitts & Nelson, 2002; Adeyemo & Onongha, 2010) have indicated that many registered postgraduate students are either stuck at the dissertation process or withdrawn officially (though unofficially in most cases). They often complete the course works but are unable to finish the dissertation. While some complete the dissertation process before due date, others do not and consequently, give up. These students, according to Barnett (2004) turn out to be victims of the phenomenon known as "All But Dissertation" (ABD), the somewhat dubious distinction that postgraduate students obtain when they have completed all required course works (sometimes with comprehensive examinations). At this point, the only thing standing between the students and the degree they applied for is the dissertation. This has been a source of concern to researchers since the 1970s when they began to treat students' desire to persist or withdraw as the outcome of a longitudinal multivariate process (Dominguez, 2006).

Meanwhile, dropout rate among doctoral students in Nigeria had been reported as above 50%. This presumption is premised on the statistics for enrolment and output of doctoral students in Nigerian universities between 1985 and 1989 (NUC, 1994) which revealed a staggering disparity between the two years. For instance, the data reveal that the 1985/86 academic session recorded a total enrolment of 10,021 postgraduate students, whereas the output was only 4,834 for the 1987/88 session when they were expected to graduate. This represented an output of 48.24% of total enrolment for 1987/88 session. In the same vein, the postgraduate output for the 1986/87 intakes was only 42.96% and declined in 1989/90 by about 8% with no session recording an output of 50%. More revealing was the observable disparity in postgraduate output by discipline. There was a gradual decline in output, with the lowest record of 38.06% in the 1986/87 academic session. No discipline made up to 50% output. This trend has continued in recent times and even appears to be worsening. A slight difference had been observed in the dropout rate among doctoral students in the United States of America where the dropout rate had been reported to be about 50% (Bowen & Rudenstine, 1992; Tinto, 1993; Kerlin, 1995; Grosjean, 1995; Lovitts & Nelson, 2002; and Griffin, n.d).

Several factors have been articulated for this high rate of attrition, unfortunately, these factors are not limited to particular fields but they cut across disciplines (Herzig, 2004). Researches indicate that barriers forestalling completing dissertations include those beyond the candidates control (external) such as challenges set by the learning environment (Kember, 1990), pressures from jobs, family or significant others, lack of support from the supervisor (or advisors), professorial committee, questionable support from an employer (Germeroth, 1990; Mallinckrodt & Leong, 1992). There are also within (internal) factors such as financial burdens, computer literacy, ability to access requisite technology, time management and self-judgment of their capabilities to organise and execute courses of action required to complete a dissertation (Griffin, n.d; Golightly, 2007; Varney, 2010; Adeyemo & Onongha, 2010). Such students may have self-doubt that they are not "doctoral materials" (Arnkoff, Glass, & Robinson, 1992). Vander Well and Sartoris (1973) assert that the candidate's personality is responsible for the delay in completion or abandoning of dissertation process while Simpson (1987) points out that the well-known difficulty and challenge of transition from course–work to dissertation research (a lonely activity) that involves a shift in tempo had been found uncontrollable by many students. Their lack of persistence is often attributed to failure of becoming socially and academically integrated, as well as other factors that are internal and external to an academic institution (Kember, 1995).

Prominent among dissertation internal inhibiting factors as observed in recent literature are beliefs about personal capability (dissertation efficacy) of the candidates and the level of anxiety the candidates exhibit toward the dissertation process. The perceived personal capability to complete the dissertation process by various categories of students has been linked with their performances (Stein, 1987; Multon, Brown & Lent, 1991; Chemers, Hu, & Garcia, 2001; Lane & Lane, 2001; Lane, Devonport, Milton & Williams, 2003; Griffin, n.d.; Adeyemo, 2007; and Adeyemo & Onongha, 2010). Varney (2010) affirms that dissertation efficacy plays the mediational role in performance self-efficacy theory. Statistically, significant differences between dissertation completers and dissertation non-completers have been attributed to self-efficacy and self-handicapping (Harsch, 2008). The belief in one's capabilities to organise and execute courses of action required to produce given attainments influences individual academic achievement including writing and presenting a dissertation (Bandura, 1994, 1997). Notably, perceived self-efficacy enhances performance it is believed that it should also reduce the debilitating effects of anxiety for those who are initially highly anxious learners (Bandura, 1988).

Generally, if people perceive a task as moderately difficult and attainable in conceivable time, they will persist. Many students will commit themselves to achieve goals that are perceived as challenging, specific, and attainable in the near future (Bandura & Schunk, 1981). Efficacy beliefs help determine how much effort individuals will expend on their chosen activity, how long they will persevere when confronting obstacles, and how resilient they will prove in the face of adverse situations—the higher the sense of efficacy, the greater the effort, persistence, and resilience (Bandura, 1977; Pajares, 1996). Researchers (Bandura, 1997, Lent, Brown & Gore, 1997; Adeyemo, 2007) have established that efficacy beliefs also influence individuals' thought patterns and emotional reactions. Self-efficacy had been found very significant in relation with some other psychological constructs like self-concept, depression and assertiveness (Kanfer & Zeiss, 1983 & Lee, 1984; Ehrenberg, Cox & Koopman, 1991; Woodruff & Cashman, 1993; Lent, Brown & Gore, 1997).

Low efficacious students are poor independent learners. Students with low self-efficacy may believe that completing a dissertation is tougher than what they could achieve, a belief that fosters stress, depression, and a narrow vision of how best to accomplish it. The common approach among such individuals is to adopt coping strategies (like delay starting), or putting serious efforts into the dissertation until the students feel there are no other options. Lack of planning has also been attributed to poor performance in such cases (Devonport, Lane, Milton, & Williams, 2003). High self-efficacy, on the other hand, helps create feelings of serenity in handling the dissertation process and whatever the challenges to encounter. Characteristically, students with strong beliefs in their capabilities to undertake dissertation, will outline achievable objectives and set necessary machinery in motion for actualising them (Adeyemo, 2007). Thus, self-efficacy beliefs are strong determinants and predictors of the level of accomplishment that individuals finally attain. Self-efficacy is anticipated to be a mediating variable between previous performance accomplishments and future performance (Lane, Devonport, Milton & Williams, 2003).

Albert Ellis, the prominent proponent of Rational Emotive Therapy (RET) has established there is always an interaction between cognition and affection (thinking and feeling). Several researchers have noted that individuals maintained a level of emotionality (cognitive anxiety) in academics (Deffenbacher, 1980; Hodapp, Glanzmann, & Laux, 1995). Although emotionality has traditionally not been viewed as central to performance, studies have demonstrated that emotionality may be the triggering mechanism for self-regulation strategies that facilitate performance (Schutz & Davis, 2000; Fiore, 2003). In the past, there has been evidence that high level of anxiety is associated with low grades and high dropout

rates among university students (Gaudry & Speilberger, 1971). In addition, Lindsay (2002) reports that individuals with high levels of academic anxiety displayed slower times on attention measuring tasks than low-anxious individuals, and also are more apt to incorrectly remember memories related to anxiety. However, high-anxious individuals showed equivalent performance to low-anxious individuals on other attention-measuring tasks, recall of neutral false memories and correct hits (Lindsay, 2002). Academic-anxious individuals typically perform more poorly under evaluative and stressful situations than low-academic anxious persons. Nevertheless, highly-academic anxious individuals usually perform at least as well as those low in test anxiety, if the situation is not evaluative or stressful (Wine, 1971; Sarason, 1980).

Anxiety is a vital factor and also a correlate of self-efficacy toward the completion of a dissertation process (Griffin, n.d.; Adeyemo & Onongha, 2010). A number of education studies have consistently affirmed negative relationship of anxiety in academic domains of self-efficacy (Shelton & Mallinckrodt, 1991; Bandura, 1997). Thus, researches have shown that when faced with fearful, threatening or stressful situations, individuals often react by expecting failure, which by definition means lowered self-efficacy in the threatened domain results. Bandura (1997) and McGrath (2002) submit that a high level of feeling of tension and foreboding can obstruct clear thinking and also prevent students from putting up their best performance and abandon the dissertation process. Anxiety arousal is affected by perceived coping efficacy and perceived efficacy to control disturbing thoughts. Students, who experience anxiety in all academic activities, are likely to find the activities unpleasant (Crowl, Kaminsky & Podell, 1997).

Dissertation anxiety is hypothesised as an inner conflict that involves one part of the student straining to concentrate on the task of researching and the other interrupting concentration while writing the dissertation. The students go through the experience of straining to write a phrase or sentence and immediately crossing it out. The “inner drafter” is interrupted by the “inner editor.” The back-and-forth struggles between drafter and editor are the experience of anxiety, a process of inner conflict. Notably, students are often unaware of the vacillation between the concentrating and interrupting selves. Since the anxiety is a discomfort, the student does not dwell long at either pole of the conflict but shuttles back and forth, and in the process, loses awareness of the polar nature of the conflict (Garcia, 2007). Dissertation anxieties such as writing blocks, defense anxiety, stage fright, and technophobia with peers, faculty and families have hampered completion of the process. Students with high level of anxiety show significantly less motivation in academic activity perceived as highly

evaluative compared to students with low level of anxiety. Literature on test anxiety and various academic domains have indicated that negative relationship consistently exists and that fear and anxiety are often the causes of students' failure to complete their dissertations (Hembree, 1988; Shelton & Mallinckrodt, 1991; Schwarzer, Babler, Kwiatek, Schroder, & Zhang, 1997; McGrath, 2002; Griffin, n.d.).

Reports on the experiences of those who have experienced the dissertation process have indicated that students who manifest anxiety towards it experience procrastination (Ebeltoft-Kraske, 1996; Carbonell, 2000). This is an all-too-familiar problem which involves the needless delaying of tasks to the point of experiencing subjective discomfort. 95% of university students were reported to have been engaged in procrastination provoked by evaluation anxiety (Ellis & Knaus, 1977). There is evidence that procrastination results in detrimental academic performance, including poor grades and course withdrawal (Semb, Glick & Spencer, 1979), and that the tendency for students to procrastinate increases as the period they engage in academic activities lengthens. Such students are characterised by lack of assertion, fear of the consequences of success, perceived aversiveness of the task, and overly perfectionistic standards about competency. Meanwhile, some other students enter into postgraduate studies with certain deficiencies in conducting a research. They possessed little skill in knowing how to build on prior knowledge. This category of students is being confounded into anxious feelings toward academic activities (Ainley & Pratt, 2001; Rysz, 2004). They need more guidance on how to actively use previously acquired knowledge to learn and understand field application of research principles.

An underpinning variable of self-efficacy and anxiety as observed in various study is the emotional content of those personal attributes that individual student manifests in the dissertation process. How a student is able to understand his/her feelings and at the same time be able to cognitively perform his/her academic tasks have been the focus of researchers. Students' capacity to apply reasoning to the understanding of emotion and use emotion to enhance reasoning (Emotional Intelligence) is important. This capacity, reported to influence about 85% of human success (Adeyemo, 2007), has contributed to individual's cognitive-based performance (Lam & Kirby, 2002) and significantly related to scholastic achievement (Petrides, Fredrickson & Furnham, 2004). Emotional intelligence was conceptualised as influence on using information about one's emotions (and that of others) to guide one's thinking and action (Salovey & Mayer, 1990; Mayer & Salovey, 1997 and Bracket, Mayer &Warner, 2004). Thus, the moderating factor of dissertation efficacy and anxiety is the ability of students on regulation of emotion in the self and others and the utilisation of

emotional content in problem solving. Researchers have also been apprehensive about candidates' dissertation ability to embark on verbal and non-verbal appraisal and expression of emotion (Emotional Intelligence). This factor is germane to academic success (Jaeger, 2002; Bar-On, 2003; Farook, 2003; Petrides et al., 2004; Parker, Summerfeldt, Hogan & Majeski, 2004; Marquez, Martin & Bracket, 2006; and Adeyemo, 2007).

Another moderating variable of concern in this study is gender differences in dissertation performance. The relationship between gender and self-efficacy has been a focus of research. In general, researchers have reported that men tend to be more confident than women in academic tasks such as mathematics, science, technology and dissertation (Meece, 1991; Pajares & Miller, 1994; Wigfield, Eccles, & Pintrich, 1996). In these areas, a masculine orientation is associated with confidence and achievement because masculine self-perceptions are imbued with the notion that success is a masculine imperative (Hackett, 1985; Eccles, 1987). On the contrary, few literature have indicated that there is no general academic anxiety difference between males and females, other studies have indicated that there are significant differences in the level of anxiety experience by the genders in certain specific academic areas (D'Ailly & Bergering, 1992; Onwuegbuzie, 1995; Williams, 1996; Pramod (1996). Approximately, 25% males have been reported to have extremely high anxiety whereas only 6.7% girls have high academic anxiety (Ojha, 2005). Some theorise that this is orchestrated by different societal expectations, norms and mores that determine "appropriate" roles for the genders (Silvestri, 1986).

It is worth noting that very few literature exist on behavioural and cognitive interventions employed to effect high efficacy and how to reduce anxiety among postgraduate students. Meanwhile, studies have established that anxieties reducing teaching methods are effective and would reflect in more learning gains in participants than students using traditional methods in tertiary institutions especially after completion of their programmes (Taylor, 1992). Albert Ellis developed the Rational-Emotive Therapy (RET), which deals with identifying irrational thoughts that cause negative emotions. Meanwhile, cognitive-behaviour modification has been shown to be effective in reducing academic anxiety and other stress related problems. Glass and Singer (1972) as well as Aveill (1974) show that cognitive-behavioural approach involves training individuals to alter thoughts in an attempt to produce appropriate and constructive emotions and behaviour. Cognitive-behaviour approach has been successfully used to teach clients how to cope with stressors such as test anxiety (Meichenbaum, 1977).

Neuro-Linguistic programming had been found to enhance dissertation efficacy of undergraduate students (Skinner & Croft, 2009). Garcia (2007) also developed a Dialectic Dialogue approach to handle academic anxieties of postgraduate students in the dissertation process. The approach was reported effective but the duration of the therapy (about three years) seems too lengthy for an average student. Also, the therapeutic approach is designed for students in needs of special attention and not for average postgraduate students. Hence, it is of great concern to this researcher, to develop effective therapies for average individuals suffering from depression and wrong perception about self and personal research capabilities (Martin & Pear, 2003). To this end, the Metacognitive Strategy and Achievement Motivational Training are intended to help potential ABDs candidates overcome anxiety and consequently, enhance their efficacy beliefs toward the dissertation process.

Dissertation process requires that individuals' self-regulate their thoughts about the strategy they are using and adjust it based on the situation to which the strategy is being applied. The activities of strategy selection and application include those concerned with an ongoing attempt to plan, check, monitor, select, revise, evaluate, etc, therefore, an ubiquitous process like metacognition comes handy in self-regulated learning. Metacognition had been significantly associated with self-efficacy (Kanfer & Ackerman, 1989), it influences a student's motivation to learn because it directly affects attribution and self-efficacy (Peirce, 2003). Students who have high self-efficacy are more likely to use metacognitive strategies when working on a task than those with low self-efficacy. Similarly, students with high self-efficacy use more metacognitive skills than those with low self-efficacy. Thus, regardless of prior achievement, higher self-efficacy is related to more use of cognitive and Metacognitive strategies (Bouffard-Bouchard, Parent & Larivee, 1993; Pajares, 2002). Metacognition is considered stable in that learners' initial decisions are derived from the pertinent fact about their cognition through years of learning experience. Simultaneously, it also depends on learners' sense and familiarity with tasks, motivation, emotion, and so forth. Metacognitive strategies help people perform many cognitive tasks effectively (Carr, 2002; Gammil, 2006). Instruction in metacognitive self assessment strategy has been found to enhance the achievements of students in some school subjects.

Metacognitive strategies are efforts aimed at developing learner autonomy, independence and self-regulation. Learners who are exposed to metacognitive self-assessment skills have been suggested to persist on difficult tasks, are confident about their ability and take responsibility for their learning tasks (Daley. 2002; Kuiper. 2002). Metacognitive therapy elicits positive effects and lasting changes on generalized anxiety

disorder (GAD) with cognitive-behavioural treatments (Garner, 1990; Hascher & Oser, 1995; Wells, 1995, 2006; Mace, Belfiore, & Hutchinson, 2001; Pressley & Ghatala, 1990; Zimmerman & Schunk, 2001).

Achievement Motivation Training (AMT), another intervention strategy adopted in this study is a cognitive – behavioural intervention which targets achievement drive competency, a very important aspect of which is the emphasis on goal setting and personal action plan by participants and the development of "achievement thinking", which means writing new stories, saturated with achievement-related thinking. It has been used in different settings with different individuals including corporate executives, business entrepreneurs, students, police officers, and social workers. The programme designers conceptualised it to include learning achievement motivation thinking, understanding own characteristics and goals.

In addition, AMT seeks to help learners practice achievement-related actions in case studies, role plays and real life; relate the achievement behaviour model to their own behaviour, self-image and goals; and help learners develop a personal action plan. AMT has been found to foster positive effects on the affective (Elias & Wan Rafael, 1994), achievement thinking (cognitive domains) and helps the practice of achievement-related actions in case studies, role plays, and real life (Miron & McClelland, 1979).

Judging from various submissions made so far, it is evident that many theoretical works had been carried out on the impact of self-efficacy on academic achievement and the dissertation process. However, very little has been achieved at fostering high self-efficacy towards dissertation process. Further, there is paucity of literature on the role of anxiety on dissertation process. The dearth of theoretical and empirical works aimed at controlling students' anxiety toward dissertation process is noted. Much attention is yet to be given to interventions designed to enhance dissertation performance of postgraduate students. There is need to increase the use of experimental techniques to manipulate sources and effects of low self-efficacy and anxiety toward dissertation (Lane et al, 2003). This study is a step in the direction of influencing doctoral candidates' self-belief at completing their dissertation by managing and controlling their anxiety toward achieving their dream of becoming PhD holders.

1.2 Statement of the problem

In Nigeria, it is common to find doctoral students who have abandoned the programme alleging frustration and victimisation among other reasons. It has also been observed that despite efforts made by those still on the programme, most of them end up

making a Ph.D. between seven and eight years as against the stipulated minimum of three to four years. The Nigerian government and the universities have expressed displeasure concerning this reported chronic academic problem of ever increasing time in obtaining a doctoral degree that result in loss of high-level resources. Attrition from postgraduate programmes is estimated at approximately 50% (Nolan, 1999). Further, of this 50%, about 20% give up at the dissertation stage. Failure at this point is not only painful and expensive for a student, but also discouraging for the faculty involved, and injurious to an institution's reputation. Also, the high dropout rate among postgraduate students seems incongruous given the importance of doctoral study to research, education, policy, leadership and professional practice.

When students fail to complete a degree programme, significant costs are incurred by them, the universities they leave, and by the society at large. Students who discontinue may lose their monetary investment in fees, books and additional living expenses incurred by relocating out of the campus (in the case of full time students) to meet residency requirements. Lack of academic credential may limit future earnings, and, whatever the reason, their failure to achieve may contribute to a negative self-concept and personal frustration. Universities experience direct financial loses, through the high initial cost of admitting students, and from the experience associated with developing and administering progress for students, who subsequently cease to attend. An unsuccessful student occupies a a space a potentially successful applicant who was not admitted could have occupied. In terms of the cost to society at large, high rates of attrition may erode the confidence of the taxpaying public that the universities are not able to meet the intellectual requirements of their students, and create the perception of a less than optimal investment of monetary allocations by the government and grants from non-governmental institutions.

The dissertation is perceived as a reflection of people's academic and intellectual culture (Isaac, Quinlan and Walker, 1992). The implication of this assertion is that the failure of completing a doctoral dissertation is detrimental to the candidate, the supervisor, department and university. It is quite unfortunate that despite the importance of the dissertation to our academic and intellectual culture, little effort had been directed at assisting aspiring candidates in alleviating their eroding confidence and debilitating anxiety experienced in the dissertation process. Most of the documented intervention programmes on dissertation efficacy and anxiety (though few) were carried out among foreign students. This study is a response to the challenges of attrition and drop-out syndrome among doctoral

students and an attempt to influence Nigerian doctoral students towards timely dissertation completion.

1.3 Purpose of the study

The main purpose of this study was to experimentally investigate and determine the effectiveness of metacognitive strategy and achievement motivation training (AMT) on dissertation efficacy and anxiety of doctoral students.

Specifically, the study aimed at establishing between metacognitive strategy and AMT which will be more effective at improving the dissertation efficacy and in reducing dissertation anxiety of the participants;

- determine the mediational role of emotional intelligence on the causal relationship between the independent variables and the criterion measure; and
- ascertain the influence of gender on the relationship between the independent and the dependent variables.

1.4 Significance of the Study

The expected finding of the study will be of immense benefits to doctoral students and the academic world. Conducting seminars or abbreviated courses of this nature should alert concerned students on the dissertation process on how to manage the complexity of the dissertation process and the factors influencing it. Their ability to appropriately manage the process will invariably enhance doctoral students towards completion of their dissertation within a specified and self-determined period.

Considering the demands of the dissertation process, trainings that aim at helping individual participants in self-regulation and emotional management are expected (his or her emotion and that of others) to be of immense benefits to doctoral students. Training in metacognitive skills seeks to provide conventional responses needed for academic and general life success. In addition, the trainings should hopefully assist dissertation students set realistic goals that can serve as motivators towards achieving their career aspiration and self-actualisation. Moreover, students would be provided with the necessary skills in conducting researches and presentation of research findings.

The study is concerned with the need to provide emotional support and encouragement to doctoral students. The training is expected to help the doctoral students acquire strategies that will assist in confronting and solving problems of dissertation process and subsequently in life. It is logical to believe that incorporating coping strategies in attending to affective needs of the curriculum will benefit such learners experiencing

dissertation anxiety. This further necessitates the need to pull doctoral students together as a group for providing support, encouragement and promoting self-efficacy

Hopefully, the anticipated findings from the study should assist stakeholders involved in the development of academics for various tertiary institutions in the country. The expected findings of the study seek to promote an integrated programme that will enable adequate preparation for dissertation writing throughout students' doctoral experiences. The study expected findings should be a direct encouragement towards enhancing the realisation of the government's desire to develop capable academics in various universities in Nigeria.

The expectation is that the study should provide necessary information and skills that can assist supervisors/advisors toward successful and timely completion of dissertation among doctoral students. The expected findings should provide modalities for mentoring doctoral students on preparation for dissertation experiences. The therapies should serve as tools for the advisors or supervisors on providing supportive assistance for technical and emotional nature. In other words, the expected finding of the study should provide dissertation supervisors information on how best they can guide doctoral candidates on successful completion of their dissertation.

The study should contribute to generating relevant data on literature and also provide counselling intervention procedures that should be helpful to counsellors working in tertiary institutions and other behavioural therapists in finding solution to debilitating anxiety that discourage and frustrate the process of writing and presenting dissertation. In essence, the study will present counselling therapists with tools to help postgraduate students in general.

1.5 Scope of the Study

The study was set to determine the effectiveness of metacognitive strategy and AMT on dissertation efficacy and reduction of anxiety among doctoral students toward writing and presentation of their dissertations for a doctoral degree.

The study was carried out in three Nigerian universities selected from the South-West region of Nigeria. Two are federal universities while the third is a state-owned university.

1.6 Operational Definitions of Terms

The following terms are defined as used in the study

Dissertation: This refers to a lengthy, formal treatise written by a candidate for the doctorate degree of a university. It should be noted that dissertation is referred to as **thesis** in some countries such as Portugal, Brazil, India, Nigeria (in most universities) etc. but in UK the terms are used interchangeably.

Metacognitive strategy: This refers to the method of organising, monitoring and modifying one's functioning in the aspect of cognitive processes. It refers to the ability to reflect upon a specific task demand and independently select and employ the knowledge or awareness of one's cognitive processes and the efficient use of this self-awareness to self-regulate these cognitive processes.

Dissertation efficacy: This is the belief individuals have about themselves to successfully conduct a research and present it in written and oral forms.

Dissertation Anxiety: A situation of being stressed, depressed and nervous or showing worry concerning writing, presenting and defending dissertation/thesis.

Emotional intelligence: This refers to skills and abilities to appraise, regulate and use emotions and emotional knowledge to enhance thought.

Self-awareness: A condition of having knowledge about one's abilities, capabilities and talents.

Self-regulation: This is ability of individuals to monitor their learning and maintain the attitudes necessary to invoke and employ these strategies on their own towards achieving academic success. It is the exercise of influence over one's motivation, thought processes, emotional states and patterns of behaviour. Self-regulated learning is students' active learning processes in meta-cognition, motivation, and behaviour.

Achievement motivation: This is individual's need to perform well or the striving for success as evidenced by persistence effort in the face of difficulties or challenges.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter is a review of various views and empirical attempts on verifying theories based on independent and dependent variables. The first part reviews the theoretical literature while the second part reviews the empirical literatures.

Theoretical Review focuses on:

- Doctoral Dissertation
- Dissertation Efficacy
- Dissertation Anxiety
- Self-efficacy Theory
- Components of Self-efficacy
- Emotional Intelligence
- Metacognitive Strategy
- Achievement Motivation

Empirical Review

- Metacognitive Strategy and Dissertation Efficacy
- Metacognitive Strategy and Dissertation Anxiety
- Achievement Motivation Training and Dissertation Efficacy
- Achievement Motivation Training and Dissertation Anxiety
- Emotional Intelligence and Dissertation Completion
- Gender Differences and Dissertation Completion

2.1 Doctoral Dissertation

Dissertation as an academic activity involves the negotiation of a rigorous writing process that ideally enables students learn about themselves as scholars, working mostly on their own, using self-reliance and discipline to set goals and schedule work time. The importance of the thesis or dissertation in the educational experience of the undergraduate or graduate student should not be underestimated. University lecturers and professors view dissertation as a cumulative effort (i.e. representative of the entirety of the educational experience). The quality of the dissertation is measured on a number of different criteria: including format, consistency, language development, source quality and overall presentation. Even simple errors in this kind of a document can mean the difference between a dissertation that can be published or dismissed and not given a second look. The dissertation as a formal writing requirement is often seen as an original contribution to knowledge and research for a university degree (Glossary of United States Educational

Terminology, 2002). It is a scholarly work that measures postgraduate students' ability to perform self-directed scholarly research. Adeyemo and Onongha (2010) posit that it is not an easy task but one that is complex, anxiety laden and often very stressful.

For decades, undergraduate and graduate students have been challenged by the researching and formatting requirements of dissertations. These students sometimes sought the help of inaccessible professors, busy librarians and unskilled research assistants, with varied successes. The most difficult elements of developing a dissertation include understanding the formatting, creating effective bibliographies and collecting and summarizing valuable research documents to provide support for the hypothesis posited in the author's introduction. According to Adeyemo and Onongha (2010), a dissertation candidate is primarily concerned with making a decision on a topic of interest and relevance in his/her field of study. A dissertation topic is borne out of the candidate's ability to articulate problems which is derived from review of literature (theoretical and empirical documents). The topic thereafter is submitted to the student's supervisor (or advisor) for scrutiny to ascertain its researchability.

Cash and Sanchez-Hucles (1992) reveal an assumption that once students are successful with course works, it would not be difficult to undertake dissertation writing. This assumption has been contradicted by other findings. Griffin (n.d.) and Adeyemo and Onongha's (2010) submit that dissertation candidates still express concerns about the adequacy of their training to see them through the dissertation process. The process is barraged with frustration, loneliness, self-doubt, anxiety and uncertainty that might lead to negative attitude toward the dissertation and eventual withdrawal from the programme.

Studies in fields such as psychology and other fields have identified reasons like financial difficulties, poor working relationship with supervisor/advisor and/or committee, substantive problems with the dissertation research, personal or emotional problems, receipt of an attractive job offer, interference of paid work with dissertation work, family demands, lack of peer support, loss of interest in earning a Ph.D. and computer skills at the beginning of the dissertation to inability to complete the dissertation (Jacks, Chubin, Porter, & Connolly, 1983; Grissom, 1985; Mah, 1986; Huguley, 1988; Lenz, 1994; McCabe-Martinez, 1993/1996; Allen, 1996; Pinson, 1997). Differing from the aforementioned reasons, Muszynski (1988) identifies seven factors that could aid dissertation completion as: supportive, interested, competent, and secure advisor; accessible, manageable, and interesting topic; internal strength, including independence, high motivation, ability to endure frustration; self-imposed deadline or goal; limited or no employment; delaying internship

until completion of dissertation and externally imposed incentives, like future employment. She also found depression as well as stressful life events as possible hindrances to dissertation completion students either do not seek appropriate support for such difficulties, or fail to recognise their gravity.

2.2 Self-Efficacy Theory

Theoretically, self-efficacy is rooted in social cognitive theory, developed by Albert Bandura (1977, 1997). Social cognitive theory assumes people are capable of human agency, or intentional pursuit of courses of action and that such agency operates in a process called triadic reciprocal causation. Reciprocal causation is a multidirectional model suggesting that our agency results in future behaviour as a function of three interrelated forces: environmental influences, our behaviour, and internal personal factors such as cognitive, affective, and biological processes. This three mutually impacts its members, determines what we believe about ourselves and affects the choices we make and actions we take. Human beings are seen not as products of the environment or biology but as products of the dynamic interplay between the external, the internal and our current and past behaviour. In reaction to more reductionist theories, Bandura (1986) notes: "Dualistic doctrines that regard mind and body as separate entities do not provide much enlightenment on the nature of the disembodied mental state or on how an immaterial mind and bodily events act on each other".

Fundamental to Bandura's (1997) framework is his concept of self-efficacy. Bandura's aspirations about self-efficacy are grand, as reflected in the title of his 1977 article "Self-Efficacy: Toward a Unifying Theory of Behavioural Change." In this significant work, Bandura defines self-efficacy as beliefs in one's capabilities to organise and execute the courses of action required to produce given attainments. Self-efficacy beliefs are characterised as the major mediators for our behaviour and importantly, behavioural change. Over the last 30 years, Bandura's other works continued to develop and defend the idea that our beliefs in our abilities powerfully affect our behaviour, motivation and ultimately, our success or failure (Bandura, 1982, 1986, 1993, 1996, 1997).

An important focal point of the Social Cognitive Theory is that people are seen to possess a self-system that enables them exercise a measure of control over their thoughts, feelings, motivation and actions (Pajares, 2002). Bandura's social cognitive theory stresses that the self-system encompasses one's cognitive and affective structures and provides reference mechanisms and a set of sub-functions for perceiving, regulating, and evaluating behaviour, which results from the interplay between the system and environmental sources of influence (Bandura, 1986). As such, it serves a self-regulatory function by providing

individuals with the capability to influence their own cognitive processes and actions and thus alter their environments. Individuals engage in self-referent thought that mediates between knowledge and action. Social cognitive theorists view perceived self-efficacy functions as an essential factor in self-regulatory mechanisms (Bandura & Wood, 1989). The consistent claims by Bandura that judgements of capability a person brings to a specific task are strong predictors of the performance that results from that task and mediate the other determinants of that performance (Bandura, 1977, 1982, 1984, 1986, 1989, 1991, 1993, 1997). It has been demonstrated in research works that self-efficacy influences academic motivation, learning and achievement (Brown, Lent, & Larkin, 1989; Bores-Rangle, Church, Szendre, & Reeves, 1990; Schunk, 1995; Pajares & Kranzler, 1995; Pajares, 1996; Adeyemo, 2001, 2007, 2008).

Self-efficacy is defined as the belief in one's capabilities to organise and execute courses of action required to produce desired attainments (Bandura, 1986; Eccles & Wigfield, 2002). It is the judgements people make regarding their capabilities to organize and execute courses of action that are needed to achieve the selected performance. Self-efficacy is a cognitive construct that describes a person's confidence in his/her ability to perform tasks. It is also much more specific to an assignment (e.g. "I can determine the proper number of significant digits in a multiplication problem") instead of a general idea of proficiency (e.g. "I understand math"). A person with a strong feeling of efficacy strongly influences a person's achievement levels and personal comfort in many ways. Self-efficacy has been shown by researchers to have an influence on a broad range of individual's cognition and behaviour. Again, self-efficacy is associated with increased expectations and goals (Bandura, 2001), improved work-related performance (Stajkovic & Luthans, 1998), greater job search activity (Eden & Aviram, 1993), good academic performance (Luszczynska, Gutiérrez-Doña, & Schwarzer, 2005), and health-related choices (Wulfert & Wan, 1993; McAuley, Courneya, Rudolph, & Lox, 1994; Clark & Dodge, 1999). Self-efficacy can be either task-specific, relate to many related tasks within a domain or be generalised. Self-efficacy theory is a common theme in current views of motivation (Graham & Weiner, 1996), primarily because of its predictive power and application for practically any behavioural task.

Beliefs about the contingency between behaviour and expected outcome and these expectations affect the individual's choice of activities, effort and maintenance of behaviour. According to Bandura (1995, 1997), perceived efficacy plays a key role in how humans perform because it directly affects factors such as goals and aspirations, affective tendencies, outcome expectations, and perceptions of opportunities in the social environment. Bong and

Skaalvik (2003) opine that it is what people believe they can do with whatever skills and abilities they possess that is considered important, not the actual skills and abilities that they possess. Self-efficacy beliefs affect the individual's aspirations and strength of commitment in a very wide variety of settings. Such beliefs influence analytical and strategic thinking, motivation, and perseverance in the face of difficulties and obstacles.

Perceived capability in a course may be both varied and complex. In the academic context, students' beliefs about their abilities to achieve academic tasks successfully, that is their academic self-efficacy beliefs are strong predictors of their ability to successfully carry out those tasks (Bandura, 1997; Skaalvik & Skaalvik, 2008). Students' perceptions of their efficacy to regulate their own learning and to master academic activities determine their level of motivation and academic accomplishments (Bandura, 1993). Students are believed to act if their acts boost feelings of competence, control and effectiveness (Bandura, 1997). Difficult goals are believed to develop skills more effectively than easy goals, as difficult goals offer more information about ability. Models such as teacher, supervisor and peer students are important sources of explicit efficacy information (vicarious experience), and observing models can be very beneficial in supporting efficacy and motivation (Bandura, 1997).

Self-referent thought has become an issue that pervades psychological research in many domains. It has been found that a strong sense of personal efficacy is related to better health, higher achievement and more social integration (Schwartzer, 1992). Bussey and Bandura (1999) further emphasise that self-efficacy influences an individual thought patterns and emotional reactions. High self-efficacy helps create feeling of serenity in approaching difficult tasks and activities. On the contrary, people with low self-efficacy may believe things are tougher than they really are. Such belief fosters anxiety, stress, depression, and a narrow vision of how best to solve a problem. As a consequence, self-efficacy beliefs can powerfully influence the level of accomplishment that one ultimately achieves. This kind of self-beliefs therefore, creates a somewhat self-fulfilling prophecy in which one accomplishes what one believes one can accomplish. Bandura (2001) further stresses that self-efficacy underlies several key personality factors, such as whether we are optimistic or pessimistic, undertake challenges, take full advantage of lucky opportunities, persevere in the face of adversity, and react toward frustration with heightened motivation or utter demoralisation. According to Gist and Mitchell (1992), there are three important aspects of self-efficacy. The first, a comprehensive summary or judgement of one's perceived capability of performing a specific task, second, a mobilisation or motivational component of the self-belief one has.

The third is the dynamic construct nature of the self-belief over time and in the response to new experiences and information.

2.2.1 Dissertation Efficacy

An important characteristic of self-efficacy is its level of specificity. At the broadest level, self-efficacy can be completely general (Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs, & Rogers, 1982), referring to confidence about any and all tasks. At the narrowest level, self-efficacy refers to beliefs about one's confidence in completing a specific task successfully. However, as tasks are often interrelated by domain, self-efficacy can also refer to an individual's confidence in abilities that apply to several related tasks within a domain. This latter example is referred to as domain-specific self-efficacy. Self-efficacy has been found to be associated with academic achievements at school (Pajares & Valiante, 1997; Huang & Chang, 1998; Pajares, Miller & Johnson, 1999).

People with great self-confidence in their capabilities approach complicated tasks as challenges to be mastered rather than as tasks to be avoided. Having a positive outlook and feeling of self-confidence helps to foster intrinsic interest and deep fixation in activities (Shannon, 2008). Individuals will set challenging goals for themselves and maintain a strong commitment to achieving them. When faced with new challenges, these individuals will intensify and sustain their efforts in the face of failure. They are also able to quickly recover their sense of efficacy after failures or setbacks. These individuals will attribute failure to inadequate effort or insufficient knowledge and skills, which can be acquired (Bandura, 1994). In contrast, people who doubt their capabilities tend to withdraw from difficult tasks which they view as personal challenges. These individuals, often times, have low aspirations and a limited dedication to the goals they choose to pursue. Individual with low efficacy, when faced with difficult tasks, often dwell on their personal deficiencies, on the obstacles they will encounter, and all kinds of adverse outcomes rather than concentrate on how to successfully achieve their goals. They usually give less than stellar level of effort and quickly give up in the face of adversity. They are slow to recover their sense of efficacy following failure or setbacks (Bandura, 1994).

Academic self-efficacy is profoundly affected by students' earlier encounters with identical or similar tasks (Zimmerman, 1995). Dissertation self-efficacy is influenced by cognitive interpretations of success and failure in the dissertation process, but also influences effort, persistence and the cognitive resources that are used in seeking to interact with the doctoral programme. Motivation and efficacy are enhanced when learning progress and comprehension are perceived. Meanwhile, acquired strategies may influence the dissertation

self-efficacy and motivation, and students who believe that a new strategy can improve their performance may keep their initial motivation even if they perceive little progress though the new strategy gives a sense of control over achievement outcomes. Bandura (1997) projects that because self-efficacy beliefs are explicitly self-referent in nature and directed toward perceived abilities given specific tasks, they are powerful predictors of behaviour. Literature has supported this proposition and has linked efficacy to various clinical issues such as phobias (Bandura & Cervone, 1983), addiction (Marlatt, Baer, & Quigley, 1995), depression (Davis & Yates, 1982), and smoking behavior (Garcia, Schmitz, & Doerfler, 1990). However, numerous researchers have used this theoretical framework to measure self efficacy in various academic settings (Lane & Lane, 2001; Pajares, 1996; Pintrich, & Schunk, 1996; Zimmerman, Bandura, & Martinez-Pons, 1992).

Educationally, self-efficacy beliefs are related to academic performance and self-regulated learning (Hackett, 1995; Pajares, 1996; Schunk, 1991; Zimmerman, 1995). Importantly, efficacy beliefs help dictate motivation to embark and accomplished dissertation completion or achieve scholarship goals (Maehr & Pintrich, 1997; Pintrich & Schunk, 1996). Bandura (1986) observes that people regulate their level and distribution of effort in accordance with the effects they expect their actions to have. Consequently, their behaviour is better predicted from their beliefs than from the actual cost of their action. Thus, the social cognitive theorists submit that, because human agency is mediated by our efficaciousness, self-efficacy beliefs influence our choices, our effort, our persistence and our emotions when facing adversity (Pajares, 1997). Dissertation efficacy is influenced by cognitive interpretations of success and failure in tasks, and also influences effort, persistence and the cognitive resources that are used in seeking to interact with the academic context. Students make reliable differentiations between their self-efficacy judgments across different academic domains which, collectively, form a loose hierarchical multidimensional structure.

Self-efficacy theory is not concerned with the skills an individual has, but with the judgments they possess concerning their skills. The perceived capability to complete the dissertation process by various postgraduate candidates has been linked with their performances (Stein, 1987; Multon et al., 1991; Chemers et al., 2001; Lane & Lane, 2001; Lane, Devonport, Milton & Williams, 2003; Adeyemo, 2007; Griffin, n.d.). The belief that a dissertation candidate has regarding own ability to successfully accomplish the dissertation process is referred to as dissertation efficacy (Adeyemo & Onongha, 2010). Self-efficacy differs from other similar constructs as it is more predisposed to contextual factors and concerns a specific goal. How the academic context is perceived directly influences self-

efficacy. Greene, Miller, Crowson, Duke and Akey (2004) further maintain that the motive for mastering academic material and tasks in many situations is that the knowledge will be needed in the future. If students see that current learning is instrumental for future success, they will be encouraged to master the material.

Individual students with high perceived efficacy as regards satisfying educational requirements and attaining professional positions have been found to have a great interest in them, prepare themselves educationally and show greater staying power in their quest for challenging occupations (Lent, Brown, & Hackett, 1994; Hackett, 1995; Bandura, 1997). In other words, students' dissertation-efficacy and perceptions of their capabilities and skills influence their career aspirations in the academia and motivation for developing these capabilities and skills. The influences of individuals' self-perceptions of competence on motivation and on behaviour have formed the core component of various expectancy theories and are a major component of most motivation theories. Self-efficacy and other expectancy beliefs have in common beliefs about one's perceived capability; they differ in that self-efficacy is defined in terms of individuals' perceived capabilities to attain designated types of performances and achieve specific results.

According to social cognitive theory, the events which personal influence is exercised vary. Depending on what is being managed, it may entail regulation of one's motivation, thought processes, affective states and actions, or changing environmental conditions. Self-efficacy beliefs are sensitive to these contextual factors. As such, they differ from other expectancy beliefs in that self-efficacy judgments are more task- and situation-specific and in that individuals make use of these judgments in reference to some type of goal (Bandura, 1986, 1989; Pintrich & Schunk, 1995).

Two general categories of academic expectancy beliefs have been postulated. Eccles and Wigfield (2002) outline them as academic outcome expectations and academic efficacy expectations. The first is described as student's beliefs that specific behaviours will lead to certain outcomes (e.g., "If I do my homework my grades will improve"). Academic efficacy expectations are students' beliefs in their ability to perform the necessary behaviours to produce a certain outcome (e.g., "I have enough motivation to study hard for this test"). Understanding the difference between these two forms of expectancy beliefs is important for individuals to know certain behaviours will produce certain outcomes (outcome expectation), but may not believe they can perform that behaviour (efficacy expectation).

There has been a recent increase in research on academic self-efficacy among all categories of students. Most studies examine factors contributing to low rates of academic

persistence and achievement (Wells 1989; Lin, 1990; Brown & Kurpius, 1997; Jackson & Smith, 2001; Jackson, Smith, & Hill, 2003; Bryan, 2003; Hill, 2004; Downs, 2005). In two separate studies conducted by Bryan (2003) and Downs (2005), self-efficacy was significantly positively correlated to academic achievement, suggesting that this construct may have some utility with this population. Bryan (2003) concludes that high academic performance will result from high academic self-efficacy. He further suggests that efforts to improve academic self-efficacy could positively impact academic performance in students of higher learning. Varney's (2010) correlational study showed a statistically significant positive relationship between Dissertation Efficacy and Dissertation Progress ($r = .556$, $p = .000$) supporting the contention that those students who exhibited the highest DSE showed a high level of progress in their dissertations and students who had lower confidence in their ability to conduct their dissertation showed a low level of dissertation progress.

2.2.3 Components of Dissertation Self-efficacy

In his later work on self-efficacy, Bandura (1997) acknowledged the powerful findings relating self-efficacy beliefs and educational performance. However, most of the studies assessed levels of general academic self-efficacy (Pajares, 1996; Galliher, 1998; Lindley & Borgen, 2002; DeWtiz & Walsh, 2002; Bryan, 2003; Downs, 2005), and few have focused on identifying the relevance of the four components of self-efficacy in academic settings (Bandura, Barbaranelli, Caprara & Pastorelli, 1996; Lopez, Lent, Brown & Gore, 1997; Zimmerman, 2000; Schunk, 2003). The four sources of information on the development of academic efficacy beliefs are reviewed below.

Performance accomplishments are based on an individual's history of performances/experiences with a given task (Bandura, 1977, 1997). Several terms have been used to describe performance accomplishments. Three examples of these terms are enactive attainments (Lindley & Borgen, 2002; Lane, Lane, & Kyprianou, 2004), personal accomplishments (Betz, 1992; Luzzo, Hasper, Albert, Bibby & Martinelli, 1999), and past success (Betz, 1992; Bandura, 1997; Lane, et al, 2004). These terms are considered to be synonymous; however, the term past success is used for the balance of this study. Pajares (2002) submits that the most influential source of academic self-efficacy beliefs is the interpreted result of one's performance. Performance accomplishments are the most influential sources of efficacy information, as they provide the most authentic evidence of an individual's ability to successfully complete a task (Bandura, 1997). Rust (2002) notes a disproportionately low self-belief with some students from non-traditional backgrounds at the undergraduate dissertation.

Bandura (1997) explains the role successful experiences play in forming efficacy beliefs. Zimmerman (1995) posits that academic self-efficacy is profoundly affected by students' earlier encounters with identical or similar tasks. Successes raise mastery expectations; repeated failures lower them, especially if the failures occur early in the course of events. After strong efficacy expectations are developed through repeated successes, the negative impact of failures is likely to be reduced. Occasional failures that are later overcome by determined effort can then strengthen persistence and efficacy expectations because of the perceived ability to overcome obstacles to achieve a mastery level. The effects of failure (and success) on personal efficacy is therefore dependent not only on the pattern of experiences, but the timing of experiences in which failures occur. Bandura (1977) further explains that giving opportunities to individuals with low self-efficacy to successfully accomplish a particular task or behaviour reduces anxiety around the task or behaviour and creates positive experience that an individual can use to increase efficacy expectations. Furthermore, if an individual is systematically exposed to a task for which he/she has low self-efficacy, he/she can generate successful experiences (Campbell & Hackett, 1986; Betz, 1992; Luzzo et al., 1999; Lane, et al, 2004).

A large body of research has demonstrated the importance of past success and its effects on efficacy beliefs. They suggest that past successful experiences are the most powerful components of academic self-efficacy (Bandura, 1982, 1997). Betz (1992) further discussed the necessity of creating successful experiences in order to improve career and academic self-efficacy as part of effective counselling of university students. Other studies have similarly shown the positive relationship between past accomplishments and reported levels of academic self-efficacy (Keyser & Barling, 1981; Lane, et al, 2004), and career self-efficacy (Dawes, Horan, & Hackett, 2000). Students who have successfully accomplished and completed dissertation process at the undergraduate level will attempt more difficult academic activities, improve on different achievement activities and persist in light of challenges that may confront the activities. There is also general notion that postgraduate students have undertaken a course work in research methods and the skills acquired could have influenced their dissertation performance during their degree programme. Their previous dissertation performances could have influence their self-efficacy beliefs toward postgraduate dissertation. Successes usually increase efficacy while failures decrease it, an infrequent failure or success following numerous successes or failures may not have much impact on self-efficacy.

High self-efficacy perceptions are also believed to make individuals engage in tasks that develop their skills and capabilities, while low-efficacy perceptions make students choose tasks that will not need development of new skills (Schunk, 1991). Motivation and efficacy are enhanced when learning progress and comprehension are perceived. Strategies may influence self-efficacy and motivation and students who believe that a new strategy can improve their performance may keep their initial motivation even if they perceive little progress if the new strategy gives a sense of control over achievement outcomes. Zimmerman and Kitsantas (2005) suggest that high self-efficacy students attribute more responsibility to themselves than to teachers. They further maintain that perceived responsibility is an important motive for the academic achievement of highly efficacious students. Students who based their self-efficacy on positive self-perceptions as excellent students received their efficacy information from their general cognitive ability. The efficacious students emphasised their own responsibility and their strategy is usually to learn how to achieve without depending on others such as peers or instructors. Self-efficacy theorists place the acquisition of skills and the mastery of academic material at the core of efforts to build and develop confidence. For this reason, instructors are wise to take as a central responsibility, the task of providing intellectual challenge.

Two, the **vicarious experience** acquired through dissertation advisors and mentors--perhaps a lecturer who came our way at just the right time--help instil self-beliefs that influence the course and direction our lives take. The ability to relate to a similar person also influences students' self-efficacy. Seeing others perform threatening activities without adverse consequences can generate expectations in observers that they too will improve if they intensify and persist in their efforts. Individuals persuade themselves that if others can do it, they should be able to achieve at least some improvement in performance. Thus, vicarious experiences are those in which an individual observes another successfully perform a given task. Bandura (1977, 1997) defines these observations as modelled behaviour. According to Schunk (2003), modelling refers to emulating one's thoughts, beliefs, actions, strategies and behaviours after those demonstrated by models. Modelling takes place when observers display new behaviours that prior to modelling had no probability of occurrence, even if the observers were motivated to accomplish such behaviours (Bandura, 1986b). There are three main factors that create good models; age and expertness, similarity between models and observers and the difficulty of tasks to be performed (Bandura, 1977, 1997).

Many students experience increase in self-efficacy vicariously, without overt performance, but by observing peer or senior models possess their similar characteristics (e.g.

age, gender, background) and are successful at attempting dissertation processes. Students are likely to have high self-efficacy and motivation to succeed at dissertation because they believe that if the person, who is like them, can do well, they also can. In the same vein, students' self-perception may also be adversely affected by the failures of models because they may associate the models' incompetence to their own. Models are separated into two types—coping and mastery. Coping models, who initially exhibit the common fears and deficiencies of students but gradually improve, are generally more effective than mastery models in raising students' self-efficacy. Conversely, mastery models demonstrate unflawed performance and high assurance from the beginning. For students who are likely to go astray and experience low levels of confidence, coping models are more likely to affect their perceived similarity and self-efficacy.

Modelling has not been studied as widely as past success but is still likely to contribute to increases in self-efficacy (Bandura, 1997; Dawes, Horan, & Hackett, 1997). For example, Hackett, Betz, Casas, and Rocha-Singh (1992) observe that individuals who have good models in conjunction with successful performance accomplishments exhibit greater increases in self-efficacy than individuals who experience only performance accomplishments. Eden and Kinnar (1991) emphasise that exposure to senior and peer models increases positive work attitudes and behaviours such as work attendance and participation in projects and places of work. Several studies have given weight to the notion that models are an important source of information in the formation of efficacy beliefs in several areas including academic skill acquisition (Pajares, 1996), occupational self-efficacy (Schyns, 2004), social self-efficacy (Anderson & Betz, 2001), mathematics/science self-efficacy (Luzzo, Hasper, Albert, Bibby & Martinelli, 1999), and athletic performance self-efficacy (Jackson & Csikszentmihalyi, 1999). Modelling has been shown to be an important means of promoting learning (successful academic experiences) and increasing academic self-efficacy (Schunk, 2003).

Bandura (1977, 1997) posits that for models to be effective as a source of information, they must be similar to the observer in characteristics, such as age, gender, ethnicity and perceived competence. Models of similar race and gender are viewed as more credible and instil stronger efficacy beliefs than models of different races and gender (Bandura, 1997). Racially similar models are more effective than those that are racially different from the observer (Mayo & Christenfeld, 1999; Schunk, 2003). However, several studies indicate lack of appropriate racially similar models as being a roadblock in the completion of university degrees in multicultural college student populations (Powers & Rossman, 1984; Tashakori &

Thompson, 1991; Mayo & Christenfeld, 1999; Jackson, Smith & Conner, 2003). It may be necessary to expose students to individuals that are successful academically and who are similar in race, gender and age.

The third influence on self-efficacy is referred to as **performance feedback** which is termed verbal persuasion by Bandura. Verbal persuasion can be described as a source of efficacy information by which an individual is led to believe she/he can successfully complete tasks in a specific domain through verbal suggestion. In company with prior achievement, the social persuasion students get from self and significant others in the form of motivation (implicit and explicit) is a considerable impact on students' academic efficacy (Wigfield, Guthrie, Tonks & Perencevich, 2004). Karl, O'Leary-Kelly, and Martocchio (1993) show that students' self-efficacy has significantly greater increases when they receive feedback.

Bandura (1977, 1997) postulates that verbal persuasion as a source of efficacy information is less influential than the two previously discussed. Bandura (1977, 1986a, 1986b, 1997) believes this to be true since verbal persuasion provides no experiential basis. However it is imperative to acknowledge the role verbal persuasion plays in influencing human behaviour and motivation. It is the most widely used and readily available source of efficacy information. Several persons report being affected by motivational speeches which increase their beliefs that they are capable of successfully performing behaviours in various settings and performance areas include athletics, competition (Orlick, 2000); supervision and training of graduate student counsellors (Bernard & Goodyear, 2004); occupational self-efficacy (Schyns, 2004); and math and science self-efficacy (Betz, 1992; Speight & Rosenthal, 1995). Knowles (1999) recognises feedback as the main gauge by which dissertation candidates and their supervisors measure whether the supervision is successful. Feedback must be timely, thorough and critical and given within a supportive personal relationship between supervisor and student. Delays in feedback consequently affect dissertation completing time (Seagram, et al, 1998). Knowles (1999) draws attention to the ethics of giving feedback and the waste of students' time if supervisors give insufficient critical feedback. The result can mean that substandard work and errors are left uncorrected and can compound. Aspland, Edwards, O'Leary and Ryan (1999) propose practical strategies which ensure regular feedback, as well as guidelines and evaluative tools.

While it is known that verbal persuasion plays a role in the formulation of self-efficacy beliefs, the attempts to demonstrate the effects of verbal suggestion are somewhat limited. Many studies look at the two main sources of efficacy information (performance

accomplishments and vicarious experiences) in conjunction with verbal persuasion (Betz, 1992; Speight & Rosenthal, 1995; Guthrie & Shwoerer, 1996; Schyns, 2004). Verbal persuasion is a means of strengthening students' beliefs in their ability to succeed academically. Students that are persuaded by others of their ability to accomplish educational tasks are more likely to exert greater effort and maintain that effort over a period of time than individuals not receiving persuasion (Bandura, 1997). Likewise, individuals that have been persuaded by others that they lack the capabilities to succeed avoid engaging in challenging academic activities and thus eliminate the possibility of creating positive efficacy beliefs (Bandura, 1977, 1997; Bandura & Cervone, 1983; Baron, 1988; Betz, 1992).

The last influence on efficacy development is the **physiological arousal** and emotional manifestations that involve the stress reactions (such as sweating, trembling, and increased heart rate), negative emotional proclivities and misinterpretations of physical states (Bandura, 1994). Emotional arousal can be described as the level of anxiety one experiences when performing behaviours in a given domain. Other terms used to describe emotional arousal include physiological states and anxiety levels. Bandura (1977, 1997) posits that stress provoking experiences and demanding situations elicit emotional arousal that might inform an individual concerning her/his competency to complete a given task. Moderate levels of emotional arousal are posited to lead to great self-efficacy. People rely on their state of emotional arousal to judge their ability to complete a task (Bandura, 1986a). Students' experience of negative physical or emotional symptoms that are believed to have originated from stress may attribute to a decrease in self-efficacy. Similarly, when students' feel less stressful or anxiety from academic demands, they may have an increase in self-efficacy (Schunk, 2004).

Bandura explains that perceived self-inefficacy leads people to approach intimidating situations anxiously, and experience of disruptive levels of arousal may further lower their sense that they will be able to perform well. However, people are much more likely to act on self-percept of efficacy inferred from mastery experiences (past successes) and social comparison of capabilities (modelling) than to rely heavily on the stirrings of the viscera. Emotional arousal has often been operationalised by researchers as anxiety (Betz, 1978; Stent, 1977; Tobias, 1976). Indeed, the emotional support and encouragement others provide can be very powerful. However, Bandura (1986b) cautioned against giving too much weight to emotional arousal as it pertains to the formulation of efficacy beliefs.

The implication of the influences of dissertation efficacy beliefs towards completing a dissertation emphasises the need for students to be armed or helped to possess strong belief in

their capabilities to accomplish the dissertation process. The qualitative study by Kluever (1997) explores personal and program experiences presumably affecting dissertation completion. 13 graduates and 9 ABD interviewed students believe there is more structure and direction associated with courses than with the independent activity required to complete a dissertation. They describe the need for self-motivation and self-direction as important attributes for successful completion of their progress.

Empirically, Faghihi, Rakow and Ethington (1999) identify self-efficacy as a predictive factor of performance in dissertation process. They surveyed 97 students from three departments within a College of Education at an urban Southern research university who had completed their course work and passed comprehensive examinations between 1987 and 1997, but had not completed their degrees by December 1997. The study focused on differences in research self-efficacy and dissertation progress among the ABDs. Faghihi et al. (1999) observe that both students' research self-efficacy and their relationships with advisors and committee members significantly contributed to dissertation progress. At the same time, none of the student background characteristics had a significant effect on dissertation progress. Davenport, Lane, Milton and William (2003) also corroborated this through a correlational study on dissertation progress. They found that the composite score of self-efficacy correlated positively and significantly with dissertation progress. Likewise, Presley (1995/1996), in her study of first-year African-American doctoral students, found students' positive views of themselves may relate to the successful completion of the doctorate, while students' negative views of themselves may relate to withdrawal. No significant difference was reported between completers and non-completers with respect to self-concept.

2.2.4 Efficacy-Triggered Processes

Self-efficacy in whatever domain has been postulated to be triggered by four main processes (Bandura, 1994). They include cognitive, motivation, affective and selection processes.

Cognitive Processes refers to the thinking processes involved in the acquisition, organisation and use of information. The cognitive processes organises human courses through thoughts thereby affecting people's beliefs in their efficacy shape, the type of anticipatory scenarios they construct and rehearse. Those with a high sense of efficacy visualise success scenarios that provide positive guides and support for performance while those with doubt in their efficacy visualise failure scenarios and dwell on the many things that can go wrong. It is difficult to achieve much while fighting self-doubt. A major function of thought is to enable people predict events and develop ways to control those that affect

their lives. Such skills require effective cognitive processing of information that contains many ambiguities and uncertainties. It requires a strong sense of efficacy to remain task oriented in the face of pressing situational demands, failures and setbacks that have significant repercussions. Indeed, when people are faced with the tasks of managing difficult environmental demands under taxing circumstances, those who are beset by self-doubts about their efficacy become more and more erratic in their analytic thinking, lower their aspirations and the quality of their performance deteriorates. In contrast, those who maintain a resilient sense of efficacy set challenging goals for themselves and use good analytic thinking which pays off in performance accomplishments.

Motivation Processes. Individuals' level of motivation is reflected in choice of courses of action, and in the intensity and persistence of effort. Self-regulation of motivation is fundamental in academic performance. Self-beliefs of efficacy play a key role in the self-regulation of motivation. Most human motivation is cognitively generated (Bandura, 1994). People motivate themselves and guide their actions anticipatorily by the exercise of forethought. They form beliefs about what they can do and anticipate likely outcomes of prospective actions. They set goals for themselves and plan courses of action designed to realize valued future. Three different forms of cognitive motivators were proposed by theorists, they include causal attributions, outcome expectancies, and cognised goals. The corresponding theories are attribution theory, expectancy-value theory and goal theory, respectively. Self-efficacy beliefs operate in each of these types of cognitive motivation. Self-efficacy beliefs influence causal attributions. People who regard themselves as highly efficacious attribute their failures to insufficient effort, those who regard themselves as inefficacious attribute their failures to low ability. Causal attributions affect motivation, performance and affective reactions mainly through beliefs of self-efficacy.

In expectancy-value theory, motivation is regulated by the expectation that a given course of behaviour will produce certain outcomes and the value of those outcomes. However, people act on their beliefs about what they can do, as well as on their beliefs about the likely outcomes of performance. The motivating influence of outcome expectancies is thus partly governed by self-beliefs of efficacy. There are countless attractive options people do not pursue because they judge they lack the capabilities for them. The predictiveness of expectancy-value theory is enhanced by including the influence of perceived self- efficacy. The capacity to exercise self-influence by goal challenges and evaluative reaction to one's attainments provides a major cognitive mechanism of motivation. Motivation theorists have

shown that explicit, challenging goals enhance and sustain motivation. Goals operate largely through self-influence processes rather than regulate motivation and action directly.

Motivation based on goal setting involves a cognitive comparison process and by making self-satisfaction conditional on matching adopted goals, people give direction to their behaviour and also create incentives to persist in their efforts until they fulfill their goals. They seek self-satisfaction from fulfilling valued goals and are prompted to intensify their efforts by discontent with substandard performances. Motivation based on goals or personal standards is governed by three types of self influences- self-satisfaction and self-dissatisfying reactions to one's performance, perceived self-efficacy for goal attainment, and readjustment of personal goals based on one's progress. Self-efficacy beliefs determine the personal goals people set; how much effort they expend; how long they persevere in the face of difficulties and their resilience to failures. When faced with obstacles and failures, people who harbour self-doubts about their capabilities slacken their efforts or give in quickly. Those who have a strong belief in their capabilities exert greater effort when they fail to master the challenge. Strong perseverance contributes to performance accomplishments

Affective Processes refer to processes regulating emotional states and elicitation of emotional reactions. Students' beliefs in their academic coping capabilities impinge on level of stress and depression they experience in threatening or difficult situations, as well as their level of motivation. Perceived self-efficacy to exercise control over stressors plays a central role in anxiety arousal. People who believe they can exercise control over pressure do not invoke disturbing thought patterns. However, students who believe they cannot manage academic pressure experience high anxiety arousal. They are preoccupied with their coping deficiencies. In their perceptions, the academic environment is fraught with danger. They magnify the severity of possible threats and worry about things that rarely happen. Through such inefficacious thinking, they distress themselves and impair their level of functioning. Perceived coping self-efficacy regulates avoidance behaviour as well as anxiety arousal. The stronger the senses of self-efficacy, the bolder people are in taking on tasking and threatening activities.

Anxiety arousal is affected by individual's perceived coping efficacy and perceived efficacy to control disturbing thoughts. Perceived self-efficacy to control thought processes is a key factor in regulating thought produced stress and depression. It is not the sheer frequency of disturbing thoughts but the perceived inability to turn them off that is the major source of distress. Perceived coping self-efficacy and thought control efficacy operate jointly to reduce anxiety and avoidance behaviour.

Social cognitive theory prescribes mastery experiences as the principal means of personality change. Guided mastery is a powerful vehicle for instilling a robust sense of coping efficacy in people whose functioning is seriously impaired by intense apprehension and phobic self-protective reactions. Mastery experiences are structured in ways to build coping skills and instill beliefs that one can exercise control over potential threats. Intractable phobic, of course, are not about to do what they dread. One must, therefore, create an environment so that incapacitated phobic can perform successfully despite themselves. This is achieved by enlisting various performance mastery aids. Feared activities are first modeled to show people how to cope with threats and to disconfirm their worst fears. Coping tasks are broken down into subtasks of easily mastered steps. Performing feared activities together with the therapist further enables phobics to do things they would resist doing by themselves. Another way of overcoming resistance is to use graduated time. Phobics will refuse threatening tasks if they will have to endure stress for a long time. But they will risk them for a short period. As their coping efficacy increases the time they perform the activity is extended. Protective aids and dosing the severity of threats also help to restore and develop a sense of coping efficacy.

The mastery aids are withdrawn to verify that coping successes stem from personal efficacy rather than from mastery aids after functioning is fully restored. Self-directed mastery experiences, designed to provide varied confirmatory tests of coping capabilities, are then arranged to strengthen and generalise the sense of coping efficacy. Once people develop a resilient sense of efficacy they can withstand difficulties and adversities without adverse effects (Bandura, 1994). Guided mastery treatment achieves widespread psychological changes in a relatively short time. It eliminates phobic behaviour and anxiety and biological stress reactions, creates positive attitudes and eradicates phobic ruminations and nightmares. Evidence that achievement of coping efficacy profoundly affects dream activity is a particularly striking generalised impact.

A low sense of efficacy to exercise control produces depression as well as anxiety. It does so in several different ways. One route to depression is through unfulfilled aspiration. People who impose on themselves standards of self-worth they judge they cannot attain drive themselves to bouts of depression. A second efficacy route to depression is through a low sense of social efficacy. People who judge themselves to be socially efficacious seek out and cultivate social relationships that provide models on how to manage difficult situations, cushion the adverse effects of chronic stressors and bring satisfaction to people's lives. Perceived social inefficacy to develop satisfying and supportive relationships increases

vulnerability to depression through social isolation. Human depression is cognitively generated by dejecting ruminative thought. A low sense of efficacy to exercise control over ruminative thought also contributes to the occurrence, duration and recurrence of depressive episodes.

Other efficacy-activated processes in the affective domain concern the impact of perceived coping self-efficacy on biological systems that affect health functioning. Stress has been implicated as an important contributing factor to many physical dysfunctions. Controllability appears to be a key organising principle regarding the nature of these stress effects. It is not stressful life conditions per se, but the perceived inability to manage them that is debilitating. Thus, exposure to stressors with ability to control them has no adverse biological effects, but exposure to the same stressors without the ability to control them impairs the immune system. The impairment of immune function increases susceptibility to infection contributes to the development of physical disorders and accelerates the progression of disease.

Biological systems are highly interdependent. A weak sense of efficacy to exercise control over stressors activates autonomic reactions, catecholamine secretion and release of endogenous opioids. These biological systems are involved in the regulation of the immune system. Stress activated in the process of acquiring coping capabilities may have different effects than stress experienced in aversive situations with no prospect in sight of ever gaining any self-protective efficacy. There are substantial evolutionary benefits to experiencing enhanced immune function during development of coping capabilities vital for effective adaptation. It would not be evolutionarily advantageous if acute stressors invariably impaired immune function, because of their prevalence in everyday life. If this were the case, people would experience high vulnerability to infective agents that would quickly do them in. There is some evidence that providing people with effective means of managing stressors may have a positive effect on immune function. Moreover, stress aroused while gaining coping mastery over stressors can enhance different components of the immune system (Bandura, 1997).

There are other ways in which perceived self-efficacy serves to promote health. Lifestyle habits can enhance or impair health. This enables people to exert behavioural influence over their vitality and quality of health. Perceived self-efficacy affects every phase of personal change--whether people even consider changing their health habits; whether they enlist the motivation and perseverance needed to succeed in any academic activity should they choose to do so and how well they maintain the habit changes they have achieved. The stronger the perceived self-regulatory efficacy, the more successful people are in reducing

health-impairing habits and adopting and integrating health-promoting habits into their regular lifestyle.

Selection Processes. From the foregoing, efficacy-activated processes have been perceived as those that enable people to create beneficial environments and to exercise some control over those activities they encounter everyday. Doctoral students are partly the product of their environment. Therefore, beliefs of personal efficacy can shape the course of their lives which will be influenced by the types of activities and environments they choose. They can avoid activities and situations they believe exceed their coping capabilities. But they readily undertake challenging activities and select situations they judge themselves capable of handling. Cumulatively, their choices play a vital role at cultivating different competencies, interests and social networks that determine life courses. Any factor that influences choice behaviour can profoundly affect the direction of personal development. This is because the social influences operating in selected environments continue to promote certain competencies, values, and interests long after the efficacy decisional determinant has rendered its inaugurating effect.

The higher the level of doctoral students' perceived self-efficacy, the wider the range of research options they seriously consider, the greater their interest in them, the better they prepare themselves educationally for their academic pursuits, the greater their success. The choice of career in the academia forms a good structure and part of doctoral students lives and thus, provides them with a major source of personal growth.

2.3 Dissertation Anxiety

As the concept of academic self-efficacy emerged as a comprehensive explanation for poor academic achievement, researchers looking at the effects of anxiety, or emotional arousal, sought to lend support to Bandura's notion of emotional arousal as a source of efficacy information. Matsui, Matsui, and Ohnishi (1990) found emotional arousal as anxiety that plays a role in the formation of academic efficacy. Other researchers showed that levels of emotional arousal play a key role in the formation of academic efficacy beliefs across subjects. It is opined that most of the problems students are confronted with are concentrated on academic anxiety followed by anxiety regarding their future (Reddy, 1989).

Research indicates direct connections between emotions, learning and performance. Cognitive psychologists have shown considerate attention in the relationship that exists between cognition and emotion. They noted that cognition, emotion and personality are not entirely independent but are related (Crowl, Kaminsky & Podell, 1997). Sometimes, thinking clearly can ease emotional problems. In addition, emotion can influence thinking. In a peak

emotional state, one may think more clearly. Of course, the opposite is also true. Emotion sometimes inhibits thinking ability. Anxiety is an emotion conceived of as a hypothetical construct mediating certain situational stimuli and various specifiable responses. The stimulus situation that evokes the anxiety reaction is assumed to be such that the individual anticipates a strong threat to his/her coping resources and self-esteem (Gaudry & Spielberger, 1971).

Biologically, anxiety is the body's way of communicating that there is something in the environment in need of your attention. It is basically a series of biochemical changes in one's brain and body, such as an increase in adrenaline (causing the heart to beat faster) and a decrease in dopamine (a brain chemical that helps to block pain). These changes result in a state of heightened attention to the source of the anxiety. High levels of anxiety cause the body to prepare to fight or run away from the perceived threat – usually referred to as the "fight-or-flight response." According to Sarason in Haris and Coy (2003), anxiety is a basic human emotion consisting of fear and uncertainty that typically appears when an individual perceives an event as being a threat to the ego or self esteem. The phenomenon of academic anxiety is real, occurring in all learners. According to Verma and Gupta (1990), dissertation anxiety could be caused due to assessment system, burden of research and attitudes of significant others and lecturers or advisors. Moreover, this is a generation where everybody lives, breathes and eats competition. The all-pervasive competitive atmosphere, be it social or academic, encourages students to constantly compare themselves with their peers. Consequently, their self-image is in a continual state of redefinition. Spielberger's theory of anxiety describes anxiety as an emotional state consisting of feeling, tension, apprehension, nervousness, and worry with activation or arousal of the autonomic nervous system, these are differentiated as state and trait anxiety (Spielberger, 1966).

There are different factors that can contribute to the development of academic anxiety. According to Spielberger & Sarason (1989), one factor is self-concept, which is the overall sum of self-referent information that an individual has processed, stored and organised in a systematic manner. The self-concept can be viewed as an image of oneself. Worry concerning suffering a reduction of the self-image, particularly in the eyes of peers leads to higher academic anxiety levels (Freidman & Bendas-Jacob, 1997). Another factor that contributes to the development of academic anxiety is self-awareness. It is defined as the feeling of being observed or evaluated by others. Other people's perception of the individual may have an impact on performance (Levitt, 1980). Anxious students have experience of cognitive deficits like misapprehension of information or blocking of memory and recall. It is

believed that heightened levels of sensitivity, pressures, perfectionism and expectations of doing well, from self and peers, parents and significant others all contribute to an intelligent student experiencing dissertation anxiety (Silverman, 2003). Excessively high expectations from family and community can all contribute to such feelings of anxiety.

Sustained stress and negative emotions can inhibit the brain's ability to function properly. Such feelings can impair high cognitive processes such as attention, memory recall, reasoning, problem solving and creativity, thus resulting in less than optimal academic performance (McCraty, 2005). Research also supports the position that brain functions can be improved with positive emotions. When examining the research, it indicates that students suffering from dissertation anxiety experience negative effects in many areas. Most students experience some level of anxiety towards any academic activity. However, when anxiety begins to affect postgraduate students negatively in dissertation performance it has become a problem. Research has documented that dissertation anxiety can have either facilitating or debilitating effect on a student. Individuals with low levels of anxiety maintain their focus throughout information processing and retrieval. Because they do not experience cognitive breakdowns, these individuals stay on the dissertation process, complete it and present it to the faculty (Wigfield & Eccles, 1989). Low-anxious individuals are confident and are less likely to have disruptive thoughts while completing the dissertation process.

The debilitating effects of academic anxiety can hamper the performance of all types of learners (Trent & Maxwell, 1980). Academic related anxiety has even deemed a potential cause of "invisible disability" (Hill & Wigfield, 1984; Cheek, Bradley, Reynolds & Coy, 2002). Dissertation anxiety can manifest itself in different ways and in varying degrees among dissertation candidates, with effects including intense feelings of worry about the dissertation process, fear or doubt about meeting a set target or deadline and apprehension concerning dissertation presentation (Supon, 2004). It can lead to withdrawal, overactive behaviour, attrition, procrastination and other depressive symptoms (Cheek et al, 2002).

Efforts have been made by some researchers to unravel why students actually experience the onset of dissertation anxiety. Their efforts have led to the development of three categories of academic anxiety among students. The first category of anxious students experiences dissertation anxiety as a result of lack of competence. They lack proper research skills and are simply unable to grasp the technicalities involved in writing and presenting a dissertation. The second category experiences dissertation anxiety from fear of failure. Often they possess strong research skills and are well prepared for dissertation, yet they are nagged by the fear of failure. This category of students could also

comprise of individuals with perfectionist tendency. Simon (2007) opines that many gifted learners and potential academics will fall into this group. The third category experiencing anxiety does so as a result of thinking they have adequate skills that can sustain them through the dissertation process when in reality they do not, therefore, they realise during the process and presentation situation that they are not prepared for academic assessment (Supon, 2004).

Meanwhile, Speilberger (1983) reports two forms of anxiety: state anxiety – a response to a particular stimulation or set of circumstances, and trait anxiety – an intrinsic characteristic of the person. Anxiety is perceived as a state of apprehension, uncertainty and fear resulting from the anticipation of a realistic or fantasised threatening event or situation, often impairing physical and psychological functioning. In short, highly anxious individuals will overestimate the likelihood and consequences of negative evaluation compared to low anxious individuals. Performance is therefore more likely to be impaired in situations involving evaluation while there are clear cognitive differences between high and low anxious performers. The highly anxious individual does not necessarily demonstrate impaired performance or performance that is inferior to that of low anxious individuals (Strahan & Conger, 1998).

Academic anxiety has four components – worry, emotionality, task-generated interference and study skills deficits but has been overwhelmingly identified as a two-factor construct, consisting of the cognitive (manifesting as worry) and emotional (or affective) components (Morris, Davis, & Hutchings, 1981; Schwarzer, 1986). The predominant view of the relationship between these two factors suggests that the cognitive component directly impacts performance (Hembree, 1988; Bandalos, Yates, & Thorndike-Christ, 1995), while the emotionality component is related but does not directly influence assessment performance (Sarason, 1986; Williams, 1991). Literatures on test anxiety and various academic domains have indicated that negative relationship consistently exist and that fear and anxiety are often the causes of students failing to complete academic activities including dissertations (Hembree, 1988; Shelton & Mallinckrodt, 1991; Schwarzer, Babler, Kwiatek, Schroder, & Zhang, 1997; McGrath, 2002; Griffin, n.d.; Adeyemo & Onongha, 2010). According to Sanford (1993), it is evident that many people believe some students face considerable anxiety toward the dissertation process.

Anxiety over dissertation performance has also been related to low efficacy belief (Yildirim, & Ergene, 2003; Yildirim, Genctanirim, Yalcin, & Baydan, 2008), all of which have an adverse effect on academic achievement (Zeidner, 1990). Although theories of academic anxiety provide important insights regarding the process like interference model,

deficits model, or information processing model by which anxiety affects dissertation performance, while much of the research on test anxiety has focused on the differential impact of emotionality and worry factors of test anxiety on performance (Hembree, 1988; Cassady, & Johnson, 2002; Parks – Stamm, Gollwitzer, & Oettingen, 2010). Emotionality refers to the physiological reactions such as arousal, trembling, sweating that are experienced in an evaluative situation. Worry, on the other hand is the cognitive manifestation of academic anxiety.

Studies examining the impact of the emotionality factor on performance, however, suggest lack of consistency in findings. Somewhat unexpectedly, majority of the studies have found that the emotionality factor (i.e., physiological arousal) has weak or insignificant effects on performance (Hembree, 1988). According to the Yerkes-Dodson law, an inverted U-shaped function relates performance to arousal, with the peak of performance occurring at some intermediate level of arousal. In consistence with this theory, Cassady and Johnson (2002) provide evidence that moderate, but not low or high levels of physiological arousal were related to higher exam performance. Most other studies, however, have failed to support this finding (Sarason, 1984; Hembree, 1988; Hong, 1999; King, Ollendick, & Prins, 2000).

In contrast to these mixed findings, the worry component of test anxiety has been shown to have an inverse relationship with performance; a relationship that has been observed among children as well as adults (Hembree, 1988; Hong, 1999; King et al., 2000; Cassady & Johnson, 2002; McIlroy & Bunting, 2002); and in both genders (Sowa & LaFleur, 1986). Moreover, these studies have also reliably shown that worry is manifested as task debilitating cognitions, including more negative self-evaluations and off-task thoughts and fewer positive self-evaluations. McCroskey and Richmond (1990a) indicate that people who experience high levels of fear or anxiety about academic tasks tend to avoid or withdraw from academic activities. Reports on the experiences of others who have experienced the dissertation process have indicated that students who manifest anxiety towards the dissertation process do experience procrastination toward the dissertation (Ebeltoft-Kraske, 1996; Carbonell, 2000). This is a familiar problem which involves the needless delaying of tasks to the point of experiencing subjective discomfort. 95% of students in tertiary institutions were reported to have engaged in procrastination provoked by evaluation anxiety (Ellis & Knaus, 1977). Procrastination results in detrimental academic performance, including poor grades and course withdrawal (Semb, Glick, & Spencer, 1979), and the tendency for students to procrastinate increases as long as they are involved in academic activities. The consequences of such anxiety are lack of assertion, fear of the consequences

of success, perceived aversiveness of the task and overly perfectionist standards about competency. One difference between students who procrastinate because of aversiveness of the task and those who procrastinate because of fear of failure is that the latter also report high anxiety and low self-esteem.

An examination of the items constituting the fear of failure factor further highlights this finding; these items are indicative of evaluation anxiety and low self-confidence. Spielberger and Sarason (1985) also opine that the learning environment can provide a level of arousal that is in relation to the learner's adaptation. This arousal level is the determinant of whether a positive affective experience will result. If an individual's experience is negative, then the academic anxiety level will be high leading to low performance. Conversely, if an individual's experience is positive, then the academic anxiety level will be low leading to high performance. Overall, it is important to consider motives, aptitudes, cognitive assessment of the task and past experience when analysing academic anxiety and how it relates to performance.

Cognitive complexities and emotional intensities were noted by Silverman (1997) in relation to academic performance. Barlow (2000) also asserts that anxiety is a unique and coherent cognitive-affective structure within our defensive motivational system. They explain that anxiety can be more of an affective need for gifted earners than for their non-gifted peers. At the heart of this structure is a sense of uncontrollability that is focused on future threats, danger or other potentially negative events. Accompanying this negative affective state is a strong physiological or somatic component that may reflect activation of distinct brain circuits such as the corticotrophin releasing factor system. Anxiety generally is a feeling of mingled dread and apprehension about expectations without a specific cause for such fear. Anxiety is therefore reflected by an individual's disposition to react in certain ways to situations judged stressful or dangerous (Stipek, 1998). The more anxious one is when facing a stressful situation, the more intense will be one's reactions.

Previous anxiety research suggests that there are roughly two types that can be experienced at different psychological levels (Spielberger, 1966). In Spielberger's conceptualisation, individuals with high levels of anxiety generally hold heightened levels of trait anxiety, but in evaluative situations, the state anxiety also elevates. Hancock concludes that students with high level of anxiety show significantly less motivation in classrooms perceived as highly evaluative compared to students with low of level anxiety (Hancock, 2001). Anxiety can impair performance in three ways: disruption of attention leading to interference with normal information processing (i.e. high test or performance anxious people

often pay more attention to their own anxiety in test or performance situations than to the task); production of off-task, incompetent or competing behaviours and behavioural selection effects, such as reducing one's effort or choosing less competent behaviours. Anxiety also influences one's self-efficacy beliefs. Speilberger (1979) observes that students with high-test anxiety tend to blame themselves for their poor performance, while low test-anxious students do not. He also observes that high test-anxious students apparently respond to examination stress with intense emotional reactions and negative self-centred thought that impair the performance, while those low in test anxiety react with increased motivation and concentration. However, there are stable individual differences in the degree to which anxiety is manifested in any given situation. A disruption or disorganisation of effective problem-solving and cognitive control, including difficulty in thinking clearly, can also lead to test anxiety (Freidman & Bendas-Jacob, 1997).

A little anxiety may help keep us alert and make the adrenaline flow, but too much anxiety prevents us from doing our best. According to Hansen (1977) anxiety exerts a feeling of tension and fore-bolding that can obstruct clear thinking. He opines that at one time or the other, we have all experienced anxiety related to taking test. If students experience anxiety while taking tests and in all other school activities, school will become a highly unpleasant place for them and their academic performance will suffer (Crowl, Kaminsky & Podell, 1997). However, Wigfield and Eccles (1989) suggest that anxiety may be encouraged whenever there are pressures to perform, severe consequences for failure and competitive comparisons among students. This position substantiates the assertion made by Williams (1976) that anxious students can outperform others when some of the personal costs of failing are removed. High level of anxiety also interferes with concentration and memory, which are critical for academic success.

Students with high level of anxiety achieve low academic performance (Luigi, Francesca, Maria, Eleonora, Valentina & Benedetto, 2007; McCraty, 2007). Feeling discomfort and anxious in the learning situation does not enhance learning of any kind. The anxiety's psychological symptoms among students include feeling nervous before a study class, panicking, going blank during a test, feeling helpless while doing assignments or lack of interest in difficult subjects whereas the physiological symptoms include sweaty palms, racing heartbeat or an upset stomach (Vitasari, Awang, Othman, &Abdul Wahab (2010). Academic anxiety is, to a certain extent, unavoidable, necessary and even productive, since it motivates students to spend time preparing for and taking tests. However, when academic anxiety elevates above this productive lever, negative outcomes such as loss of concentration

during study time, procrastination (making students become immobilised), hampered memory and below expectation performance in academic tasks.

Researchers have suggested two patterns in the relationship with anxiety and academic achievement in students that consistently under- perform. The first pattern suggests that students who report feeling a high amount of nervousness and anxiety (emotionally over-aroused) about school and schoolwork will under-perform (Matsui, Matsui, & Ohnishi, 1990; Anderson & Betz, 2001). Second, many students that are typically emotionally under-aroused (bored) perform below expectations. There are two groups of individuals that fit into this pattern. The first group is comprised of individuals that have failed so frequently that they experience extreme anxiety, or over-arousal, about schoolwork and perform well below age/grade norms (Seifert, 2004). The second group of students consists of individuals that are capable of performing well but seem to be under-challenged and thus perform well below their levels of capability due to boredom (Dweck, 1986; Jarvis & Seifert, 2002). Students that are more often than not emotionally over or under-aroused typically have poor academic outcomes.

The apparent relationship between emotionality and academic performance is such that emotionality impacts dissertation performance only under situations where the individual also maintains a high level of cognitive academic anxiety (Deffenbacher, 1980; Hodapp, Glanzmann, & Laux, 1995). Although emotionality has traditionally not been viewed as central to performance, recent work has demonstrated that emotionality may be the triggering mechanism for self-regulation strategies that facilitate performance (Schutz & Davis, 2000). Anxious students usually have to divide their attention between task-related cognition and self-related cognition, making cognitive performance less efficient (Eysenck, 1979; Wine, 1982). As a result, it takes anxious learners longer time to master and become skilled at academic tasks compared with relaxed students. Anxiety is associated with distracting, self-generated cognition (such as excessive self-evaluation), and worry over potential failure and concern over the opinions of others. Price (1991) submits that anxious students have lower efficiency than relaxed students. This class of students usually does not perform as well as they should at this stage because the output stage of the production and demonstration of their academic resources are hampered.

The cognitive-behavioural point of view is currently the most influential in academic anxiety research (Sarason, Sarason & Pierce, 1990). For example, Wine's (1971) direction of attention hypothesis, emphasises the attentional focus of the high and low academic-anxious individuals. A person with high dissertation-anxiety divides attention between self-relevant

and task relevant factors under evaluation condition of dissertation defence (Sarason, Sarason & Pierce, 1990). Thus, the highly anxious person is more frequently focused on self-evaluative, self-deprecatory thinking in an assessment situation (Deffenbacher, 1980). This self-focused cognitive activity occurs during task-performance and it diverts attention away from the task and relevant performance cues undermining effective task performance. Attention at any given instance is directed either toward the self or toward external events, just as the highly academic anxious are assumed to divide attention between the self and the task in evaluative situations. Consequently, the self-focused attention typically provides negative effect, since self-attention often makes people aware they fall short of their standards.

Scholars have identified sources of anxiety in relation to dissertation process to include anxiety about presentation of knowledge discovered under an evaluative atmosphere. Presentation anxiety is aimed at student taking class presentation and public delivery and defence of their discovery. Research has shown that anxiety has significant negative effects on an individual's communication (Murugesan, 2005). Anxiety associated with giving presentation is an issue that is obvious in university based setting with reasonable frequency. Performing in front of a group, other students, colleagues and lecturers is a difficult part of the student experience and speaking in public can unsettle or even frighten some students. Presentation is considered to be of paramount importance to postgraduate students, though Horwitz (cited in Murugesan, 2005) alludes to the fact that anxious students can avoid studying and in some cases skip classes entirely. According of Krannich in Brenda and Tillson (2007), the fear of delivering a speech or presentation ranks as the number one fear among most people, including students. Bishop in Elliot and Joyce (2005) reports that 35% of the students surveyed were identified with public speaking anxiety. The high level of presentation anxiety has impact on students' performance. Murugesan (2005) suggests that students can avoid presentation anxiety through adequate preparation and practice.

Anxious students characteristically perform more poorly under evaluative and stressful situations than low-academically anxious persons. However, highly anxious individuals usually perform at least as well as those low in academic anxiety if the situation is not evaluative or stressful (Wine, 1971; Sarason, 1980). Kazeem (1973) observes that female university students in scientifically and literary disciplines do not show a systematic connection between anxiety trait and academic achievement, as the relationship was curvilinear. However, Othman (1975) observes that academic achievement does not differ with anxiety; it differs with the variance of interaction between the level of anxiety and the

experimental situation. Meanwhile, Fazey and Hardy (1988) present a model that the actual level of competence, low self-efficacy, negative expectancies, high cognitive anxiety and high physiological arousal combine to produce a performance disaster. The fact that so many factors are involved might explain why such disasters happen rarely. Recovery appears to depend primarily on a significant drop in physiological arousal.

Another anxiety source which is relevant to dissertation process is associated with the use of the library. Expectedly, every postgraduate student is required to use the library in the course of his/her study. The term library anxiety was first used by Mellon in 1986, to describe the sense of fear and anxiety towards using the library among students (Goliath, 2007). Theory of library anxiety proposes that when students are confronted with the need to gather information in the library, many become so anxious that they are unable to approach the problem logically and effectively. Further, compared to low anxious students, high anxious students often have low self perception about their own ability to effectively use the library in general. Library anxiety is recognised as negative experiences among university students, the previous study reported that between 75% and 85% of undergraduate students experience uncomfortable levels of library anxiety (Qun & Anthony, 2002).

Dissertation anxiety is also rooted in the apprehensive and pessimistic (negative) feelings writers have when they attempt to produce ideas and words. These feelings are informally referred to as “writing anxiety" and "writer's block". Hjortshoj (2001) describes the phenomenon as situational rather than psychological attributes and that people are not born anxious writers; rather, they become anxious or blocked through negative or difficult experiences with writing. With the realisation of the fact that writing anxiety clearly negatively affects writing performance (Smith, 1984; Pajares & Johnson, 1994), researchers and practitioners became more sensitive to this phenomenon. In the related literature, the sources of writing anxiety have been detected as stemming from an individual’s writing ability, the degree of preparation to complete the writing task, the fear of being assessed and judged on the basis of writing tasks, and the mixed messages students receive from their teachers (Daly & Miller, 1975a, 1975b; Fox, 1980; Raisman, 1982; Smith, 1984; Pajares & Johnson, 1994; Leki, 1999). These sources are of utmost importance to achieve a better understanding of writing anxiety. It is a possibility stated in the literature that students who suffer from writing anxiety are not skillful writers and their anxiety level reflects their awareness of this problem. This category of students may avoid writing and writing instruction, thus neglecting chances to improve their writing skills. They may take less risk in writing and may not be straightforward and clear when they write (Smith, 1984). Another

major source of writing anxiety mentioned in the literature is the fear of being evaluated and judged on the basis of writing ability and proficiency. A great deal of educational testing that students experience takes place by way of writing. Leki (1999) while considering writing anxiety experienced by highly skilled writers puts forward a reciprocal interaction between skills and anxiety.

Many studies showed that students with high test anxiety performed poorly in tests compared to students with low test anxiety (Sieber, O'Neil & Tobias, 1977; Tobias, 1987). Since research findings suggest that high anxiety interferes with the cognitive processes that control learning, procedures for reducing the anxiety level have been investigated. For example, Deutsch and Tobias (1980) observe that highly anxious students who had options to review study materials (e.g., videotaped lessons) during learning showed a higher achievement than other highly anxious students who did not have the review option. Under an assumption that anxiety and academic skills have complementary effects, Tobias (1987) proposed a research hypothesis, anxious students with poor study skills would learn optimally from a programme addressing anxiety reduction and study skills training. On the other hand, anxious students with effective academic skills would profit optimally from programmes emphasising anxiety reduction without the additional study skill training.

2.4 Emotional Intelligence

The present study assumed that individual's emotional experience and reaction is an important moderator in his or her self-belief and feeling toward academic activity of dissertation. Early theorists such as Thorndike and Gardner paved way for contemporary experts in the field of emotional intelligence. Meanwhile, over the past decade, emotional intelligence has been the subject of debate regarding its conceptual definition, its empirical relationship to personality and traditional cognitive abilities, and how best to measure the construct. Salovey and Mayer (1990) initially proposed a definition of emotional intelligence as a set of skills and abilities contributing to the appraisal of emotions, the regulation of emotions, and the use of emotions in reasoning. Since then, other researchers have proposed alternative theories (Epstein & Meier, 1989; Goleman, 1995, 1998; Bar-On, 1997). While some of the differences in these theories may appear due to differences in the level of focus (Epstein, 1998; Mayer, Salovey, & Caruso, 2002), many of the conceptual disparities are due to differences in the scope of the definition.

Mayer, Salovey, and Caruso (2000) assert that there are two basic classes of emotional intelligence models – mixed and ability models. Models that incorporate aspects of the original definition of emotional intelligence and aspects of personality are classified as

mixed models of emotional intelligence. Models that propose a pure ability definition of emotional intelligence are considered ability models. Petrides and Furnham (2000) also suggest that there are two types of models of emotional intelligence; trait models and information processing models. These authors argue that trait models of emotional intelligence focus on behavioural consistency across situations assess typical behaviour rather than maximal behaviour and include vague concepts such as optimism or impulsivity. In contrast, information processing models of emotional intelligence are more explicit in the relationships between emotional intelligence and cognitive ability.

Both of these classifications also propose that the measurement method is important to categorising new and extant models of emotional intelligence. Mayer et al. (2000) assert that while mixed models use self-reports to assess an individual's emotional intelligence, an ability model requires the use of task-based assessment procedures. They liken self-report methods of assessing emotional intelligence to self-report of intelligence in general, which is to say, these reports are not likely to be accurate. Petrides and Furnham (2000) extend this argument one step further by stating the measurement method defines the model. If a measure of emotional intelligence is self-report, then it must be assessing trait emotional intelligence. However, given the lack of strong evidence supporting the hypothesis that emotional intelligence is an intelligence in the same manner as verbal or spatial ability, (Roberts, Zeidner, & Matthews, 2001), the importance placed on the measurement method in defining a model of emotional intelligence by these authors may be inappropriate at this time.

Trait Models: Trait models of emotional intelligence attempt to isolate personality attributes or personal tendencies that are associated with high levels of emotional intelligence, therefore, they are not technically models of emotional intelligence, but models that link emotional abilities to our existing understanding of personality. Trait emotional intelligence is defined as a constellation of emotional self-perceptions located at the lower levels of personality hierarchies and measured via the trait emotional intelligence questionnaire (Petrides, Pita, & Kokkinaki, 2007). The domain of trait emotional intelligence indicates that people with high levels of emotional intelligence are likely to be habitually

- Assertive
- Confident
- Controlled
- Disciplined
- Driven to achieve
- Emphatic

- Energetic
- Organised
- Optimistic
- Sociable

There should be no doubt that the operational definition of emotional intelligence as presented by the trait model opposes Bar-On's, Goleman's, and Salovey and Mayer's definitions, instruments and models. Consequently, it is impossible to meaningfully group with any of them, least of all under a competence label. Indeed, it is unclear how such a label can be applied to any of the models discussed in Cherniss (2010) because they all encompass salient intrapersonal components. How are we to obtain competence judgments concerning a typically developed individual's intrapersonal emotional ''abilities'' when that individual is the only person with direct access to the information that is necessary for making such a judgment? Trait Emotional Intelligence remains the only operational definition in the field that recognises the inherent subjectivity of emotional experience. The trait emotional intelligence facets are personality traits, as opposed to competencies or mental abilities or facilitators. This is also corroborated by research revealing that the same genes that are implicated in the development of individual differences in the Big Five personality traits are also implicated in the development of individual differences in trait emotional intelligence (Vernon, Villani, Schermer, & Petrides, 2008).

Ability Model of Emotional Intelligence: Peter Salovey and John Mayer first coined the term "emotional intelligence" in 1990 (Salovey & Mayer, 1990) and have since continued to conduct research on the significance of the construct. Their pure theory of emotional intelligence integrates key ideas from the fields of intelligence and emotion. From intelligence theory comes the idea that intelligence involves the capacity to carry out abstract reasoning. From emotion research appears the notion that emotions are signals that convey regular and discernable meanings about relationships and that a number of basic emotions are universal (Mayer, Salovey, & Caruso, 2002). They propose that individuals vary in their ability to process information of an emotional nature and in their ability to relate emotional processing to a wider cognition. They then posit that this ability is seen to manifest itself in certain adaptive behaviours.

Mayer and Salovey's conception of emotional intelligence is based within a model of intelligence, that is, it strives to define emotional intelligence within the confines of the standard criteria for a new intelligence (Mayer, Salovey, Caruso, & Sitarenios, 2003). It proposes that emotional intelligence is comprised of two areas: experiential (ability to

perceive, respond, and manipulate emotional information without necessarily understanding it) and strategic (ability to understand and manage emotions without necessarily perceiving feelings well or fully experiencing them). Each area is further divided into two branches that range from basic psychological processes to more complex processes integrating emotion and cognition. The first branch, *emotional perception*, is the ability to be self-aware of emotions and to express emotions and emotional needs accurately to others. Emotional perception also includes the ability to distinguish between honest and dishonest expressions of emotion. The second branch, *emotional assimilation*, is the ability to distinguish among the different emotions one is feeling and to identify those that are influencing their thought processes. The third branch, *emotional understanding*, is the ability to understand complex emotions (such as feeling two emotions at once) and the ability to recognise transitions from one to the other. Lastly, the fourth branch, emotion management, is the ability to connect or disconnect from an emotion depending on its usefulness in a given situation (Mayer & Salovey, 1997).

Mixed Models of Emotional Intelligence. Bar-On's model of emotional intelligence relates to the potential for performance and success, rather than performance or success itself, and is considered process-oriented rather than outcome-oriented (Bar-On, 2002). It focuses on an array of emotional and social abilities, including the ability to be aware of, understand, and express oneself, the ability to be aware of, understand, and relate to others, the ability to deal with strong emotions, and the ability to adapt to change and solve problems of a social or personal nature (Bar-On, 1997). Bar-On further posits that emotional intelligence develops over time and that it can be improved through training, programming and therapy (Bar-On, 2002).

In his model, Bar-On outlines five components of emotional intelligence: intrapersonal, interpersonal, adaptability, stress management, and general mood. Within these components are 15 sub-components, all of which were operationalised through his Emotional Quotient Inventory (EQ-i), which is a self-assessment of 15 different aspects of emotional intelligence that blend abilities, traits and skills;

- Self-regard—self-confidence (trait) grounded in an accurate knowledge of self
- Emotional self-awareness—the ability to know and fully understand own emotions
- Assertiveness—a tendency (trait) to stand up for yourself and what you believe to be right in situational appropriate ways (non-cognitive skill).
- Independence—an internal locus of control (trait)
- Self-actualisation—a strong achievement drive (trait)

- Empathy— a state of being attuned to others (trait) and reading how they feel (ability)
- Social responsibility—being conscientious (trait) and fulfilling obligations to the groups to which you belong
- Interpersonal relationships—a host of non-cognitive skills
- Stress tolerance—the ability to handle intense emotions coupled with a tendency to be emotionally stable (trait)
- Impulse control—the ability to control impulses coupled with a tendency to be organised and show a high level of self-discipline (traits)
- Reality testing—the ability to reframe your thoughts and feelings.
- Flexibility—the ability to adopt new ways of thinking coupled with the tendency to be open to experience (trait).

Bar-On hypothesises that those individuals with higher than average E.Q.'s are in general successful in meeting environmental demands and pressures. He also notes that deficiency in emotional intelligence can mean lack of success and the existence of emotional problems including anxiety. Problems in coping with one's environment is thought, by Bar-On, to be especially common among those individuals lacking in the subscales of reality testing, problem solving, stress tolerance and impulse control. In general, Bar-On considers emotional intelligence and cognitive intelligence to contribute equally to a person's general intelligence, which then offers an indication of one's potential to succeed in life (Bar-On, 2002).

The second category of mixed model of emotional intelligence was presented by Daniel Goleman, a psychologist and science writer who was inspired by the findings of Salovey and Mayer in the 1990's; he began to conduct research on emotional intelligence and eventually wrote a book in 1995. The landmark book familiarised the public and private sectors with the idea of emotional intelligence. Emmerling and Goleman (2003) explain that a learnable skill (such as architectural drawing) is often rooted in a non-learnable ability (such as spatial intelligence). An apt analogy is that while we can all learn to develop our sporting prowess, some people have more natural sporting ability than others.

Goleman's model outlines five main emotional intelligence constructs. The first, self-awareness, is the ability to read one's emotions and recognise their impact while using gut feelings to guide decisions. Self-management is the second construct which involves controlling one's emotions and impulses and adapting to changing circumstances. The third construct, social awareness, includes the ability to sense, understand, and react to other's

emotions while comprehending social networks. The fourth construct which is motivation, includes a high achievement drive together with the tendency to be optimistic and take initiative. Finally, relationship management entails the ability to inspire, influence, and develop others while managing conflict (Goleman, 1998).

Despite the existence of three distinct models of emotional intelligence, there are theoretical and statistical similarities between the various conceptions. On a global level, all the models aim to understand and measure the elements involved in the recognition and regulation of one's emotions and the emotions of others (Goleman, 2001). All models agree that there are certain key components to emotional intelligence, and there is even some consensus on what those components are. For example, all three models of emotional intelligence implicate the awareness (or perception) of emotions and the management of emotions as being key elements in being an emotionally intelligent individual.

A relationship between elements of the models has been established through statistical analyses. As outlined in the descriptions of the measures of emotional intelligence, there is evidence that different measures of emotional intelligence are related and may be measuring similar components. Brackett and Mayer (2002) observe significant similarities between the regulation of emotion subscale of the Mayer-Salovey-Caruso Emotional Intelligence Test and the interpersonal EQ scale of the Bar-On Emotion Quotient Inventory. Considerable similarities have been found between self-report measures of emotional intelligence. Brackett and Mayer (1998) observe that two self-report measures, the Emotion Quotient Inventory and the Self Report Emotional Intelligence Test, are highly correlated (r = .43). However, no relation between the two measures could be found when personality and positive well-being were controlled for, suggesting that while the two measures share variance, this variance may be attributable not to the measurement of emotional intelligence but to the measurement of other factors.

Emotional Intelligence embraces and draws from other numerous branches of behavioural, emotional and communications theories, such as NLP (Neuro-Linguistic Programming), Transactional Analysis and empathy. By developing our Emotional Intelligence in these areas and the five EQ domains we can become more productive and successful at what we do and help others to be more productive and successful too. The process and outcomes of Emotional Intelligence development also contain many elements known to reduce anxiety for individuals and organisations, by decreasing conflict, improving relationships and understanding and increasing stability, continuity and harmony.

2.5 Concepts of Metacognition and Metacognitive Strategies

Metacognition is a noteworthy concept in cognitive theory. It was introduced by Flavell (1976) to signify self knowledge of one's cognition. Metacognition variously refers to the study of memory-monitoring and self-regulation, meta-reasoning, consciousness (awareness) and auto-consciousness (self-awareness). In practice these capacities are used to regulate one's cognition, to maximise one's potential to think, learn and to the evaluation of proper ethical rules. Flavell (1976, 1979) defines metacognition as the knowledge and experiences we have about our cognitive processes or anything related to them. In a general term, metacognition is thinking about thinking. More specifically, Taylor (1999) defines metacognition as "an appreciation of what one already knows, together with a correct apprehension of the learning task and what knowledge and skills it requires, combined with the ability to make correct inferences about how to apply one's strategic knowledge to a particular situation and to do so efficiently and reliably." Some evolutionary psychologists hypothesise that metacognition is used as a survival tool (Wright, 2009) and that we engage in metacognitive activities every day.

Metacognition enables us to be successful learners, and has been severally associated with intelligence (Sternberg, 1984, 1986a, 1986b; Borkowski, Carr, & Presseley, 1987). Metacognition is described as higher order thinking which involves active control over the cognitive processes engaged in learning. Activities such as planning how to approach a given learning task, monitoring comprehension and evaluating progress toward the completion of a task are metacognitive in nature. Because metacognition plays a critical role in successful learning, it is important to study metacognitive activity and development to determine how students can be taught to better apply their cognitive resources through metacognitive control.

Winn and Snyder (1996) observe that metacognition consists of two basic processes occurring simultaneously: monitoring progress as learning takes place, and making changes and adapting strategies if it is perceived one is not doing so well. It's about self-reflection, self-responsibility and initiative, as well as goal setting and time management. As also observed by Coutinho (2007), there is always a partial mediation effect of metacognition in the relationship between mastery goals and academic performance. Though, Coutinho asserts that performance goals are not directly related to academic performance but in a way, both mastery goals and performance goals are related to academic success but only through metacognition. Thus, students with mastery goals are predicted to have good metacognition, and this leads to academic success. If mastery or performance goals are significant predictors of academic success, this would mean educators could infer academic success of students not yet enrolled in university based on their mastery and performance goals and metacognition.

The more students are aware of their thinking processes as they learn, the more they can control such matters as goals, dispositions and attention.

Self-awareness promotes self-regulation. If students are aware of how committed (or uncommitted) they are to reaching goals, of how strong (or weak) is their disposition to persist, and of how focused (or wandering) is their attention to a thinking or writing task, they can regulate their commitment, disposition and attention (Marzano, Brandth, Hughes, Jones, Rankin & Suhor, 1988). For example, if students were aware of lack of commitment to writing a long research assignment, noticed they were procrastinating, and were aware that they were distracted by more appealing ways to spend their time, they could then take action to get started on the assignment. But until they are aware of their procrastination and take control by making a plan for doing the assignment, they will continue to neglect the assignment.

According to Flavell (1979, 1987), metacognition is a regulatory system that includes knowledge; experiences or regulation; goals; and strategies. Metacognitive knowledge refers to acquired knowledge about cognitive processes, knowledge that can be used to control cognitive processes. Metacognitive knowledge is useful in a strategic manner to meet a goal. It is figuring out how to do a particular task or set of tasks and then making sure the task or set of tasks are done correctly (Sternberg, 1986). Dawson (2008) expresses that metacognitive knowledge is stored knowledge or beliefs about oneself and others as cognitive agents (e.g., knowing that one learns better when studying in a quiet setting than in front of the television or noisy setting); tasks (e.g., knowing that it's easier to prepare for a multiple-choice test than an essay test); actions or strategies (e.g., when and how to use them); and how all these interact to affect the outcome of any intellectual undertaking. Brown (1987), Shimamura (2000) and Niemi (2002) assert that metacognitive knowledge or awareness of one's cognitive processes also involves the efficient use of this self-awareness to self-regulate these cognitive processes.

Metacognitive regulation/experiences are conscious cognitive or affective experiences that concern any aspect of an intellectual undertaking (Dawson, 2008). Metacognitive regulation (self-regulation) is the regulation of cognition and learning experiences through a set of activities that help people control their learning. The concept of self-regulation emphasised the necessity of learners actively giving meaning to what they learn. Metacognists assert that it also needs to be stressed that learning (not instruction) is important, and that learners must be responsible and see to it that they actually go through all the phases of learning. It is important learners have the feeling of being in control of learning

and understand the value of intrinsic over extrinsic motivation. Students who possess metacognitive skills are more likely to learn effectively than those who lack these skills. The implication of this is that it is crucial to transfer as much responsibility for learning to the students themselves. Zimmerman (1994) therefore opines that teachers and instructors normally can not accomplish this transfer of power simply by telling their students to "go out and learn." A more structured and supportive approach is desirable if learners will be so empowered.

When learners are able to take charge of their learning by coordinating the thinking skills, psychologists refer to this as been able to self regulate. Self-regulation refers to the use of processes that activate and sustain thoughts, behaviours and affects in order to attain goals (Schunk & Zimmerman, 1997). Self-regulated learners are flexible. They do not perform tasks just once. Rather, they go through the process recursively, looping back to make adjustments when necessary (Zimmerman, 1989; Carver & Scheier, 1990; Butler & Winne, 1995). McCombs (1989); Schunk (1994) and Zimmerman (1994) summarise that academic self-regulation includes skills such as valuing learning and its anticipated outcomes; setting performance goals; planning and managing time; holding positive beliefs about one's abilities; attending to and concentrating on instruction; effectively organizing, rehearsing and encoding information; setting up a productive work environment; using social resources effectively; focusing on positive effects and making useful attributions for success and failure. Zimmerman (1990) maintains that self-regulated learners approach educational tasks with confidence, diligence and resourcefulness; are aware when they know a fact or possess a skill and when they do not; proactively seek out information when needed and take the necessary steps to master it; find a way to succeed even when they encounter obstructions; view learning as a systematic and controllable process; accept responsibility for their achievement outcomes and monitor the effectiveness of their learning methods or strategies. Self-regulated learning strategies include self-evaluation, organisation and transformation, goal setting and planning, information seeking, record keeping, self-monitoring, environmental structuring, giving self-consequences, rehearsing and memorising, seeking social assistance, and reviewing. In addition to metacognition, motivation and behaviour are considered to be components of self-regulated learning.

From a social cognitive perspective, self-regulation involves the interaction of personal, behavioural and environmental triadic processes (Bandura, 1986). Zimmerman (2000) defines self-regulation as self-generated thoughts, feelings, and actions that are planned and intermittently adapted to the attainment of personal goals. Self-motivated

students choose self-set goals, then make plans and choose strategies available in order to achieve the self-set goals. Based on self-awareness of their performance to achieve the self-set goals, students monitor goals and strategies and control social and physical settings including seeking help. The psychological dimensions of self-regulation involve motivation, strategies, self-awareness of performance outcomes, and sensitivity to environmental and social settings (Zimmerman and Risemberg, 1997). Academic self-regulation processes include planning and managing time; attending to and concentrating on instruction; organising, rehearsing and coding information strategically; establishing a productive work environment and using social resources effectively (Schunk & Zimmerman, 1997).

In order to be self-regulated, individuals need to use three important processes: self-observation, self-judgment, and self-reaction (Bandura, 1986). Self-observation refers to the deliberate attention to observe one's behaviour. Self-judgment refers to the comparison between one's performances with that of a standard or goal. Self-reaction is the evaluative response to self-judgment. Thus, following personal observations, individuals make a judgment of their progress toward self-set goals. Based on these judgments, they alter their behaviours accordingly so as to attain these goals. However, Zimmerman (2000) suggests three cyclical phases for the processes of self-regulation: forethought, performance or volitional control and self-reflection. The forethought phase refers to processes and beliefs that precede efforts to learn. Examples of these processes include students' motivation, self-efficacy, goal-setting and planning. The performance or volitional control phase refers to processes that students focus on the task to optimise their performance. The processes include controlling attention, keeping records, and monitoring. The self-reflection phase refers to processes associated with self-observation-processes that include self-evaluation. During this phase, students compare information about their performance with a standard or goal and ascribe causal meaning to the results. They make a judgment about whether an unsatisfactory result is due to their limited capability or to insufficient effort.

Metacognition researchers maintain that students at almost any age are capable of taking charge of their own learning. That's what every learner should be doing if he/she hopes to gain as much as possible from any academic activity. However, the fact that almost all people are capable of self-regulation does not mean all students actually do take effective charge of their own learning. Whenever self-regulated learners are faced with a learning task, they characteristically analyse the task and interpret the task requirements in terms of their current knowledge and beliefs; set task-specific goals, which help them select, adapt and possibly invent strategies toward accomplishing their objectives; they monitor their progress

toward goals after implementing strategies; adjust their strategies and efforts based on their perception of ongoing progress and use motivational strategies to keep themselves on task when they encounter difficulties or become discouraged.

Researchers like Paris and Winograd (1990) maintain that metacognition can promote motivation and dissertation performance (and academic learning in general). They also argue that such "consciousness-raising" has double benefits: it transfers responsibility for monitoring learning from supervisors/advisors to students, and it promotes positive self-perceptions, affect and motivation among students. In this manner, metacognition provides personal insights into one's thinking and fosters independent learning. The various findings have shown that students' awareness of their own learning processes can be enhanced through systematic, direct instruction. However, the researchers cautioned that metacognition should not be regarded as a final objective for learning or instruction. It should be regarded as an opportunity to provide students with knowledge and confidence that enables them manage their learning and empowers them to be inquisitive and zealous in their pursuits (Paris & Winograd, 1990). To learn effectively, students should not only understand what strategies are available and the purposes these strategies will serve, but also become capable of adequately selecting, employing, monitoring and evaluating their use of these strategies in presenting a dissertation (Graham & Harris, 1992).

Cognition plays a critical role in people's capability to construct reality, self-regulate, encode information and put up certain behaviours. Hamzah and Abdullah (2009) affirm that the social cognitive theory recognises and emphasises this assertion. As Bandura (1986) further stressed, people are self-organising, pro-active, self reflecting and self-regulating. For example, how people interpret the result of their behaviour informs and alters their environments and the personal factors they possess which, in turn, inform and alter subsequent behaviour. In this context, postgraduate students (participants in this study) are viewed as self – organising, pro-active, self-reflecting and self-regulating individuals. They should be able to plan, monitor and evaluate their learning. According to Nussbaum and Kardash (2005), this foundation of Bandura's (1986) concept views personal factors in the form of cognition, affect and biological events; behaviour and environmental influences which create interactions. Social cognitive theory as a framework provides the instructor avenue to improve student's emotional states and to correct faulty self-beliefs and habits of thinking (personal factors), improve their academic skills and self regulatory practices (behaviour) and alter the institutional and societal structures (environmental factors) that may work to undermine student success (Pajares, 2002).

From a cognitive psychology perspective, effective learning through the lifespan is dependent upon effective information processing and the possession and quality of basic learning-to-learn skills and knowledge (Cornford 1999, 2000). Learning-to-learn skills involve metacognitive skills. Edwards, Ranson and Strain (2002) have specifically identified metacognition as an important element in the development of a theory of lifelong learning. Kuhn (2000) defines metacognition as enhancing metacognitive awareness of what one believes and how one knows and metastrategic control in application of the strategies that process new information. This awareness is developmental and lies on a continuum. Several previous studies suggested that superior learners already have various learning strategies, while poor learners do not have proper strategies or have difficulties in using the strategies (Kim, 1999). Among all the preferred cognitive oriented strategies, metacognitive strategies are considered as the most essential ones in developing learners' skills (Anderson, 1991) and it was emphasised by O'Malley, Chamot, Stewner-Mazanares, Russo and Kupper (1985) that learners without metacognitive approaches have no direction or ability to monitor their progress, accomplishments and future learning directions. On the other hand, learners who have developed their metacognitive awareness are likely to become more autonomous learners (Hauck, 2005). Goh (2002) emphasises the importance of metacognitive strategies by arguing that learners' metacognitive awareness is related to effective learning in all learning contexts.

Researchers have characterised metacognitive strategies in different ways. However, metacognitive strategies may be summarised as higher order executive skills which enable students approach learning in a systematic, efficient and effective way by using the elements of planning, monitoring and evaluating. Metacognitive skills involve the conscious structuring of knowledge; they are likely to be more developed in areas of greater knowledge. Learning may be enhanced when instruction provides explicit content knowledge while asking students to use metacognitive skills to operate on that knowledge (Bransford, Sherwood, Vye, & Rieser, 1986; Perkins, 1987). Learning environments should include opportunities for students to reflectively apply new concepts and tools in real-world context (Glaser, 1984). McCombs and Marzano (1990) and Schunk (1990) further reiterate that increased self-confidence and a sense of increased personal responsibility may provide motivation for learning.

Metacognitive strategies are important organisers of all tasks we perform. They enable planning, setting goals, initiating work, sustaining future-oriented problem solving activities, monitoring and managing progress on tasks to detect and correct errors, and

keeping track of the effect of one's behaviour on others. Metacognitive skills focus upon the actual, basic skill learning processes used and controlled by the individual learner. This is why metacognitive learning strategies are often referred to more generally as learning-to-learn skills. When made explicit, they move beyond process potentially to a learned skill capacity that can be retained for life. Characteristics of metacognitive strategies include goal-directed, intentionally invoked, effortful but not situation specific, since they involve more universal application through focus upon planning for implementation, monitoring and evaluation (Schraw 1998), that is, metacognitive strategies are not so situation specific but involve truly generic skills essential for adult, more sophisticated forms of thinking and problem solving. Metacognitive strategies equip students with the tools to monitor and improve their understanding of new learning. Students who are proficient in applying metacognitive strategies outperform their peers with poor metacognitive skills (Kuhn & Dean, 2004).

Metacognitive strategies are better taught through repeated guided practice. Gourgey (1998) reveals that metacognitive strategy such as self-regulation empowers students to plan, monitor and evaluate their performance. Students who have ownership over their learning are likely to improve their achievement, self-efficacy and motivation for deeper learning. Good learners automatically (unconsciously) employ metacognitive strategies to focus their attention on learning tasks and to make adjustments when things go wrong. They do not think about or label these skills while performing them; but if we ask them what they were doing that was successful, they can describe their metacognitive processes accurately. In addition, when problems arise - as when there is a distraction, when they encounter extremely difficult tasks or when they have to advise someone else regarding the same skill - they slow down and become consciously aware of their metacognitive activity. Pressley, Borkowski, and Schneider (1987) are of the view that it will be more accurate to state that metacognitive strategies are almost always potentially conscious and controllable.

According to Anderson (2002), the use of metacognitive strategies activates one's thinking and leads to improved performance in learning in general. Learners who have metacognitive abilities seem to have the following advantages over others who are not aware of the role metacognition plays in learning: they are more strategic learners; their rate of progress in learning as well as the quality and speed of their cognitive engagement is faster; they are confident in their abilities to learn; they do not hesitate to obtain help from peers, teachers or family when needed; they provide accurate assessments of why they are successful learners; they think clearly about inaccuracies when failure occurs during an

activity; their tactics match the learning task and adjustments are made to reflect changing circumstances and they perceive themselves as continual learners and can successfully cope with new situations (Wenden, 1998).

Another claim made by Bielaczyc, Pirolli and Brown (1995) is that without the explicit teaching of cognitive and metacognitive skills, learning may not occur, or will occur with more effort and less effectively, than if individuals have a good repertoire of the most effective skills and make use of them. Further, it has been demonstrated that the deliberate teaching of metacognitive strategies can consequently lead to superior learning when students consciously apply them (Weinstein and Meyer, 1994; Bielaczyc et al, 1995). Metacognitive strategies are considered as the most essential ones in developing learners' skills (Anderson, 1991) as was emphasised by O'Malley, Chamot, Stewner-Mazanares, Russo, and Kupper (1985) that learners without metacognitive approaches have no direction or ability to monitor their progress, accomplishments and future learning directions. Conversely, learners who have developed their metacognitive awareness are likely to become autonomous learners (Hauck, 2005). Likewise, Chamot (2005) and Goh (2002) point out that few learners who do not have the metacognitive knowledge need to select appropriate strategies and that learners' metacognitive awareness is related to effective learning in all learning contexts.

The teaching of various skills is considered advantageous to learners as it will provide them with a choice of learning for occupations and adult life, as these will necessitate the ability to think critically, to solve problems and to understand what they are doing and reasons for doing it, rather than having them adopt the approach they initially feel most comfortable with. If they cannot understand what they are engaged in and select appropriate strategies, there is little likelihood of critical thinking or effective problem solving with the best that could be expected intuitive or concrete thinking in terms of Piaget's stages of development. These forms of thinking are not sufficient for survival in competitive workplaces in adult life for individuals in the normal range of abilities. Teaching metacognitive skills is aimed at making learners expert students (Sternberg, 1998) and there is good reason to believe that possession of a sophisticated set of metacognitive skills eventually will place control of learning with the learner. However, in all of this, the essential elements in learning metacognitive skills involve skill, will and self-regulation (Weinstein & Meyer, 1994). Where skill learning is involved, there is relatively complex learning which is developed over long periods of time (Cornford, 2002). Metacognitive skills of planning, monitoring and evaluating require great ability in abstract reasoning which is essential to dissertation process (Schraw, 1998).

While skills may be taught directly but certainly not the issues of will, that is definite self-motivation, and self-regulation can only really be acquired through the individuals learning about themselves and their abilities and assuming responsibility for what they engage in and achieve (Cornford, 2002). Zimmerman and Kitsantas (2005) therefore opined that high self-efficacy students attribute more responsibility to themselves than to teachers and that perceived responsibility is an important motive for academic achievement. Pajares (1996) observes that the self-efficacy of gifted students is based on perceptions of their cognitive ability (metacognitive ability).

It has been demonstrated that the deliberate teaching of certain cognitive and metacognitive strategies can result in superior learning when students consciously apply the strategy (Bielaczyc et al, 1995, Weinstein & Meyer, 1994). There exists a considerable body of research from the 1980s onwards demonstrates possession and usage of these skills result in superior learning generally (Weinstein & Mayer, 1986) with meta-analyses of research findings like that of Haller, Child and Walberg (1988) strongly supporting the effectiveness of metacognitive instruction. A line of metacognitive research has shown that metacognitive training, even if administered for a short time, can improve performance considerably (Nietfeld & Schraw, 2002; Thiede, Anderson, & Therriault, 2003). These researchers have shown that students that were provided metacognitive training, in addition to task-based training, are likely to improve their performance scores much more than students who receive only task-based training. Even more encouraging is that academically weak students are found to benefit from metacognitive training (White & Frederiksen, 1998). Since all students do not spontaneously engage in metacognition, some require explicit training and coaching to learn such skills (Chi, Bassok, Lewis, Reimann, & Glaser, 1989; Lin & Lehman, 1999).

According to a model of metacognitve strategy presented by Vandergrift (1997), four strategy categories were listed to include planning, monitoring, evaluation and problem identification. For planning, a student draws attention to an appropriate action plan that enables him/her deal with difficulties that may obstruct the student from completing a task successfully. This stage underscores the importance of pre-action activities that help students make predictions about what the dissertation process should involve and, subsequently, to focus attention on mastery while working on dissertation. In monitoring category, students check consistency with their predictions. In the evaluation category, students evaluate the results of decisions made during the academic task by getting involved for example with the dissertation supervisor or peer dissertation presentations (seminars). Lastly, within the problem identification category, he/she underlines the importance of explicitly identifying the

aspect of the task that hinders completion of the dissertation successfully. Vandergrift (1997) also suggests using a checklist including two parts as "before activities" and "after activities" which will help students evaluate their performance in a systematic fashion, particularly if they had difficulty completing the academic task. This self-evaluation will help students adjust their strategies for the following tasks.

The Cognitive Academic Language Learning Approach (CALLA) model was developed by Chamot and O'Malley (1994) as a metacognitive strategy training model. It is a model that helps teachers combine language, content and learning strategies in a carefully planned lesson. In the CALLA model, students' prior knowledge and their practice of evaluation of their learning seem to be the major principles. This model has five instruction phases as explained below:

- Preparation: Students prepare for strategies instruction by identifying their prior knowledge about and the use of specific strategies. e.g.: setting goals and objectives, identifying the purpose of a language task, over-viewing and linking with already known materials.
- Presentation: The teacher demonstrates the new learning strategy and explains how and when to use it. For example, explaining the importance of the strategy, asking students when they use the strategy.
- Practice: Students practice using the strategy with regular class activities. For example, asking questions, cooperating with others, seeking practice opportunities
- Evaluation: Students self-evaluate their use of the learning strategy and how well the strategy is working for them. e.g.: Self-monitoring, self-evaluating, evaluating their learning.
- Expansion: Students extend the usefulness of the learning strategy by applying it to new situations or learning for them. For example, arranging and planning their learning.

Based on previous research, Anderson (2002a) has proposed five main components for metacognition, they include: preparing and planning for learning; selecting and using learning strategies; monitoring strategy use; orchestrating various strategies and evaluating strategy use and learning. By preparation and planning in relation to their learning goal, students think about what their goals are and how they will go about accomplishing them. Students, with the help of the teacher, can set a realistic goal within a set time for accomplishing that goal. Setting clear, challenging and realistic goals can help students view their progress and hopefully, by becoming consciously aware of their progress, students' motivation for learning would be increased. The metacognitive ability to select and use particular strategies in a given context for a specific purpose means the learner can think and make conscious decisions about the learning process. Learners should be taught not only

about learning strategies but also when and how to use them. Students should be instructed on how to choose the best and most appropriate strategy in a given situation.

The next main component of metacognition is monitoring strategy use. By examining and monitoring their use of learning strategies, students have more chances of success in meeting their learning goals (Anderson, 2002a). Students should be explicitly taught that once they have selected and begun to use the specific strategies, they need to check periodically whether or not those strategies are effective and being used as intended. For example, when reading, they can use context to guess the meaning of some unknown vocabulary items. To monitor their use of this strategy, they should pause and check to see if the meaning they guessed makes sense in the text and if not, go back and modify or change their strategy.

Researchers in the field of educational psychology have suggested in various studies that focusing on metacognition has a parallel relationship with cognitive processes such as volition (Corno, 1994), self regulation (Schiunk & Zimmerman, 2008; Wolters, 1998; Zimmerman & Schunk, 2001) and motivation (Pintrich, 2003). Volition concerns how students strengthen their will to achieve a goal until its accomplishment (Corno, 1993) and self-regulation relates to personal strategies intended to acquire skills and knowledge (Pintrich & Zusho, 2002). The metacognitive training in using higher order approach is anticipated to act as a form of dissertation skills' training which has been shown to be effective in reducing the information processing demands of learning tasks (Tobias, 1986), and in decreasing anxiety for highly anxious individuals with poor study habits which prevent their initial processing of information (Naveh-Benjamin, 1991). Further, student motivation was expected to increase as a function of increased control over their learning for the cooperative group (Eccles, Midgely, & Adler, 1984). When it comes to motivation, there is lack of clear definition of motivational constructs (Murphy & Alexander, 2000; Schunk, 2000) but educational psychology has presented a focus on achievement goals as a key precursor of motivation (Ames, 1987; Pintrich, 2000a). In the next section, the term motivation will be discussed in relation to goal achievement.

2.6 Conceptualising Achievement Motivation

Motivation is the basic drive for all our actions. Motivation refers to the dynamics of our behaviour, which involves our needs, desires and ambitions in life. It is the driving force behind all the actions of an individual. The influence of an individual's needs and desires has a strong impact on the direction of their behaviour. Motivation is based on emotions and achievement-related goals, it is an associative network of affectively toned personality

characteristics such as self-perceived competence, locus of control, anxiety (McClelland, 1965). Thus, understanding and incorporating the interactive roles of motivation with cognitive process variables during instruction is important. However, little research evidence is available for understanding the interactions between the affective and cognitive variables, particularly individual differences in the interactions.

Although motivation as the psychological determinant of learning achievement has been emphasised by many researchers, research evidence suggests that it has to be activated for each task (Weiner, 1990). According to Snow (1986), students achieve optimal level of performance when they have an intermediate level of motivation to achieve success and to avoid failure. Nicholls, Jagacinski, and Miller (1986) suggest that intrinsically motivated students engage in the task more intensively and show better performance than extrinsically motivated students. However, some studies showed opposite results (e.g., Frase, Patrick & Schumer, 1970). The contradictory findings suggest possible interaction effects of different types of motivation with different students. For example, the intrinsic motivation may be more effective for students who are strongly goal oriented, like adult learners, while extrinsic motivation may be better for students who study because they have to, like many young children.

Writers have presented different forms of motivation including extrinsic, intrinsic, physiological and achievement motivation. Achievement motivation which is a variable in this study has been defined in literature as the need for success or the attainment of excellence. It is perceived as the need to perform well or the striving for success, and evidenced by persistence and effort in the face of difficulties; achievement motivation is regarded as a central human motivation. Individuals will satisfy their needs through different means, and are driven to success for varying reasons, internal and external. Achievement motivation is based on reaching success and achieving all our aspirations (goals) in life. Achievement goals can affect the way a person performs a task and represent a desire to show competence (Harackiewicz, Barron, Carter, Lehto, & Elliot, 1997). Achievement motivation as viewed by the cognitive model is the capacity or the ability to think and to interpret the causes of success or failure in achievement related tasks. In an achievement related context, the causes perceived as most responsible for success and failure are ability, effort, and task difficulty and luck (Weiner 1979).

David McClelland and John Atkinson were among the first to concentrate on the study of achievement motivation (McClelland, Atkinson, Clark & Lowell, 1953). They classified achievement motivation as a variant of motivation that can be distinguished among

achievement, power and social factors (McClelland, 1985; Murray, 1938, 1943). Achievement motivation was defined by Murray (1938) as the desire or the tendency to do well or to do better than others. The ability to solve problems, to achieve a high standard of work and the ability to do something unique are examples of achievement motivated behaviour. To be motivated therefore implies a move into action to achieve a perceived goal. Achievement motivation could be seen as self determination to succeed in whatever activities one engages in, be it academic work, professional work, sporting events, among others. Gesinde (2000) posits that the urge to achieve varies from one individual to the other, while for some individuals need for achievement is very high whereas for others it may be very low. There are two approaches to the study of achievement motivation namely the affective approach as advocated by McClelland (1961) and the cognitive approach as proposed by Weiner (1974). The affective approach views achievement motivation as the ability to experience pride from a successful competition with some standards of excellence. It is this pride that drives individuals to strive hard to achieve achievement goals.

There are two general explanations for the source of achievement motivation (Stipek, 1993). A school of thought view achievement motivation as a stable and unconscious trait-something that someone has more or less of. This explanation ascribed the source of achievement motivation to the family and cultural group of the student. The explanation assumes that if achievement, initiative and competitiveness are encouraged and reinforced in the home, and if parents let children solve problems on their own without becoming irritated by the children's initial failures, children are likely to develop a high need for achievement (McClelland & Pilon, 1983; Woolfolk, 1995). Children who see that their actions can have an impact on their environment and who are taught how to recognise good performance are more likely to grow up with the desire to excel (Lefton, 1994; Schunk, 1991a). Achievement motivation can be likened to a set of conscious beliefs and values shaped mainly by recent experiences with success and failure and by factors in the immediate situation such as the difficulty of the task or the incentives available. Thus one might have high achievement motivation in developmental psychology because he/she is doing well but low achievement motivation in the required dissertation process because he/she had trouble with dissertation at the undergraduate stage/level.

Motivational researchers have sought to promote a hierarchal model of approach and avoidance achievement motivation by incorporating the two prominent theories: the achievement motive approach and the achievement goal approach. Achievement motives according to Atkinson (1964); Grote and James (1991) include the need for achievement

(striving) and the fear of failure (apprehensiveness). These are the more predominant motives that direct our behaviour toward positive and negative outcomes. Achievement motives can be seen as direct predictors of achievement-relevant circumstances. Thus, achievement motives are said to have an indirect or distal influence, and achievement goals are said to have a direct or proximal influence on achievement-relevant outcomes (Elliot & McGregor, 1999). Our motives for achievement can range from biological needs to satisfying creative desires or realising success in competitive ventures.

Two motives are directly involved and often work together in the prediction of individual's behaviour in direction and passion, implicit and explicit (Brunstein & Maier, 2005). Implicit motives are spontaneous impulses to act, also known as task performances, and are aroused through incentives inherent to the task. Individuals with strong implicit needs to achieve goals set high internal standards, whereas others tend to adhere to the societal norms. A person with a strong implicit drive will derive pleasure from achieving a goal in an efficient way. The increase in effort and overcoming the challenge by mastering the task satisfies the individual. Explicit motives are expressed through deliberate choices and more often stimulated for extrinsic reasons. They are built around a person's self-image. This type of motivation shapes a person's behaviour based on their own self-view and can influence their choices and responses from outside cues. The primary agent for this type of motivation is perception or perceived ability. Explicit and implicit motivations have a compelling impact on behaviour. Task behaviours are accelerated in the face of a challenge through implicit motivation, making performing a task in an effective manner the primary goal.

Achievement goals are viewed as concrete cognitive representations pointing individuals toward a specific end. There are three types of these achievement goals: a performance-approach goal, a performance-avoidance goal, and a mastery goal. A performance-approach goal is focused on attaining competence relative to others a performance-avoidance goal is focused on avoiding incompetence relative to others, and a mastery goal is focused on the development of competence and of task mastering (Harackiewicz, Barron, Carter, Lehto, & Elliot, 1997). Most of our goals are incentive-based and can vary from basic hunger to the need for love and the establishment of mature sexual relationships.

Theories of motivation usually include the notion of intention as a central concept (e.g. Lewin, 1951/1997). This notion involves a distinction between motivated and amotivated behaviour (i.e. between intentional and non-intentional actions). Three examples are personal versus impersonal causality (Heider, 1958), voluntary responding versus

helplessness (Seligman, 1975), and internal versus external locus of control (Rotter, 1966). Self-determination theory (SDT) which focuses on the extent to which the behaviours of people are volitional or self-determined, has an important additional distinction within the class of behaviours that are intentional or motivated (Deci, Vallerand, Pelletier, & Ryan, 1991; Vallerand, Pelletier, & Koestner, 2008).

In the area of achievement motivation, the work on goal theory has differentiated three separate types of goals: mastery goals (also called learning goals) which focus on gaining competence or mastering a new set of knowledge or skills; performance goals (also called ego-involvement goals) which focus on achieving normative-based standards, doing better than others, or doing well without a lot of effort and social goals which focus on relationships among people (Dweck, 1986; Ames, 1992; Urdan & Maehr, 1995). Huitt (2001) states that in the context of school learning, which involves operating in a relatively structured environment, students with mastery goals outperform students with either performance or social goals. However, it seems critical that individuals have all three types of goals in order to be very successful. One aspect of this theory is that individuals are motivated to either avoid failure (more often associated with performance goals) or achieve success (more often associated with mastery goals). In the former situation, the individual is more likely to select easy or difficult tasks, thereby either achieving success or having a good excuse for why failure occurred. In the latter situation, the individual is more likely to select moderately difficult tasks which will provide an interesting challenge, but still keep the high expectations for success.

Theorists have proposed that people's achievement goals affect their achievement-related attitudes and behaviours. Notably, there are two different types of achievement-related attitudes: task-involvement and ego-involvement. Task-involvement is a motivational state in which a person's main goal is to acquire skills and understanding while the main goal in ego-involvement is to demonstrate superior abilities (Butler, 1999). One example of an activity where someone strives to attain mastery and demonstrate superior ability is dissertation. However situational cues, such as the person's environment or surroundings, can affect the success of achieving a goal at any time. McClelland (1961) contends that an individual's thoughts are related to his/her actions, but verbalising a particular motive such as achievement, affiliation or power has a tendency to increase the frequency of thoughts on that motive. If a particular motive gets more attention in the form of discussion, the network of associations formed in the mind will have the effect of facilitating learning. Though McClelland (1961) presented an affect approach to achievement motivation, McClelland

(1965) also presented a cognitive approach to successful programme of motivation change. The approach comprises four elements: conceptualisation of the motive; self-study in relation to the motive; planning and goal setting and group support. Marsh (1984) opines that university students are also faced with the problem of not being motivated or having low level of motivation. This position was supported by McClelland (1965) but with a proposal that motivation can be changed even at the adult stage. Eckardt & Schuler (1992) regard achievement motivation next to cognitive skills – as the second, probably general, professionally relevant factor. They opine that its general relevance becomes clear.

2.6.1 Achievement Motivation Training

Achievement motivation training refers to the process of developing motivating individuals towards achievement in performing a specific task. The goal is to increase their motivation to want to achieve greater things for self or an organisation. This can involve a lot of things such as finding out what makes the individuals tick. In achievement motivation training, participants are given guidance on how to think, talk and act like a person with high achievement and then examine carefully the extent to which they want to plan their lives in the immediate future (McClelland 1972). McClelland (1961) contends that an individual's thoughts are related to his/her actions. Articulating a particular motive such as achievement, association or influence has a tendency to increase the frequency of thoughts on that motive. If a particular motive gets more attention in the form of discussion, the network of associations formed in the mind will have the effect of facilitating learning (Elias and Wan Rafael, 1994).

The achievement motivation training laid special emphasis on achievement thinking. According to the achievement motivation theory, how an individual thinks affects, to a certain extent, his/her future undertakings. Further, the expectancies and motives which surface in one's thinking also affect his/her future propositions and actions. Wolters (2004) in a study investigated how different components of intrinsic motivation were related to each other and to students' motivation, cognitive engagement and academic achievement. Results of these studies imply that it is possible to improve the academic achievement of students by enhancing motivational orientations in them. The present study was conducted in order to improve the dissertation competencies of doctoral students through achievement motivation training programme by helping them instigate their behaviour.

Empirical Review

2.7 Metacognitive Strategies and Dissertation efficacy

A popular area of investigation for education researchers in recent times is the relationship that exists between learning variables such as goals, self-efficacy, metacognition, learning styles and techniques, and test anxiety, as these variables influence learning and performance. However, individual researchers typically focus on children in primary or secondary schools and not on tertiary level students or adults. This leaves a gap in our understanding of how such variables change and operate as students grow older. Meanwhile, variables such as self-efficacy and metacognition tend to improve with age and so the relationship between these variables with learning and performance is difficult to ascertain with school children alone (Bisanz, Vesonder, & Voss, 1978; Bransford, Brown, & Cocking, 1999).

Several studies have been conducted to better understand problematic education patterns of university students. Most of these studies have identified factors that contribute to the lower than expected persistence rate among this category of students. Rindone (1988); Pipes, Westby, & Inglebret (1993); Brown & Kurpius (1997); Hill (2004); Downs (2005) sought to explain why discrepancy exist in rate of academic achievement in various ethnic/racial groups. One positive predictor of college persistence identified by researchers is academic self-efficacy. It has frequently been cited as an important component in the academic success of college students (Wells 1989; Lin, 1990; Brown & Kurpius, 1997; Jackson & Smith, 2001; Jackson, Smith, & Hill, 2003; Hill, 2004).

Collins (1982) identifies children of low, middle, and high mathematics ability who had, within each ability level, either high or low mathematics self-efficacy. After instruction, the children were given new problems to solve and an opportunity to rework those they missed. Collins reports that ability is related to performance but, regardless of ability level, children with high self-efficacy completed more problems correctly and reworked more of the ones they missed. Bouffard-Bouchard, Parent, and Larivèe (1991) observe that students with high self-efficacy engage in more effective metacognitive self-regulatory strategies at each level of ability. Self-efficacy also enhances students' memory performance by enhancing persistence. In studies of university students who pursue science and engineering courses, high self-efficacy has been demonstrated to influence the academic persistence necessary to maintain high academic achievement (Lent, Brown & Larkin, 1984, 1986).

In one of the few studies to investigate self-efficacy of young children, Wang and RiCharde (1987) discovered the developmental basis by which children's ability to monitor

their cognitive performances interacts with their perceived self-efficacy, second-graders and fourth-graders were assigned to a training group and a control group. The only difference between the control group and the treatment group is that metacognitive awareness was encouraged in the treatment group. All the students were taught two different strategies to memorise words: rote-repetition method and sentence elaboration method. These children's memorisation of the words was measured afterwards. Regardless of grade or group, all participants exhibited gains in self-efficacy from pre-test to post-test. The successful learning performance by the children led to enhanced self-efficacy, which also generated to other similar tasks such as remembering numbers.

Research investigations on academic self-efficacy demonstrate that acquisition of cognitive skills, modelling effects, attributional feedback and goal setting influence the development of self-efficacy beliefs and that these beliefs, in turn, influence academic performances. Relich, Debus, and Walker (1986) report that self-efficacy mediated the role of skill training and attributional feedback and had a direct effect on the performance of division problems of learned helpless sixth graders. Attributional feedback showed a moderate direct effect on performance and a strong indirect effect mediated by self-efficacy. In another study, Schunk (1984b) further reports that mathematics self-efficacy influenced mathematic performance directly and indirectly through persistence. Although students with similar previous performance attainments and cognitive skills may differ in subsequent performance as a result of differing self-efficacy perceptions because these perceptions mediate between prior attainments and academic performances. In effect, such performances are generally better predicted by self-efficacy than by the prior attainments.

Pintrich and De Groot (1990) report a correlation between global academic self-efficacy and cognitive strategy use and self-regulation through use of metacognitive strategies. In addition, academic self-efficacy correlated with academic performances such as semester and final year grades, in-class seat work and homework, exams and quizzes and essays and reports. They report that perceived importance of academic achievement is associated with the outcome variables but is not a significant predictor. Pintrich and De Groot conclude that self-efficacy played a mediational or "facilitative" role in relation to cognitive engagement, that improving self-efficacy might lead to increased use of cognitive strategies and thereby higher performance, and that students must possess the will and skill to be successful in any academic task.

Zimmerman, Bandura, and Martinez-Pons (1992) used path analysis to demonstrate that academic self-efficacy mediated the influence of self-efficacy for self-regulated learning

on academic achievement. They observe that academic self-efficacy influences achievement directly as well as indirectly by raising students' scores. Correspondingly, Schunk (1982b, 1985); Fincham and Cain (1986); Paris and Oka (1986); Feather (1988); Pokay and Blumenfeld (1990); and Pintrich and Schrauben (1992) have found that self-efficacy is related to self-regulated learning variables. Their findings in this area suggest that students who believe they are capable of performing academic tasks use more cognitive and metacognitive strategies and persist longer than those who do not (Pintrich & Garcia, 1991). A meta-analytic research into self-efficacy in educational settings conducted by Multon, Brown and Lent (1991) provided a support for the facilitating effects of self-efficacy on academic performance and concluded that self-efficacy beliefs accounted for approximately 14 per cent of the variance in students' academic performance. Lane and Lane (2001) affirm while reporting similar findings among a sample of postgraduate students.

Research has shown that metacognition is an important predictor of academic performance; students are able to effectively distinguish information they know and do not know are more likely to review and retain new information (Dunslosky & Thiede, 1998; Kruger & Dunning, 1999; Dunning, Johnson, Ehrlinger, & Kruger, 2003). Pajares (1996) observes that the self-efficacy of gifted students is based on perceptions of their cognitive ability. Metacognition has been described as a discrepancy-reduction strategy where the learner begins study by setting a specific desired state of learning for the material (Dunslosky & Thiede, 1998; Thiede, Anderson, & Therriault, 2003). The student allocates resources to learn new information and monitors the degree to which new material has been learned but learning is discontinued when the student believes that he or she has mastered the information and achieved the desired state of learning.

People with strong self-efficacy focus their energy on analysing and resolving problems. People with weak self-efficacy become preoccupied with evaluation concerns, doubt their skills and abilities, and anticipate failure even before investing effort in problem-solving (Bandura & Wood, 1989). These negative beliefs heighten stress, undermine the effective use of cognitive strategies and eventually result in failure. Moderately overconfident and optimistic students tend to be the best performing students (Pajares & Miller, 1994; Pajares & Kranzler, 1995). People use their past performance to infer their level of ability and extent of success on a task (Gist & Mitchell, 1992). Those who receive positive feedback are likely to believe they have the capabilities to perform a task. Conversely, those who receive poor performance assessments are likely to have low efficacy beliefs regarding the task. Self-efficacy is a good predictor of academic performance (GPA) in higher education plans

(Lalonde, 1980; Multon, Brown, & Lent, 1991). Metacognitive knowledge and training have been reported effective in improved self-efficacy (Butler, 1993; Schmidt & Ford, 2003).

According to Flavell (1979), who coined the term, metacognition is a regulatory system that includes knowledge, experiences, goals and strategies. Metacognitive knowledge is stored knowledge or beliefs about oneself and others as cognitive agents; tasks; actions or strategies and how all these interact to affect the outcome of any intellectual undertaking. Metacognitive experiences are conscious cognitive or affective experiences that concern any aspect of an intellectual undertaking. Knowledge is considered metacognitive (as opposed to simply cognitive) if it is used in a strategic manner to meet a goal. According to Sternberg (1986) it is figuring out how to do a particular task or set of tasks and then making sure that the task or set of tasks are done correctly. Metacognition is similar to self-efficacy in that metacognitive self-assessments have been related to an individual's ability to perform a task, solve problems, or acquire new skills (Paris & Winograd, 1990; Davidson et al., 1994; Hartman, 2001; Cuevas et al., 2004). Improving the accuracy of metacognitive judgments has also been found to lead to an improvement in learning or task performance (Kruger & Dunning, 1999). The similarity in the dependent variable often results in measurement instruments that use very similar items. In particular, self-efficacy and metacognition are measured with respect to some level of achievement in performing a task.

Studies have shown that the relationship between self-efficacy and performance is partially mediated by metacognition (Kanfer & Ackerman, 1989; Bouffard-Bouchard, Parent, & Larivee, 1991). Kanfer and Ackerman (1989) observe that people with strong self-efficacy are more likely to use metacognitive strategies when working on a task and they performed better than those with weak self-efficacy. A similar conclusion comes from Bouffard-Bouchard, Parent, and Larivee. Students with strong self-efficacy engage in more metacognitive skills and have better performance scores than students with weak self-efficacy, irrespective of differences in school grade and cognitive ability. Bandura and Wood (1989) observe self-efficacy influences performance directly and indirectly through its effects on analytical strategies, suggesting a mediating effect of metacognition in the relationship between self-efficacy and performance. Students with good metacognition demonstrate good academic performance compared to students with poor metacognition.

Students with poor metacognition may benefit from metacognitive training to improve their metacognition and performance. On the contrary, Coutinho (2008) conducted a regression analysis and found out that the relationship between self-efficacy and performance was not mediated by metacognition. However, another analysis showed that the relationship

between metacognition and performance was fully mediated by self-efficacy. This suggests that students with effective metacognitive strategies also have strong belief in their capabilities to successfully perform a task. These findings lend support to training programmes for students that enhance self-efficacy and strengthen their metacognitive strategies and skills.

Notably, there are three key differences between self-efficacy and metacognition. First, according to Bandura's general model of Social Cognitive Theory, self-efficacy is a determinant of behaviour and indirectly affects performance. Given the difficulty in measuring the behaviour that goes into accomplishing a task it is no surprise to find that most studies choose to relate self-efficacy directly to (measurable) performance. Metacognition, on the other hand, has a complex relationship with behaviour and performance, initiating the (problem solving) behaviour, monitoring performance and changing behaviour if things are not going as expected. This difference makes metacognition useful in enhancing end-user training since the dependent variable of most concern is not only whether someone will use a computer (behaviour), but whether employees can use a computer to become more effective at accomplishing job related tasks (performance). In order to go beyond an understanding of behaviour, therefore, we need to examine the relationship between behaviour and attained levels of performance. It is the role of metacognition to provide the necessary feedback loop between performance and behaviour by monitoring levels of performance and controlling subsequent behaviour (Nelson & Narens, 1996).

Second, metacognition is generally considered to be a uni-dimensional construct, and is often measured as a declaration of confidence or certainty in the accuracy or adequacy of performance (McGuire & Maki, 2001; Nelson et al., 2004), as a judgment of learning (Kelemen, 2000), or as a feeling of knowing (Metcalfe, Schwartz & Joaquim, 1993) either just before or just after the behaviour of interest. As such, the method of measurement is generally a Likert-type confidence scale (Schwartz, 1994). On the other hand, self-efficacy is a three-dimensional construct including level, strength and generality, with measurement usually focusing on only one or two of the dimensions (e.g., strength).

Self-efficacy instruments are normally developed as a related set of items that increase or decrease in task difficulty (Compeau & Higgins, 1995a; Johnson & Marakas, 2000). Third, while self-efficacy is usually defined as positively correlated with behaviour and performance, metacognitive judgments are often at odds with objective measures of learning or task performance. This results from a phenomenon known as metacognitive miscalibration (MM) where an individual misjudges his/her level of proficiency by being

either overconfident or under-confident and can lead to premature termination of task effort. For instance, a student may stop studying for a test based on erroneous judgment of being good enough already (overconfident), or simply expecting to fail (under-confident). Some hypothesised reasons for MM include cue familiarity (Metcalfe et al. 1993) and the above average effect (Alicke, Klotz, Breitenbecher, Yurak & Vredenburg, 1995; Dunning et al., 1989). Put simply, familiarity results in over-confidence, while few people are willing to admit they are "below average." Whether inaccurate beliefs about one's self-efficacy poses a concern continues to generate debate (Vancouver et al., 2002; Bandura & Locke, 2003).

Knowing how to use a combination of strategies in an orchestrated fashion is an important metacognitive skill. Research has shown that successful learners tend to select strategies that work well together in a highly orchestrated way, tailored to the requirements of any learning task (Chamot & Kupper, 1989; Wenden, 1998). These learners can easily explain the strategies they use and why they employ them (O'Malley & Chamot, 1990). According to Chamot and Kupper (1989), certain strategies or clusters of strategies are linked to particular language skills or tasks. For example, L2 writing, like L1 writing, benefits from the learning strategies of planning, self-monitoring, deduction, and substitution. L2 speaking demands strategies such as risk-taking, paraphrasing, circumlocution, self-monitoring, and self-evaluation. L2 listening comprehension gains from strategies of elaboration, making inferences, selective attention and self-monitoring. Reading comprehension uses strategies like reading aloud, guessing, deduction and summarising. Research shows that use of appropriate language learning strategies often results in improved proficiency or achievement overall or in specific skill areas (Oxford, Park-Oh, Ito, & Sumrall, 1993).

One of the most important metacognitive strategies is to evaluate effectiveness of strategy use. Self-questioning, debriefing discussions after strategies practice, learning logs in which students record the results of their learning strategies applications, and checklists of strategies used can be used to allow the student reflect through the cycle of learning. At this stage of metacognition, the whole cycle of planning, selecting, using, monitoring and orchestration of strategies is evaluated. It should be noted that different metacognitive skills interact with each other. The components are not used in a linear fashion. More than one metacognitive process along with cognitive ones may be working during a learning task (Anderson, 2002b), therefore, the orchestration of various strategies is a vital component of learning in general. Allowing learners opportunities to think about and talk about how they combine various strategies facilitates strategy use.

Active-coping efforts were associated with higher self-efficacy scores and good dissertation grades by Devonport et al, (2003). Self-efficacy reflects a person's realistic expectations and degree of certainty about the ability to achieve success (Anshel, Kim, Kim, Chang & Eom, 2001). The finding that active coping and self-efficacy appear to be predictive of each other is important because efficacy expectations are proposed to influence task selection and the effort expended in task completion. The implication of this may be that academics should encourage the appropriate selection of coping options. Doing so may enhance self-efficacy and consequently academic performance, which in turn could reduce dropout rates. Again, Devonport, et al (2003) in their investigation into the relationships between self-efficacy and dissertation performance among a sample of undergraduate sports studies students reveal that the sum of self-efficacy factors such as obtaining support, understanding theory and writing skills significantly correlates with performance. Their findings lend credence to Lane, Hall and Lane (2002) assertion that self-efficacy can significantly predict academic performance.

Zimmerman and Schunk (2001) in a study observe that students who have been taught metacognitive (self-regulated learning) skills learn better than students who have not been taught these skills. This finding lends credence to the works of Pressley and Ghatala (1990); Mace, Belfiore and Hutchinson (2001). McCombs and Marzano (1990) and Schunk (1990) explain that increased self-confidence and a sense of personal responsibility instilled through metacognitive training may provide motivation for learning and also produce better learners. Metacognitive strategies have been proved to attribute to the success of reading strategy use (Lin, 2009; Hamzah & Abdullah, 2009). Vandergrift (2003) trained students in the use of prediction, individual planning, peer discussions and post listening reflections that made up the metacognitive strategies in beginner elementary school and university contexts in France. Students in both groups were more focused on the advantages of predictions for successful listening, the place of collaboration with a partner for monitoring and the confidence-building function of this approach for developing listening comprehension ability. Hoffman and Spatariu's (2007) findings in a regression design also support the unique and interactive effects of self-efficacy beliefs and metacognitive prompting on solving mental multiplication problems. Self-efficacy and metacognitive prompting increased problem-solving performance and efficiency separately through activation of reflection and strategy knowledge.

Javanmard, Hoshmandja and Ahmadzade (2013) investigated the relationship between self-efficacy, cognitive and metacognitive strategies and academic self-handicapping with academic achievement in male high school students in the tribes of Fars Province, Iran.

A descriptive, correlational method was used to analyse the data collected among high school students studying in the academic year 2010-2011. They report that cognitive and metacognitive strategies are not good predictors of academic achievement. Moreover, their results demonstrated that different groups of students had different fields of study and were in different grades – were not significantly different with regard to academic self-efficacy, academic self-handicapping, and cognitive and metacognitive strategies. However, there were significant differences in employing metacognitive strategies with regard to students' grades and fields of study

2.8 Metacognitive Strategy and Dissertation Anxiety

Strategy use is an influential factor of students' academic efficacy. Clear goals, established standards and explicit instruction are programme components that enhance students' motivation and are found among many successful practices. When students are able to grasp the steps needed to accomplish an academic goal, their confidence level rises and that leads to heightened self-efficacy and increased effort. Also, students with high self-efficacy tend to persist regardless of trouble, which influences their academic achievement (Schunk, 1989; Bandura, 1997; Schunk & Zimmerman, 1997).

There has been considerable educational interest over the last decade in the phenomenon of student self-regulated learning as a desirable product of education processes (Zimmerman, 1990, 1994, 1995; Zimmerman, Bonner, & Kovach, 1996). To facilitate learning, it is believed students must develop the will or motivation to be self-regulated by realising that they are responsible and capable of their own self-development and self-determination (McCombs & Marzano, 1990; Schunk, 1995). This sense of personal agency for learning is gained through enhanced metacognitive processes and produces in the learner a sense of self-efficacy which enhances the experience of competency (Bandura, 1986; Schunk, 1990; Zimmerman, Bandura & Martinez-Pons, 1992). Perceived self-efficacy, while enhancing performance, may also reduce the debilitating effects of anxiety for those who are initially highly anxious learners (Bandura, 1988).

Interventions for promoting metacognitive learning must address student beliefs about their competency and control as these impinge heavily on their motivation to undertake metacognitive strategies (McCombs & Marzano, 1990). Metacognitive training in using higher order thinking in dissertation was anticipated to act as a form of study skills training which has been shown to be effective in reducing the information processing demands of learning tasks (Tobias, 1986), and in decreasing anxiety for highly anxious individuals (Naveh-Benjamin, 1991). Alaiyemola, Jegede and Okebukola (1990) investigated the

relationship between the concept mapping heuristic (a metacognitive strategy) and debilitating anxiety effect on learning. The pre-post-test experiment which involved 51 senior secondary school students lasted six weeks of learning selected science concepts through the concept mapping strategy. Findings of the experiment showed the metacognitive strategy involving concept mapping to be effective and to lead to a significant lowering in students' anxiety towards the study of science.

Also, in a recent study conducted by Legg and Locker (2009), metacognition was found to have a moderating relationship with anxiety that relates to accuracy. In addition, increased metacognition is associated with great confidence in performance. This is an indication that individuals with high anxiety will benefit from high levels of metacognition, as their performance in mathematical exercise was found to be similar to those individuals with low math anxiety. As noted, the literature investigating the relationship between metacognition and anxiety is rather sparse. However, some researches have suggested that metacognition may have a negative impact on those individuals with high anxiety (Everson, Smodlaka & Tobias, 1994). The opposite pattern was observed by Legg and Locker (2009). One possibility that should be considered is that the relationship of metacognition and anxiety may be largely state-dependent relative to such factors as the consequences of the outcome, the nature of the material presented as well as the general context.

The nature of the task that individuals who were high in use of metacognitive strategy, even if high in anxiety, were able to effectively utilise the beneficial aspects of metacognition. Such aspects of metacognition as checking behaviours, strategic use of problem solving or effective deployment of strategies at appropriate times per the conditional awareness sub-domain of Schraw and Moshman's (1995) metacognitive conception. This being the case, these strategies potentially mitigated anxiety-related influences, possibly by allocating mental attention to metacognitive processes, rather than anxiety-related thoughts. However, Legg and Locker (2009) opine that it is possible that context been more analogous to a high-stress testing situation (e.g. writing a final exam), the highly anxious individuals might have utilised metacognition in a negative fashion by ruminating on the situation and potential outcomes or worrying about poor performance rather than planning or problem solving.

Notably, metacognitive training has been shown to be a very effective method in which to overcome mathematics problem-solving difficulties. Metacognitive training usually involves directing student and participant attention to metacognitive thinking such as strategy use, problem solving, and time and accuracy monitoring. Metacognitive training also

involves encouraging individuals to monitor their confidence in their abilities or lack of confidence. Kramarski and Mevarech (2003), for example, examined students' performance interpreting a linear graph unit. Some students received metacognitive training whereas others received traditional teaching, either in groups or individually. Individuals who received the metacognitive training performed significantly better than those who received the traditional teaching method, regardless of whether they received the metacognitive training in groups or individually.

Another exploratory study into the relationship between test anxiety and metacognitive word knowledge on performance on a standardised reading comprehension test was conducted by Everson, Smodlaka and Tobias (1994), 117 college students participated by completing three paper and pencil measures: a self-report measure of test anxiety; a metacognitive word knowledge task and a standardised measure of reading comprehension. The results of a series of multiple regression analyses suggest that the cognitive component of test anxiety (worry) exerted a negative influence on students' performance on the metacognitive word knowledge task, independent of overall reading ability. Additional analyses suggest that once initial reading ability is controlled, anxious worrying and metacognitive word knowledge jointly influence performance on a standardised measure of reading comprehension. On the most cognitively demanding reading comprehension tasks, however, metacognitive word knowledge interacted with worry, such that when anxious worrying was low, increases in metacognitive word knowledge were associated with high performance and when anxious worrying was high, increases in metacognitive word knowledge were associated with low levels of performance.

Metacognitive therapy was adopted by Wells (1995) and was found to be significantly effective in the reduction of worry, anxiety and depression among ten consecutive patients that met the DSM-IV criteria for Generalised Anxiety Disorder (Wells & King, 2006). In all but one case these were lasting changes. Recovery rates were 87.5% at post treatment and 75% at 6 and 12 months. Wells (2007) also attempted treating social phobia with metacognitive therapy. A greater emphasis is placed on modifying attention and worry processes and on configuring processing during and after behavioural experiments. Metacognitive therapy was found to have offered a level of formulation and intervention that does not focus predominantly on challenging the content of negative thoughts and beliefs that are emphasised in traditional cognitive therapy. The result indicates that metacognition contributes to cognitive stability and change.

Kruger and Dunning (1999) found evidence that addressing metacognitive processes such as strategy use and checking behaviours increased college students' ability to perform well on varying tasks. Further, much of the educational literature suggests that metacognitive training is beneficial to individuals in elementary, middle and high school (Cardell-Elawar, 1995; Kramarski & Mevarech, 2003; Teong, 2003). In addition, Kruger and Dunning (1999) show that even if students are examined in terms of differences in high and low achievement, metacognitive training does have positive benefits, although greater benefits seem to occur for low-achieving groups. These researchers found that high achievers benefit most from apprehending the superiority of their answers by viewing other individuals' responses to problems. However, individuals at low-achievement levels benefit from instruction regarding the skills necessary to correctly evaluate themselves as well as how to positively use metacognitive strategies.

In the same vein, Cardell-Elawar (1995) examined elementary and middle school age children who were considered low-achievers in mathematics. In the study, individuals were randomly assigned to either receive traditional teaching or metacognitive training. The metacognitive training directed students to answer certain questions throughout the problem-solving process that related to metacognitive functioning such as, "Do I understand the words in this problem?" and "With what operations needed to solve this problem do I typically have difficulty completing?" Students that received metacognitive training significantly improved in their performance compared to students in the control condition. Interestingly, the students in the metacognitive training group also exhibited improved attitudes toward mathematics. This finding supports the notion that one benefit of metacognition may be related to promoting feelings of self-efficacy.

An illustrative example of how metacognition is defined as a process was presented elaborately in the works of Teasdale, Segal and Williams (1995, 2002). In their model, metacognitive awareness refers to the process of experiencing negative thoughts and feelings as “mental events” rather than believing they are necessarily true or accurate reflections of reality. No particular thoughts or feelings are selected as important or figural to explaining their emotional impact rather, the emphasis is on changing one’s relationship to the thoughts and feelings that one becomes aware of.

2.9 Achievement Motivation Training and Dissertation Efficacy

Several other researchers have also reported that the mathematics self-efficacy of college undergraduates is more predictive of their mathematics interest and choice of mathematics-related courses and majors than either prior mathematics achievement or

outcome expectations. The findings also indicate that male undergraduates report higher mathematics self-efficacy than do female undergraduates (Hackett, 1985; Hackett & Betz, 1989; Lent, Lopez, & Bieschke, 1991, 1993; Pajares & Miller, 1994, 1995b).

Results of these studies reiterate that self-efficacy beliefs are significantly related to a wide variety of variables necessary for academic success. Pajares (1996) observe that the self-efficacy of gifted students is based on perceptions of their cognitive ability. In addition to the comprehensive research of Lent and his colleagues (1984, 1986, 1987), many other researchers have explored the associations between self-efficacy beliefs and variables of academic performance and persistence with various samples in various settings (e.g., Locke, Frederick, Lee, & Bobko, 1984; Shunk, 1985; Wood & Locke, 1987; Brown, Lent, & Larking, 1989; Bouffard-Bouchard, et al, 1991). In each study, self-efficacy beliefs were significantly associated with persistence and performance. Individuals reporting strong self-efficacy beliefs persisted longer at and performed better in behaviours necessary for academic success. Not only were self-efficacy beliefs directly related to performance and persistence, but also indirectly.

Chemers, Hu and Garcia (2001) conducted a longitudinal study of first-year college students that examined the effects of self-efficacy on their academic performance, stress, health, and commitment to stay in school. Throughout the semester, students received questionnaires to complete that solicited information about their self-efficacy and optimism. The researchers found that academic self-efficacy and optimism were strongly related to students' performance and persistence. The outcome of the study also revealed that students who gain admission into college with confidence and expectations to perform well, do so. The researchers also acknowledged that the high self-efficacy of these college students could be attributed to their high academic ability.

The goal of educators is to produce students with high self-efficacy who attempt more difficult activities, improve on different activities and persist in light of challenges. As a result, high self-efficacy contributes to high performance. Undergraduates with stronger self-efficacy beliefs tended to set more difficult, specific goals and were more committed to their goals. Wood and Locke (1987) submit that this in turn led to better performance. Multon, et al (1991) performed a meta-analytic investigation of the relationship between self-efficacy beliefs and academic outcomes. Multon and his colleagues found strong evidence for a significant association between self-efficacy beliefs and academic performance and persistence across a wide range of diverse samples. The study affirmed that generally,

individuals with stronger self-efficacy beliefs performed better and persisted longer at various academic behaviours.

Achievement motivation interventions that focused on improving self-efficacy have proven successful (Gist, Schoerer, & Rosen, 1989; Betz & Schifano, 2000). In addition, the researches equally focused more generally on academic performance and persistence, studies have also supported significant associations between self-efficacy beliefs and various specific tasks related to academic and intellectual success. Lizzio and Wilson (2004) in a research observe positive links between perceptions of the relevance of skills and motivation for further learning. Their finding confirms similar findings of Erwins (2001) when he observes positive links between job satisfaction and occupational self-efficacy. Pinquart, Juang, and Silbereisen (2003) also establish that there are similar links between high academic self-efficacy beliefs and school-to-work transition.

As discovered by Hines (2006), Scottish doctoral students held a higher dissertation self-efficacy than did American doctoral students. Based on the descriptions of pre-dissertation experiences, the findings further substantiate Bandura's (1977, 1997) proposition of self-efficacy theory. His theory espouses self-efficacy development through socially constructed learning experiences, that is, people raise their confidence level by interacting with competent people. These findings highlight the need to measure and develop the dissertation self efficacy of postgraduate students. Golightly's (2007) investigation into defining and predicting components of self-efficacy among high school students found that past success, verbal persuasion and emotional arousal are significant predictors of self-reported levels of academic self-efficacy. More prominently, past success as measured in the study was the most significant source of motivation.

Hines (2008) carried out an investigation to measure the dissertation self-efficacy differences between third year American and Scottish doctoral students of educational leadership. The result shows that Scottish doctoral students that were given instruction on how to complete a doctoral programme held higher self efficacy for writing the doctoral dissertation. These findings highlight the need to measure and develop the dissertation self efficacy of doctoral students.

The findings in the longitudinal study by Jungert (2009) indicate that students' perceptions of their opportunities to influence their study conditions interact with their motivation, self-efficacy and approaches to studying. Students who have high self-efficacy beliefs develop more strategies to influence their study environment. Also, students who perceive great opportunities to influence their study conditions adopt certain approaches to

their studies and become more motivated. These interactions are reflected in their approaches to studying and are important in the graduates' process of transition to work.

Schunk (1981) used path analysis to show that modelling treatments increased persistence and accuracy on division problems by raising children's self-efficacy, which had a direct effect on skill (Zimmerman & Ringle, 1981). He later demonstrated that effort attributional feedback of prior performance (e.g., "You've been working hard") raised the self-efficacy expectations of students and this increase was in part responsible for increased skill in performance of academic tasks (Schunk, 1982a). In subsequent experiments, he found that ability feedback (e.g., "You're good at this") had a stronger effect on self-efficacy and performance (Schunk, 1983a; Schunk & Gunn, 1986).

The relationship between anxiety and performance under test situations is complex. Some people experience anxiety as debilitating while others need and welcome anxiety as a way of enhancing their performance. Debilitating and facilitating anxiety can co-occur in the same individual. For some people, a single experience of failure may be sufficient to elevate test or performance anxiety. The cumulative effects of serial successes or failures will result in a negative correlation between attainment and anxiety (i.e. the higher the anxiety, the lower the attainment). However, this relationship may be affected by level of aspiration in the performer, and the relationship between aspiration and ability. High aspiration with low ability will produce greater performance or test anxiety, because there is a likelihood of failure under these circumstances and also cause distress because the individual's self-esteem is threatened by sub-optimal performance.

Solomon and Rothblum (1984) in a study investigated the frequency of tertiary institution students' procrastination on academic tasks and the reasons for procrastination behaviour. A factor analysis of the reasons for procrastination indicated that the factors fear of failure (evaluation anxiety and perfectionism) and aversiveness of the task accounted for most of the variance. A small but very consistent group of subjects endorsed items on the fear of failure factor that correlated significantly with self-report measures of depression, irrational cognitions, low self-esteem, delayed study behaviour, anxiety, and lack of assertion. In another study, Hoffman and Schraw (2009) examined the influence of self-efficacy beliefs and working memory capacity on mathematical problem-solving performance, response time, and efficiency motivational efficiency hypothesis, which predicted that motivational beliefs, such as self-efficacy, increase problem-solving efficiency through focused effort and strategy use. Their findings suggest that self-efficacy increased problem-solving efficiency through

strategic performance rather than faster solution times and were consistent with the motivational efficiency hypothesis.

When a person is confronted with difficulties and he/she believes in himself, this can promote motivation. On the other hand beliefs about oneself as ineffective when confronted with difficulties can undermine motivation (Reeve et al., 2004). In a study conducted by Malmberg and Little (2007) on elementary school children, they found differences in motivation among the strivers and the disengaged students. The strivers motivational profile revealed a high level of intrinsic and extrinsic motivation. Their achievement and school well being were generally at the normative level. For the disengaged, they displayed low level of intrinsic and extrinsic motivation, moderate achievement level and very low school well being. For the challenged group, the low levels of intrinsic motivation coupled with the high levels of extrinsic motivation are consistent with the maladaptive pattern that is, they show the lowest levels of school well being. The above findings indicate the importance of student motivation in their learning environment.

Among the variables studied by previous researchers on adjustment of students, are self-efficacy and achievement motivation of students. Self-efficacy refers to the beliefs about one's capabilities to learn or put up behaviours at designated levels (Bandura, 1997). Achievement motivation is a construct which refers to the desire to do well in order to attain an inner feeling of personal accomplishment (McClelland, 1987). A study conducted by Lent et al. (2009) on 252 students at a university in Northern Portugal, found that self-efficacy and environmental support were predictive of goal progress and academic adjustment. Students reported gains in their academic functioning and environmental support as their sources of motivation as they possess strong self-efficacy.

Hirose et al. (1999) while investigating on the effects of self-efficacy of adjustment to college among 1,385 Japanese students found that the three subscales for self-efficacy: Judgmental ability based on objective information, self-controlled persistence of activity and self-adjustment in human relations are basic competencies necessary for college adjustment. They found significant differences between well adjusted and poorly adjusted groups in terms of the three scales of self-efficacy.

2.10 Achievement Motivation Training and Dissertation Anxiety

Anxiety and motivation for achievement are two variables that are significant predictors of any significant achievement. They are combined and relative significant influences on academic accomplishment (Olatoye, 2009). These variables are germane and must be consider or reckon with in efforts to impact on dissertation completion. Though

academic anxiety appears to be a negative psychological construct unlike motivation for achievement, Busari and Uwakwe (2001) have linked high level of anxiety to poor learning outcomes in school. Debilitating anxiety manifests in students' inability to think clearly, fear of failure, negative self-evaluation and self-blame. This implies that the higher the academic anxiety the lower the motivation for achievement. In this case, student motivation is also expected to reflect the increased sense of control over their learning (Eccles, Midgley, & Adler, 1984).

From another perspective, researchers investigating the effects of anxiety on learning from instruction have shown that the presentation of material in a well organised or structured form also enhances the performance of anxious students relative to those low in anxiety (Tobias, 1986). According to Wigfield and Eccles (1989), "loosely structured, student-centred instructional strategies have been found to work less well with anxious students, presumably because the greater uncertainty in those kinds of situations poses a stronger evaluative threat to the anxious students."

Findings have it that anxiety towards dissertation will decrease as a consequence of increase in emotional intelligence and dissertation efficacy beliefs. Griffin (n.d.) conducted an investigation into the influence of self-efficacy and anxiety on dissertation process among doctoral students. He found a strong negative correlation between self-efficacy and anxiety toward the dissertation experience. Griffin's finding is in consonance with Adeyemo & Onongha's (2010) discovery. The significant negative correlation of anxiety and the dissertation process have been shown in the empirical studies of Hembree (1988); Bandura (1996); Odinko (1999) and Adeyemo & Adetona (2007). The findings suggest that students who are confident in their ability to perform during the dissertation experience are less anxious than those who are less confident. Skinner and Croft (2009) also sought to improve the self-efficacy of business school undergraduate students undertaking dissertation through Neuro-Linguistic Programming techniques. The training package and quantitative results indicate that students who engaged in the workshop series performed better in the dissertation and also in their overall degree classification, than their cohorts who did not engage in the programme.

Grosjean (1995) conducted an investigation on doctoral students to unravel the All But Dissertation phenomenon. The study shows that many doctoral students despite having dissertation topics do have problems choosing methodology or developing a conceptual framework and narrowing their focus for the dissertation proposal. The degree of difficulty encounter in resolving these problem areas is reflected by the length of time in the

programme prior to proposal acceptance, which varies from 18 to 48 months. This category of at-risk dissertation students tends to spend less time associating with others and slowly disappears from campus or just drifts away. Such students cite one impediment or the other (in some cases, all) as a contributing factor to their inability to complete the dissertation process: lack of supervisor support, stress of doing research, lack of finances resulting in the need for job or change of job, lower than expected scores or an overly critical approach by a supervisor .

Viewed from the perspective of resilience, the ability to rebound from disappointments may diminish over time. Repeated incidences may increase the amount of time required to become motivated again, to the point where less time is spent in action and more time in recovery. The amount of effort devoted to studies is reduced until it diminishes almost completely. Ultimately, there comes a point where the effort required to continue is greater than the disappointment of not completing. Early intervention by peers and supervisors can prevent this cycle from continuing (Grosjean, 1995). De Charms (1971), Biaggio (1978), Hosek and Man (1981) suggest that human motives can be learned or changed through a structured form of training. Considerable evaluation research has been conducted on achievement motivation training and the results are generally positive. Arnoff and Litwin (1971) observe that participants in achievement motivation training programme evidenced a significantly higher rate of advancement within their company than did a control group.

Empirical studies have shown that through training, adults can learn certain skills which help them achieve their personal goals. Among students, the achievement motivation training has been shown to be effective in increasing the level of achievement motivation and achievement in certain school subjects (Burris 1958; Kolb 1965; de Charms 1972; Ryals 1975).

Elias and Wan Rafael (1994) organised achievement motivation training for university undergraduates. Training input laid special emphasis on achievement thinking, competition, excellence, challenges, self-study, planning and decision making. The training input characteristics contributed to the change in achievement motivation and locus of control of the subjects. The result indicates that achievement motivation training in specific activities and procedures of the structured and directed McClelland approach were more effective than the activities given to the discussion group in increasing the level of achievement motivation and the feelings of internal control. The achievement motivation group also showed a significant increase in the cognitive aspect of achievement motivation ($p < .05$) compared to

the discussion and control groups. Their results support the findings of earlier studies by de Charms (1971), Biaggio (1978), Hosek and Man (1981), Weiner (1979, 1986), Craske (1985) and Ashton (1986).

Results of an Achievement motivation intervention by Muis, Franco, Ranellucci and Crippen (2010) reveal that all treatment groups had high levels of self-efficacy at posttest, and the mastery goal and performance goal conditions had low levels of anxiety at post-test compared to the control group. The test comprising 217 students were randomly assigned to one of four conditions: a control condition, a mastery condition, a performance-approach condition, and a combined mastery/performance-approach condition. In each condition, students received a raw performance score for each weekly quiz they completed in an online learning environment and, for the treatment conditions, additional feedback reflective of that specific goal condition.

2.11 Emotional Intelligence and Dissertation Completion

The past 22 years has seen increasing interest in the possibility that emotions may moderate intelligent behaviour by influencing an individual's reaction to and interpretation of information (Salovey & Mayer, 1994; Bastian, Burns & Nettelbeck, 2005). Meanwhile, as the concept of emotional intelligence is a partially novel and flourishing concept in relation to pedagogical attempts, studies dealing with the myriad implications of this construct for instructional arenas still appear to be infrequent. Among such educational issues which have received scanty attention in the light of emotional intelligence lies the would-be relationship between learners' emotional intelligence and their use of learning and coping strategies in an independent learning process of dissertation. Among the very few related studies in this regard, one can refer to Aghasafari's (2006) probe into students' use of metacognitive strategies in which she found a significant correlation between overall emotional intelligence measure and language learning strategies.

Successful academic performance includes being able to identify emotional stressors (Lyons & Schneider, 2005), a process which ability EI facilitates by providing emotion-related knowledge and capabilities such as emotion perception and emotional understanding. Skills such as effective management of one's emotions do foster emotional resilience (Fabes & Eisenberg, 1997) and allow individuals to adapt to stressful situations or crises, which may hinder their academic performance. Trait EI may also be important for academic performance, primarily because emotional self-efficacy is an important aspect of this construct (Kirk et al., 2008; Petrides, Fredrickson, & Furnham, 2004). It is perceived emotional self-efficacy (an aspect of trait EI) that plays an important role in emotion self-

management in education situations: it affects actions not only directly, but also through its influence on other decisions that might impact on academic performance. Thus, within the context of education, beliefs of one's emotional self efficacy are likely to influence what self-regulative standards people adopt during learning activities, including revision; whether they think in an enabling or debilitating manner when considering their academic performance; how much effort they invest in any one particular learning or revision strategy; how they persevere in the face of academic difficulties; how resilient they are to academic stressors; how vulnerable they are to non-academic stressors and choices they make in non-academic aspects of their lives.

As discovered in Spaulding and Rockinson-Szapkiw's (2012) investigation into the challenges of doctoral students during dissertation process, the demand for persistence includes emotional capability. Their investigation which involved 76 doctoral students reported that the level of stress doctoral students experienced in the process was overwhelming. From their finding, the dissertation process is portrayed as one that is stressful and can be overwhelming.

In another investigation by Lam and Kirby (2002) into the influence of emotional intelligence on academic performance among 304 undergraduate students, emotional intelligence contributed to individual cognitive-based performance above the level attributed to general intelligence and this relationship was positive. The finding lends credence to the effect of trait emotional intelligence on academic performance. Petrides et al. (2004) report that emotional intelligence (EI) is significantly related to scholastic achievement, with its effects having noteworthy implications for low IQ pupils. It was further reported that trait emotional intelligence was differentially associated with educational subjects considered in academic fields.

In another study by Salami (2007), it was further discovered that emotional intelligence and self efficacy are correlates and predictors of the outcomes of individual performance. The implication of the finding is that if individual's attitude towards a particular task is negative, then low performance would be recorded. Emotional intelligence appears to be a critical factor in the behaviour and performance of an individual in an assigned task. Therefore, it is imperative for schools to integrate the teaching of emotional intelligence in their curricula thereby raising the level of students' success (Abisamra, 2000). Specifically, Finnegan (1998) argues that school should help students learn the abilities underlying the emotional intelligence.

A number of studies have examined life satisfaction in relation to various EI measures, with all reporting low-to-moderate positive correlations in the order of r = .11 to r = .61 (Martinez-Pons, 1997; Mayer, Salovey & Caruso, 1999; Ciarrochi, Chan, & Caputi, 2000; Schutte, Lopez, & Malouff, 2000; Palmer, Donaldson, & Stough, 2002; Saklofske, Austin & Miniske, 2003; Gannon & Ranzijn, 2005). However, these studies have not comprehensively controlled for the possible effects of personality and cognitive abilities (if at all, generally only personality or cognitive abilities, but typically not both have been controlled).

Research on problem-solving, anxiety and EI is limited, however, study by Heppner & Lee (2002) indicates coping is positively correlated with problem-solving and, like problem-solving, while EI is negatively correlated with anxiety. Therefore, given correlations between EI and coping, problem solving and anxiety should be correlated (positively and negatively, respectively) with EI. Also, study by Bastian et al (2005) followed this direction where the relationships between EI and a number of life skills (academic achievement, life satisfaction, anxiety, problem-solving and coping) were investigated among 246 predominantly first-year tertiary students. Correlations between EI and academic achievement were small and not statistically significant, although higher EI was correlated with higher life satisfaction, better perceived problem-solving and coping ability and lower anxiety. However, after controlling for the influence of personality and cognitive abilities, shared variance between EI and life skills was 6% or less.

Also, the results of EI abilities between different sexual and age groups showed a meaningful difference. Older participants got higher score of the EI fork (facilitation, conception, management) and females got higher scores of emotion conception and aberration than males. Bracket, Mayer, Warner (1990) studied EI and its relation with daily behaviours. Criterion admissibility and emotional intelligence increase and segregation scale were assessed in this study. 330 students were selected for the EI ability test, the five-factor personality scale and Life Space scales which assess self-care behaviour, educational activities, spare time and interpersonal communications on an arrayed basis. The findings showed that females got meaningfully higher scores than males in EI, but EI is a more distinguished predictor in men's life. Men's lower score of EI (principally), inability to understand emotions and using them to facilitate thinking are associated with negative consequences such as taking alcoholic and illegal drugs, deviated behaviour and weakness in relation with friends. In this specimen, EI had a meaningful relation with male students' inadaptable and negative behaviours, but no such relation was found for females. This finding

however contradicts the findings from studies by Schutte et al., (1998); Mayer, Caruso, & Salovey, (1999); and Brackett, et al (2004) that females show higher EI than do males.

In a later investigation, Labbaf, Ansari and Masoudi (2011) were after finding the potential effect of emotional intelligence on different dimensions of learning organisation. To conduct the study, they randomly selected 86 respondents (education officials and Library assistants). Following the likert-type questionnaire analysis and resorting to the results of regression for the final analysis of data, they concluded that "EI had significant positive impact on dimensions of learning organisation, clarity of mission and vision, effective transfer of knowledge and teamwork and group problem solving".

In their search for the possible effect of EI and self-efficacy beliefs on high school students' achievement, Yazici, Seyis and Altun (2011) used a sample of 407 participants (236 female and 171 male high school learners). Successive to the analysis of data gained through EI and self efficacy questionnaires, these researchers found that gender, age and self efficacy act as the major predictors of learners' academic achievement. Their study further came up with the existence of an interaction effect between academic achievement and the learners' socio-economic status. Moreover, females' academic achievement was reported to be significantly higher than that of male participants.

In their probe into the viable relationship between EI and self-efficacy of Iranian EFL university professors, Alavinia and Kurosh (2012) faced a significant amount of correlation between the participants' scores on EI and self-efficacy. The partakers of this study were some 50 EFL university professors from whom the data were tapped through the use of Bar-On's EQ-i questionnaire and Tschannen-Moran and Woolfolk Hoy's self-efficacy scale. The final upshots of this study further revealed that the participants' ages and their years of teaching experience were of no interaction effect regarding the correlation between the subjects' EI and their self-efficacy.

In another study dealing with the interrelatedness of EI and learning strategies, Hasanzadeh and Shahmohamadi (2011) launched a research project with 100 university learners majoring in different fields. Then, administering Bar-On's EQ-i and Learning and Study Strategies Inventory, they encountered a significant relationship between the learners' EI and their learning strategies. Yet, in terms of the correlation between the learners' main fields and their EI and learning strategies no significant results were reported in this study.

With regard to empirical evidence, concurrent and one-year studies show that ability EI is important within the context of academic success, even after personality and academic intelligence are statistically controlled (Lyons & Schneider, 2005; Gil-Olarte Marquez,

Martin, & Brackett, 2006; Mestre, Guil, Lopes, Salovey & Gil-Olarte, 2006). Trait EI is also an important factor in the academic achievement of university and secondary school students (Austin, Evans, Goldwater, & Potter, 2005; Downey, Mountstephen, Lloyd, Hansen, & Stough 2008; Parker, Creque, Barnhart, Harris, Majeski, Wood, 2004; Parker, Summerfeld, Hogan, & Majeski, 2004; Vidal Rodeiro, Bell, & Emery, 2009).

Whilst there is evidence that trait EI relates to academic performance, several studies report no significant association (Bastian, Burns, & Nettlebeck, 2005; Newsome, Day, & Catano, 2000; Van der Zee, Thijs, & Schakel, 2002). Petrides et al. (2004) argue that whilst trait EI may not be associated directly with academic achievement, it moderates the relationship between cognitive ability and academic performance; because they experience more stress during their studies, adolescents with low IQ benefit academically if they have appropriate self-perceived emotional skills. Recent research shows this effect for ability and trait EI, such that adolescents low on cognitive ability, but high on ability and trait EI outperform their low cognitively able peers with low ability and trait EI (Qualter, Gardner, Pope, & Hutchinson, 2010). Thus, both types of EI are important in predicting academic performance because they act as moderators of cognitive ability.

2.12 Gender and Dissertation Completion

While Wright and Cochrane (2000) and Seagram, Gould and Pyke (1998) found little difference in completion rate with regard to gender, other studies indicates that females complete their dissertation longer than males at rates ranging between 3% and 10% (Martin, et al, 1999; Siegel, 2005; Council of Graduate Schools, 2008). In another report on potential predictors of timely completion among dissertation students, gender differences in the completion rate, Jinarek (2010) submits that females spend longer time to complete and submit their dissertation. Females take approximately 11% longer than males.

Most academic literature indicates lack of statistically significant differences in self-efficacy among the genders (Shaefers, 1993; Zhao, Seibert & Hills, 2005; Sequeira, McGee & Mueller, 2005; Mueller & Dato-On, 2007; Iskender, 2009). However, AL-Kfaween's (2010) study has established that significant difference exists in the self-efficacy level of university students. The culture prevailing in the candidate's environment have been attributed to be responsible for the observed differences in the level of observed self-efficacy among genders. Some cultures impose restrictions on the male and female as well as limited experience similarity and the absence of models, male and female (Iskender, 2009; Peggy & Zimmerman, 2007). Self-efficacy is also differentiated among genders due to societal perception and propensity to give preference to certain field of specialisations as better as and

more efficient than others. According to AL-Kfaween (2010), such society will always present individuals holding positive belief about themselves thereby encouraging accomplishment of specific tasks towards their goals.

It is noteworthy that other studies did find gender differences in self-efficacy of engineering students in relation to participants' perceived sources of self-efficacy. Bradburn (1995) found differences in self-efficacy, partially due to differences in negative persuasion (e.g. statements indicating that women can't do certain things) and anxiety signals. These differences were strong enough that, when the self-efficacy differences were eliminated statistically, gender differences in attrition were also eliminated. Zeldin and Pajares (2000) found gender differences in self-efficacy sources through their qualitative study of men and women who had entered into and continued to succeed in professional careers. Descriptive analysis exposed that men perceived mastery experiences as critical to their self-efficacy beliefs, while women valued verbal persuasion and vicarious experiences (e.g. experiencing a task or activity "second hand" through someone else's accomplishment of it). A mixed methods study by Hutchison, Follman, Sumpter and Bodner (2005) also found gender differences in sources of self-efficacy with substantial differences in how many men and women attributed computing abilities as either a positive or negative contributor to self-efficacy.

According to O'Hare (1995) and Marra and Bogue (2006), women usually embark on doctoral programme with high dissertation efficacy and self-esteem but within the first two years, their self-efficacy declines sharply that even if it does begin to elevate, it will never again reach the same height (Brainard & Carlin, 1998). During this time, women compare themselves unfavourably to their male peers and judge themselves more harshly than the men judge themselves (Hawks & Spade, 1998).

Gender differences are observed amongst adolescents as far as academic anxiety is concerned. Males are said to have more academic anxiety as compared to females. Traditionally, it is the males who are supposed to be pacesetters and so male doctoral students are more concerned about doing well in academics to ensure better jobs (Bhansali & Trivedi, 2008). Also, masculine self esteem is dependent on their ability to earn and provide for others. Doctoral students, who are striving to establish academic identity, have reasons to be worried about dissertation which is almost a ticket to their job aspirations. Pramod (1996) concludes that males manifest more future orientations than females thereby necessitating that the males have more academic anxiety. In a study conducted by Ojha (2005), 25% of the

males were reported to have extremely high anxiety while only 6.7% of the females had high academic anxiety.

The expected success of females in a given scientific task is generally lower than that of their male counterparts, even if they are equally competent. This societal belief has led to the theory that females are more highly academically anxious than males has brought some research to support the assertion that females are more test anxious with regard to mathematical studies and have lower levels of anxiety with regard to verbal assessment than their male counterparts (Richardson & Suinn, 1972; Dew & Galassi, 1983; Benson & Bandalos, 1989; Meece, Eccles, & Wigfield, 1990; Wolters, Yu, & Pintrich, 1996; Rouxel, 2000); however, in other researches, these differences have been non-significant and slight (Hyde, Fennema, & Lamon, 1990; Fan, Chen, & Matsumoto, 1997; Pajares & Graham, 1999).

A meta-analytic study conducted by Seipp and Schwarzer (1996) examined TAI (Spielberger, 1980) data obtained from 14 different countries. They reported that women in majority of the cultural groups tended to have higher levels of test anxiety than men. Moreover, this pattern is more prominent in the emotionality scores than in the worry scores. It can be comfortably asserted that more research must be conducted to determine whether this is a result of gender based differences in test anxiety or if the aetiology is rooted in the different types of academic disciplines (Furst, Gershon, & Weingarten, 1985).

2.13 Appraisal of literature

The review of related literature indicates that scholars perceive completing dissertations a noteworthy achievement that contends with certain barriers such as factors beyond (external) the candidates control such as challenges set by the learning environment, pressures from jobs, family, significant others, lack of support from the supervisor (or advisors) and the professorial committee, questionable support from an employer and prominent internal factors such as low dissertation efficacy and high level of anxiety that the candidates exhibit towards the dissertation process (Stein, 1987; Kember, 1990; Multon, Brown & Lent, 1991; Chemers, et al, 2001; Lane & Lane, 2001; Lane et al, 2003; Griffin, 2005; Adeyemo, 2007; Harsch, 2008; Adeyemo & Onongha, 2010).

It is unfortunate that despite the recorded high rate of attrition among doctoral candidates, there has been no behavioural intervention to assist the doctoral candidates at enhancing their self –efficacy towards successful accomplishment of the dissertation process. Available literature also indicates the debilitating effect of anxiety on dissertation performance of doctoral candidates. Dissertation anxiety is presented in literature as a factor

sustaining delay and procrastination in completing a doctoral dissertation. From the literature reviewed, there is a dearth of interventions on modalities of reducing dissertation anxiety experienced by doctoral candidates.

Conclusively, research has consistently demonstrated that low efficacious and high anxious students regardless of their levels perform below their capabilities at completing the dissertation process (Lane et al, 2003; Griffin, n.d.; Golightly, 2007; Varney, 2010; Adeyemo & Onongha, 2010). Failure to complete the dissertation process has therefore led to high attrition in doctoral programmes. The effect of the high rate of attrition in doctoral programme presents a great risk and a hurdle towards meeting the demand for suitably qualified academics in Nigerian universities.

Various authors have further revealed that achievement motivation training involving setting mastery goals predicted continued interest in the dissertation process while performance goals will predict long-term outcomes after completing the doctoral programme, performance-approach goals also predicts performance. Studies have found that increasing students' achievement goals increases motivation, metacognitive self-regulation (cognitive engagement), and achievement (Muis, et al, 2010). As Harackiewicz et al, (2002) argue, to improve student performance, university professors should develop environments that focus on performance as well as mastery of the dissertation process.

From available literature also, metacognitive strategies are presented as potential interventions that can increase self-efficacy and metacognitive self-regulation. Moreover, metacognitive strategies were presented as capable of causing a decrease in anxiety among all categories of students (McInerney, McInerney, & Marsh, 1998). Given that previous researches on student performance has demonstrated these factors to be positive predictors, if treatments can be implemented in an environment that increase motivation, metacognitive self-regulation and achievement then dissertation performance may also increase while dissertation anxiety decreases.

2.14 Conceptual Model for the Study

The model for this study comprises two independent variables (i.e. Metacognitive Strategy and Achievement Motivation Training), two dependent variables (High Dissertation Efficacy and Low Dissertation Anxiety) and the expected outcome that the subjects would acquire or cultivate after being exposed to the independent variables (treatment). Intervening variables are between the dependent and independent variables. The intervening variables considered in this study are emotional intelligence and gender of the participants. These variables intervene between independent and dependent variables and are expected to make

an impact on the dependent variable. Thus, the researcher would manipulate the independent variables to ascertain their effectiveness on the dependent or non – manipulative variables. With the instrument to be used in the study, the researcher would be able to know how much impact the independent variables would have on the dependent variables. The behavioural equation S-O-R represents the complete interaction of various variables in the study.

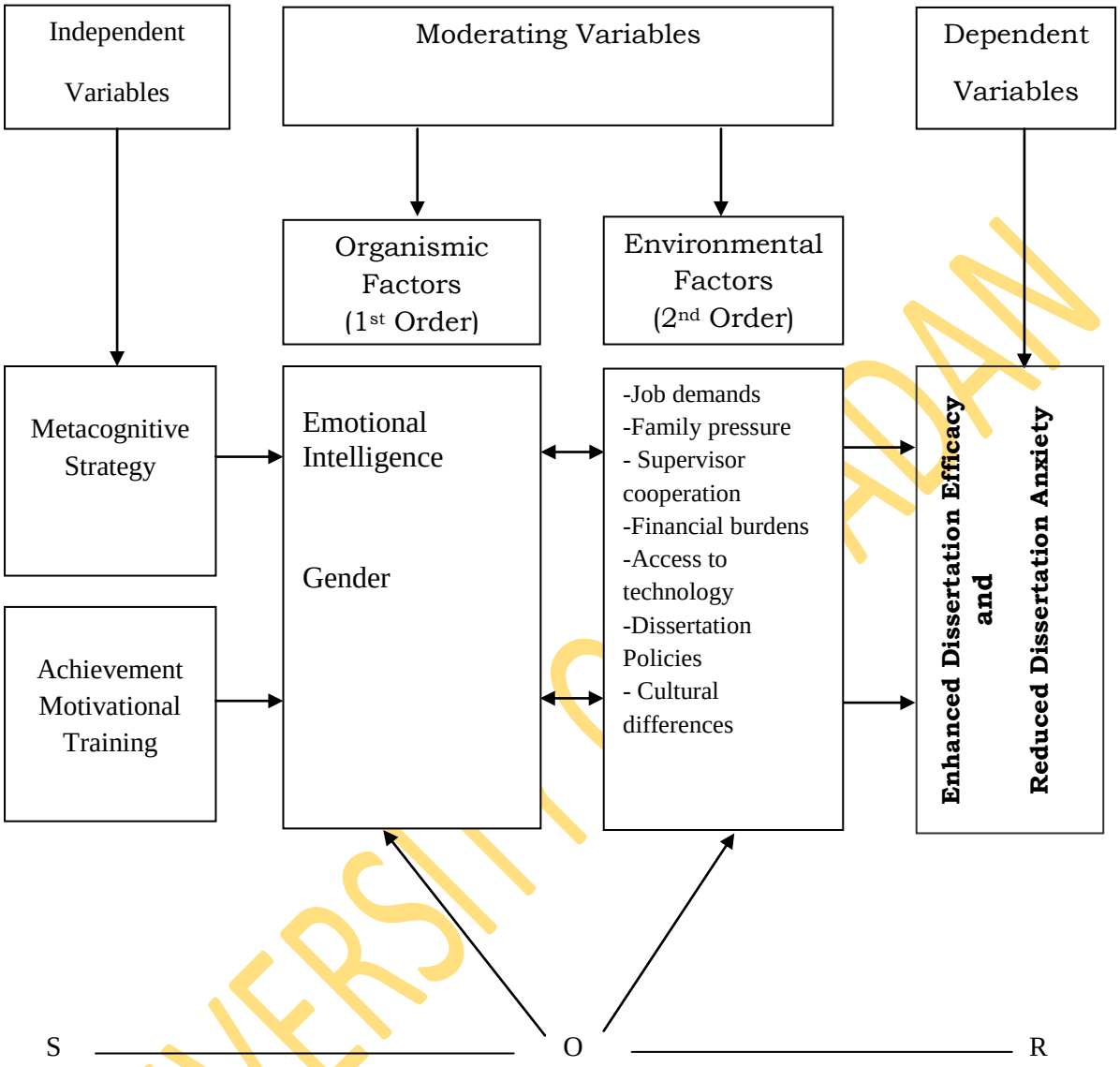
S – Stimulus (i.e. the independent variables)

O – Organism (i.e. the intervening variables found in the organism)

R – Response (i.e. the dependent variables that are the effects of the independent variables).

Figure 2.1

CONCEPTUAL MODEL FOR THE STUDY



2.15 Statement of Hypotheses

1. There was a significant main effect of treatments on the dissertation efficacy of the participants.
2. There was no significant main effect of gender on the dissertation efficacy of the participants.
3. There was a significant main effect of emotional intelligence on dissertation efficacy of the participants.
4. There was no significant interaction effect of treatments and gender on dissertation efficacy of the participants.
5. There was no significant interaction effect of treatments and emotional intelligence on dissertation efficacy of the participants.
6. There was no significant interaction effect of gender and emotional intelligence on the dissertation efficacy of the participants.
7. There was no significant interaction effect of treatment, gender and emotional intelligence on the dissertation efficacy of the participants.
8. There was a significant main effect of treatments on the dissertation anxiety of the participants.
9. There was no significant main effect of gender on the dissertation anxiety of the participants.
10. There was no significant main effect of emotional intelligence on dissertation anxiety of the participants.
11. There was no significant interaction effect of treatments and gender on dissertation anxiety of the participants.
12. There was no significant interaction effect of treatment and emotional intelligence on dissertation anxiety of the participants.
13. There was no significant interaction effect of gender and emotional intelligence on the dissertation anxiety of the participants.
14. There was no significant interaction effect of treatment, gender and emotional intelligence on the dissertation anxiety of the participants.

CHAPTER THREE

METHODOLOGY

This chapter is on methodology and techniques that this study utilised to test the effectiveness of the two treatment strategies – Achievement Motivation Training (AMT) and Metacognitive strategy. A review of the approaches used is discussed as given below:

- Research design
- Population
- Sample and Sampling technique
- Instrumentation
- Procedure
- Data analysis
- Treatment package

3.1 Research Design

The study adopts Experimental approach. A 3x2x3 non randomised pre-test and post-test control group factorial design was adopted. The factorial matrix for the matching of variables is as shown in Table 3.1

Table 3.1: A 3x2x 3 factorial Matrix for the Psychological Treatment of Dissertation Efficacy and Anxiety

Treatment	Male			Female		
	Emotional Intelligence					
	Low	Medium	High	Low	Medium	High
MST (A_1)	5	6	9	3	2	2
AMT(A_2)	1	5	6	2	5	11
Control Group (A_3)	8	3	2	6	5	3
Total	45			39		

The treatment with A_1 is the teaching of Metacognitive Strategy while A_2 represents AMT and A_3 (Control Group) which was not exposed to treatment.

A_1 = Experimental group one (Metacognitive Strategy)

A_2 = Experimental group two (AMT)

A_3 = Control group

The outline of design is symbolically represented as follows:

Experimental Group 1	A_1	O_1	T_1	O_2
Experimental Group 2	A_2	O_1	T_2	O_2
Control Group	A_3	O_1	C	O_2

Where:

O_1 = experimental and control pre-test measurement

O_2 = experimental and control post-test measurement

T_1 = treatment for experimental group one

T_2 = treatment for experimental group two

C = control group

3.2 Variables in the study

The following variables were used in the study

Independent variable: instruction stratified at three levels

1. Metacognitive Strategy
2. Achievement Motivation Training
3. Control group (no experimental treatment)

Dependent variables

1. Dissertation Efficacy
2. Dissertation Anxiety

Moderating variables

1. Emotional Intelligence
   (i) Low
   (ii) Medium
   (iii) High
2. Gender
   (i) Male
   (ii) Female

3.3 Population

The population of the study comprises all doctoral students in all Nigerian universities. Three universities were selected, two federal universities - University of Ibadan, Ibadan and University of Lagos, Akoka and a state-owned university (Lagos State University, Ojo).

3.4 Sample and Sampling Technique

The participants were eighty-four doctoral students who were purposively selected from the three Nigerian universities and constituted into the experimental and control groups. Two federal government controlled universities: University of Ibadan and University of Lagos and a state controlled- Lagos State University were selected with consideration to patronage (population of doctoral students). The participants were selected through the administration of diagnostic instruments on dissertation efficacy and anxiety.

The initial sample consisted of ninety three (93) doctoral students but as the treatment progressed, the final sample (i.e. consistent participants) consisted of 45male and 39 female doctoral students from all academic departments of the three universities selected. The sample was purposely limited for population control. Participants from two universities were constituents of the two experimental groups, while students from the third university constituted the control group. Experimental groups and control group were determined through balloting.

Participants were registered doctoral students in the selected schools. They were doctoral students in the second year (third semester) of their programmes and have done most of their course work during the first year. Also, the participants had dissertation titles and are also planning for their dissertations. Lastly, the participants selected were doctoral students interested in and were ready to be part of the training sessions. Due to various non-academic commitments of the participants, the average mortalitity rate during the treatment was 7.5%.

3.6 Instrumentation

The following instruments were used for the selection, pre-test and post-test

- Dissertation Self-efficacy Scale
- Dissertation Anxiety Scale
- Emotional Intelligence Scale

3.5.1 Dissertation Self-Efficacy Scale

Dissertation Self-efficacy Scale (DSS) was designed by Lane, et al (2003). It is a scale comprising 30 items on identified meaningful competencies towards completing a dissertation. These competencies were used to develop a self-efficacy measure specific for dissertation. Questions are phrased around the statement ‘how confident are you in your ability to…’ Examples include ‘how confident are you in your ability to schedule your work to ensure deadlines are met?’ ‘How confident are you in your ability to make time for other activities for example, exercise/socialising?’ and ‘how confident are you in your ability to use computers effectively?’

A response scale ranging from 'not at all confident' (0) to 'very confident' (4) was used. The rationale for selecting a scale anchored by zero was based on the notion that participants would understand the proposed link between the descriptions 'not at all' with the number zero. Cronbach alpha estimate of internal consistency indicated an internally reliable scale (alpha = .88) while a three week test retest Cronbach alpha value was 0.80 was obtained, which means that the reliability level of this instrument was within the acceptable range.

A qualitative analysis was used to group the self-efficacy items into a number of themes (Lane et al., 2002). The themes identified were self-efficacy towards: maintaining motivation, planning, obtaining support, understanding theory, organising time, and effectively writing the dissertation. Self-efficacy towards maintaining motivation included items such as maintaining enthusiasm for dissertation and avoiding distractions in order to remain focused on the task. Self-efficacy towards planning included items relating to collecting relevant and accurate data and setting realistic goals. Self-efficacy towards obtaining support centred on students perceived capability to arrange tutorials with their dissertation supervisors, as well as to gain support from family and friends. It also examines self-efficacy towards understanding the need for skills such as understanding and using statistics and critically analyzing past researches. Self-efficacy towards prioritising workload and making time for other activities are examples of items relating to organising time and self-efficacy towards the ability to follow the recommended dissertation format and structure of paragraphs and chapters are examples of items relating to effective writing skills.

3.5.3 Dissertation Anxiety Scale

Dissertation Anxiety Scale (DAS) is a self-constructed scale designed for this study. It was designed to elicit responses on items investigating individuals' expression of anxiety in preparing or working on their dissertation. The scale comprises of 37 items on a five-point scale – Always, Often, Sometimes, Rarely and Never. Scoring of the instrument will range between 1 and 5 (Always-5, Often-4, Sometimes-3, Rarely-2, and Never-1)

The instrument was designed to consider certain areas generating anxiety during dissertation process. Features of the scale and items are fear of failure- 7; writing anxiety- 10; library anxiety- 8; computer and statistics anxiety- 7 and dissertation presentation and defence- 5. Examples include "Thinking about the upcoming dissertation process makes me feel anxious", "Topic selection is always a source of worry to me", and "Whenever I'm under pressure I find it hard to organise my thoughts more clearly than usual". "I am worried about how well I will perform during my dissertation defence"

Dissertation Anxiety Scale (DAS) was trial tested and the data obtained used in testing the internal consistency reliability estimate. This was done using Cronbach alpha procedure and the reliability estimate obtained is 0.84. The instrument was also tested for stability as it was used for pretest and posttest. The data obtained through a re administration of the instrument after two week were correlated with the data obtained earlier using Pearson product moment correlation method and the stability estimate of 0.93 obtained. The scores range from 37 to 185. A score below 90 indicates low dissertation anxiety while a score between 90 and 185 indicates high dissertation anxiety.

3.5.3 Emotional Intelligence Scale

Emotional Intelligence Scale (EIS) also referred to as The Schutte Self-report Emotional Intelligence Test (SSEIT) was developed by Schutte, Maluff, Haggerty, Cooper, Golden and Dornheim (1998) to assess emotional intelligence based on self-report responses of respondents. It is a method of measuring general Emotional Intelligence (EI), using four sub-scales: emotion perception, utilising emotions, managing self-relevant emotions, managing others' emotions. The SSEIT is structured off the EI model by Salovey and Mayer (1990). The SSEIT model is closely associated with the EQ-I model of Emotional Intelligence. The instrument has 33 items appraising emotions in self and others, regulation of emotions in self and others, utilisation of emotions in solving problems.

Respondents are required to respond to the items by indicating their agreement to each of the 33 statements using a five-point scale ranging from 1(strongly disagree) to 5 (strongly agree). The scores range between 33 and 165. A score below 77 is low while a score from 78 to 121 is moderate and 122 and above is high. The EIS records high internal consistency with Cronbach alpha ranging from 0.87 to 0.90 and a two week test-retest reliability coefficient of 0.78 was obtained.

3.6 Procedure

A letter of introduction which also sought for the permission and assistance of university administrators was collected from the Department of Guidance and Counselling, University of Ibadan and presented to the Registrars of the selected universities. The researcher visited the selected universities to obtain permission for students' participation in the study. The researcher further met with various postgraduate/ PhD programme coordinators of various departments in the Faculties of Education, Sciences, Arts and Humanities, Social Sciences and Management Sciences. The coordinators and heads of some departments introduced the researcher to their PhD students, thereafter; doctoral candidates

who have completed at least a session of academic work and those working on their dissertation proposals were identified through the administration of research instruments.

The researcher also met with the Guidance counsellors of each university requesting for their assistance towards securing appropriate places where the treatment was administered. The candidates who met the criteria for participation and were identified to have low self-efficacy and high anxiety towards dissertation process through the diagnostic administration of the scales were invited for the trainings. Thereafter, DSS, DAS and EIS were administered to the experimental groups and the control group on the first day of training immediately after the participants were received by the researcher. Participants were guided on the procedures for responding to the instruments. Pre-training discussion focused on the explanation, objectives and expected conducts.

The treatment was done on weekly basis and on a day (Wednesday) found to be seminar day for most doctoral students. Most of the participants are usually present in their various institutions for either course work or departmental seminar. Researchers made use of available periods after the seminars. Trainings lasted eight weeks for each groups. Attendance and participation was sustained by providing refreshment for the participants during treatments. The control group was subjected to non-therapeutic talks on 'Career maintenance and consolidation'.

Summary of the treatment package (See Appendix for details)

- Experimental Group One: Metacognitive Strategy

Session one: General orientation and administration of pre-test instruments
Session two: Preparing and planning for dissertation
Session three: Metacognitive strategy and the dissertation process
Session four: Metacognitive self-regulation
Session five: Other metacognitive strategies for dissertation process
Session six: Monitoring self and strategy use
Session seven: Managing stress and dissertation anxiety
Session eight: Review of previous sessions and administration of post-test instruments.

- Experimental Group Two: Achievement Motivation Training

Session one: General orientation and administration of pre-test instruments
Session two: Dissertation process and completion.
Session three: Achievement motivation and the dissertation process
Session four: Achievement thinking
Session five: Personal goals and goal-setting
Session six: Developing a personal action plan
Session seven: Handling emotions and stress
Session eight: Review of previous sessions and administration of post-test instruments**.**

3.7 Control of Extraneous Variables

Since an experimental study of this nature is an intervention designed to produce change, it must demonstrate that the observed change is indeed a product of the intervention. The experimental design permits the difference that would not have taken place had the intervention not occurred. Therefore, relevant variables that might have an effect on the treatment outcome were carefully controlled. Such extraneous variables include subject/participants variables, therapist/researcher variables, technique variables and situation variables.

In this study, the participants were assigned to two treatment groups and a control group. The treatment groups were trained on two locations (Lagos and Ibadan). These groups were doctoral students of University of Ibadan and Lagos State University. The control group consists of participants from another institution, University of Lagos. The participants were thoroughly screened through their responses on the instruments to ensure they meet the inclusion criteria. Further, since the researcher is the only one involved in training the participants, he was able to take care of the researcher variable. Other extraneous variables were also taken care of by means of statistical control such as the use of analysis of covariance (ANCOVA).

3.8 Method of Data Analysis

The post-test data for the three groups (Metacognitive Strategy Training, Achievement Motivation Training and the Control) were analysed using the ANCOVA with the pre-test scores as covariates. Multiple Classification Analysis (MCA) was also used to determine the magnitude and direction of effects and to ascertain the amount of variation due to each independent variable. In case of significant treatment effect, Duncan Range Comparison (DRC) was employed as a post-hoc measure.

CHAPTER FOUR

RESULTS

This chapter presents the results of the study based on the hypotheses tested in this study. The results were interpreted and each of the 14 hypotheses were either accepted or rejected at 0.05 level of significance.

Hypothesis 1

There will be no significant main effect of treatments on the dissertation efficacy of the participants.

To test whether there is significant main effect of treatment on the dissertation efficacy of the participants; the Analysis of Covariance (ANCOVA) was used.

Table 4.1: Summary of Analysis of Covariance (ANCOVA) of pre-post test interactive effects of dissertation efficacy of Doctoral students in the groups

Source	Sum of Squares	DF	Mean Squares	F	Sig	Remark
Covariates	175.54	1	175.54	2.01	0.16	NS
Main Effects	7821.12	4	1564.22	17.28	0.000	
Treatment groups	6423.03	2	3211.52	35.47	0.000	Sig
EI Levels	1381.17	2	690.59	7.63	0.001	Sig
Gender	16.92	1	16.92	.19	0.667	NS
2-Way interactions	1211.38	8	151.42	1.67	0.122	
Treatment x EI	542.99	4	135.75	1.50	0.213	NS
Treatment x Gender	393.93	2	196.96	2.18	0.122	NS
EI x Gender	67.08	1	33.54	0.38	0.692	NS
3-Way Interactions	237.79	4	59.45	.66	.624	NS
Explained	9445.82	18	524.77	5.80	0.000	
Residual	6377.46	65	90.54			
Total	15330.67	83	184.71			

Table 4.1 shows there is a significant main effect of treatment on dissertation efficacy [$F_{(2,65)} = 35.47$, $p < 0.05$]. This means there is a significant difference in the mean of dissertation

efficacy scores of participants in the experimental groups and those in the control. Hence the null hypothesis is rejected. The Multiple Classification Analysis (MCA) as presented in Table 4.2 was used to determine the magnitude, direction of the difference as well as the contribution of treatment to the explanation of the participants' dissertation efficacy.

Table 4.2: Multiple Classification Analysis (MCA) of Participants by Treatment, Emotional Intelligence and Gender

Grand Mean = 101.67

Variable + Category	N	Unadjusted Deviation	Eta	Adjusted for independents +Covariate Deviation	Beta
Treatment					
Metacognitive Strategy	27	8.11		7.93	
Achievement Motivation	30	3.50		2.13	
Control	27	-12.00		-10.30	
			0.63		.55
EI Levels					
Low	25	- 8.35		- 5.61	
Medium	26	- .28		- .99	
High	33	6.55		5.03	
			0.11		.04
Gender					
Male	45	1.33		.52	
Female	39	-1.54		-.61	
			.45		.33
Multiple R Squared					.522
Multiple					.722

From Table 4.2, the participants in the Metacognitive strategy obtained the highest adjusted post-test dissertation efficacy score (x=101.67+7.93=109.60). This is followed by those in the Achievement Motivation Training (AMT) group (x=101.67+2.13=103.80) while the lowest score was obtained by the control group (x=101.67-10.30=91.37). The group means were derived from the addition of grand mean and the unadjusted variation figures of high and low dissertation efficacy scores. To this end, Metacognitive strategy was effective in enhancing dissertation efficacy than AMT and the control group. Results of the comparison are summarised in Table 4.3

Table 4.3: Duncan Post-Hoc Multiple Range Comparison of Group Mean Scores in Dissertation Efficacy

Treatment Group	N	Mean Scores	Treatment Group		
			Control	Achievement Motivation Training	Metacognitive Strategy
Control	27	91.37		*	*
Achievement Motivation Training (AMT)	30	103.80	*		*
Metacognitive Strategy	27	109.60	*	*	

*Pairs of groups with means that differ significantly at p< .05

The Table reveals that the main effect of Metacognitive Strategy on dissertation efficacy of the participants in the two experimental groups is higher when compared to the control group. The result is further illustrated in Figure 4.1.

Estimated Marginal Means of Dissertation Efficacy

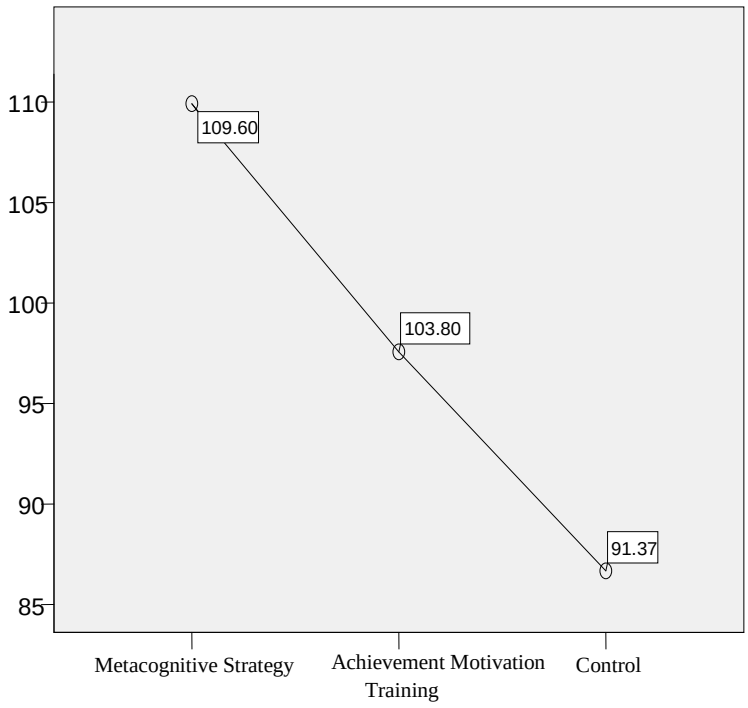


Fig. 4.1

The plot shows that Metacognitive Strategy has the highest mean score (M = 109.60); followed by AMT, (M = 103.80 and Control (M = 91.37) being the least.

Hypothesis 2: There will be no significant main effect of gender on the dissertation efficacy of the participants.

Table 4.1 shows gender had no significant effect on participants' dissertation efficacy [$F_{(1,65)} = 0.19$, $p < 0.05$]. This means there is no significant difference in the means scores of male and female. Therefore null hypothesis two is accepted. The MCA Table (Table 4.3) was used to determine the magnitude and direction of the difference as well as the influence of gender on participants' dissertation efficacy. The adjusted mean score for male participants is 102.19(101.67+.52) while the female had adjusted mean score of 101.06(101.67+-.61). This shows that the impact of gender on the dissertation efficacy of participants was not significant. Although there is no significant main effect of gender on dissertation efficacy of the participants, Fig 4.2 shows that the mean score for male is still greater than that of their female counterparts. The mean scores of male and female are further presented in Fig 4.2.

Estimated Marginal Means of Gender on Dissertation Efficacy

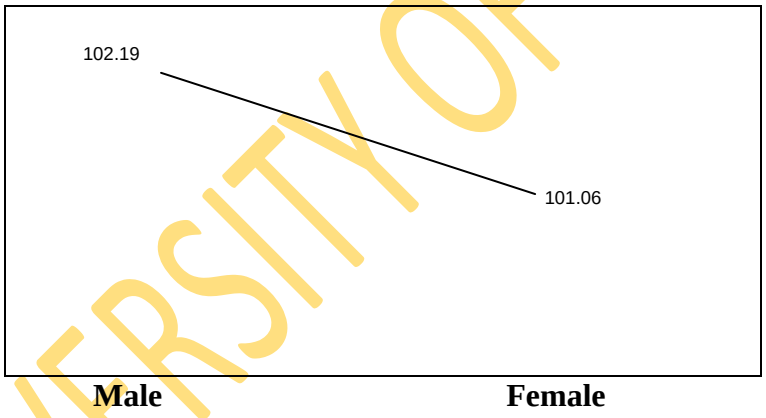


Fig. 4.2

Hypothesis 3: There will be no significant main effect of emotional intelligence on dissertation efficacy of the participants.

The result in Table 4.1 shows that emotional intelligence (EI) has a significant effect on the dissertation efficacy of participants [$F_{(1,65)} = 7.63$, $p < 0.05$]. This means participants with low and high EI levels are significantly different from one another in dissertation efficacy after exposure to treatment. Hence, this third null hypothesis is further rejected. To determine the level of significance, Table 4.1 shows participants with high EI level obtained high dissertation efficacy mean score (x=101.67+5.03=106.70) than their medium emotional intelligence (x=101.67-.99=100.68) and low level counterparts (x=101.67-5.61=96.06).

Fig 4.3 confirms this showing which of the level of EI has the higher mean score.

Estimated Marginal Means of Emotional Intelligence on Dissertation Efficacy

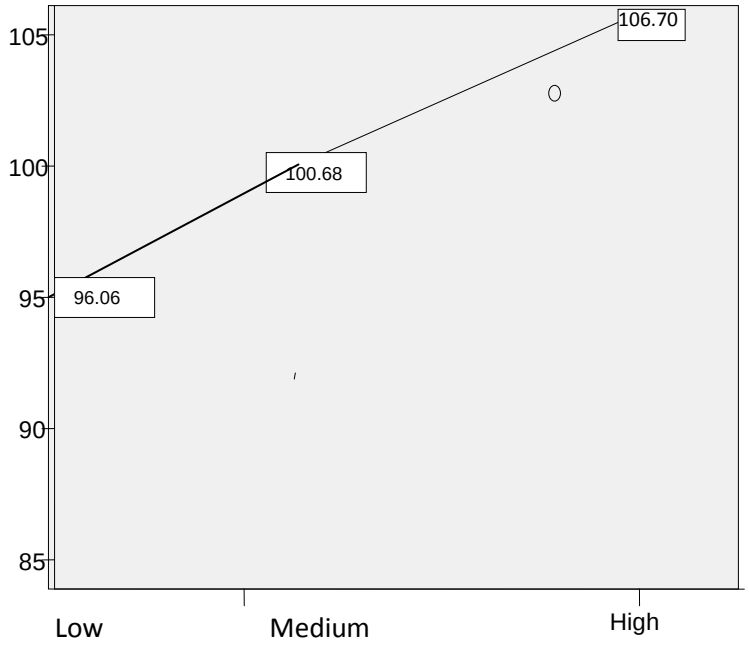


Fig. 4.3

Fig 4.3 shows that high level of EI of the participants had a mean score of 106.70 and participants with medium level of EI indicated a mean score of 100.68 while participants with low level of EI had a mean of 96.06.

Hypothesis4: There will be no significant interaction effect of treatments and gender on dissertation efficacy of the participants.

The result from Table 4.1 shows the interaction effect of treatment and gender on the dissertation efficacy of the participants is not significant [$F_{(2,65)} = 2.18$, $p < 0.05$]. Based on the significant interaction effects of treatment and gender on the dissertation efficacy of the participants, the fourth null hypothesis is accepted.

Hypothesis 5: There will be no significant interaction effects of treatments and EI on dissertation efficacy of the participants.

The result as presented in Table 4.1 shows there is no significant interaction effect of treatment and EI on participants' dissertation efficacy [$F_{(2,65)} = 1.50$, $p < 0.05$]. The fifth hypothesis seeking to verify the interaction effect of treatment and EI is therefore accepted.

Hypothesis 6: There will be no significant interaction effect of gender and EI on the dissertation efficacy of the participants.

The result from Table 4.1 shows there is no significant interaction effect of gender and EI on the dissertation efficacy of the participants [$F_{(2,65)} = .37$, $p < 0.05$]. The sixth hypothesis seeking to verify the interaction effect of treatment and EI is therefore accepted.

Hypothesis 7: There will be no significant interaction effects of treatment, gender and EI on the dissertation efficacy of the participants.

From Table 4.1, the result reveals there is no significant interaction effect of treatment, gender and EI on the dissertation efficacy of the participants [$F_{(18,73)} = .66$, $p < 0.05$). This means there is no significant interaction effect of treatment, gender and EI on the post-test dissertation efficacy score, therefore the seventh hypothesis is accepted.

Hypothesis8: There will be no significant main effects of treatments on the dissertation anxiety of the participants.

To test whether there is significant main effect of treatment on the dissertation efficacy of the participants; the ANCOVA was used.

Table 4.4: Summary of Analysis of Covariance (ANCOVA) of pre-post test interactive effects on dissertation anxiety of doctoral students in the groups

Source	Sum of Squares	DF	Mean Squares	F	Sig	Remark
Covariates	14927.48	1	14927.48	41.43	.000	
Main Effects	2977.81	5	595.56	1.65	.159	
Treatment groups	2745.39	2	1372.70	3.81	.027	Sig
EI Levels	160.67	2	80.34	.22	.801	NS
Gender	71.75	1	71.75	.20	.657	NS
2-way interactions	4183.31	8	522.91	1.45	.193	
Treatment x EI	1732.46	4	433.16	1.20	.318	NS
Treatment x Gender	2024.90	2	1012.45	2.81	.068	NS
EI x Gender	219.05	2	109.52	.30	.739	NS
3-Way Interactions	1432.75	4	358.19	.99	.417	NS
Explained	23521.35	18	1306.74	3.63	.000	
Residual	23421.32	65	360.33			
Total	46942.68	83	565.57			

Table 4.4 shows there is a significant effect of treatment on participants' dissertation anxiety [$F_{(2,65)} = 3.81$, $p < 0.05$]. This means there is a significant difference in the mean dissertation anxiety scores of participants in treatment I (metacognitive strategy), treatment II

(Achievement motivation training) and the control group. Hence, hypothesis eight is rejected. To reveal the degree of significance among the treatment groups, Table 4.5 is presented

Table 4.5: Multiple Classification Analysis (MCA) of Participants by Treatment, Emotional Intelligence and Gender

Grand Mean = 86.33

Variable + Category	N	Unadjusted Deviation	Eta	Adjusted for independents +Covariate Deviation	Beta
Treatment					
Metacognitive Strategy	27	15.00		-7.42	
Achievement Motivation	30	-5.17		-.74	
Control	27	-9.26		6.59	
			0.44		0.24
EI Levels					
Low	25	.79		-1.99	
Medium	26	.82		1.75	
High	33	-1.24		.13	
			0.04		0.06
Gender					
Male	45	3.91		.89	
Female	39	-4.51		-1.02	
			0.18		0.04
Multiple R Squared					0.381
Multiple					0.618

Table 4.5 shows Treatment group I (Metacognitive Strategy) obtained the minimum adjusted post-test mean score in dissertation anxiety (x=78.91, i.e. 86.33-7.42). This is followed by AMT group (x=86.33-.74=85.59) while highest mean score was obtained by the control group (x=86.33+6.59=92.92). The mean scores of the groups were obtained through the addition of the grand mean and the adjusted deviation scores of the groups. To this end, treatment I (Metacognitive Strategy) was more effective in reducing the dissertation anxiety than treatment II (Achievement Motivation Training) and the control group.

Table 4.6: Duncan Post-Hoc Multiple Range Comparison of Group Mean Scores in Dissertation Anxiety

Treatment Group	N	Mean Scores	Treatment Group		
			Control	Achievement Motivation Training	Metacognitive Strategy
Control	27	92.92		*	*
Achievement Motivation Training (AMT)	30	85.59	*		*
Metacognitive Strategy	27	78.91	*	*	

*Pairs of groups with means that differ significantly at p< .05

The Table shows metacognitive strategy is more effective than achievement motivation training in the reduction of dissertation anxiety among the participants. The dissertation anxiety of the participants in the metacognitive strategy group is lower to the dissertation anxiety of the AMT group. The mean score of dissertation anxiety of participants in the Control group is higher when compared to the two experimental groups.

Hypothesis 9: There will be no significant main effect of gender on the dissertation anxiety. Table 4.4 reveals gender has no significant effect of gender on dissertation anxiety [$F_{(1,65)}$= 0.20, $p < 0.05$]. This means there is no significant difference in the main effect of gender on the dissertation anxiety of male and female participants. This hypothesis is therefore accepted. Although there is no significant main effect of gender on participants' dissertation anxiety, Fig 4.4 shows the mean score for male (86.33+.9=87.23) is higher than that of their female counterparts (86.33-1.02=85.31).

Estimated Marginal Means of Dissertation Anxiety

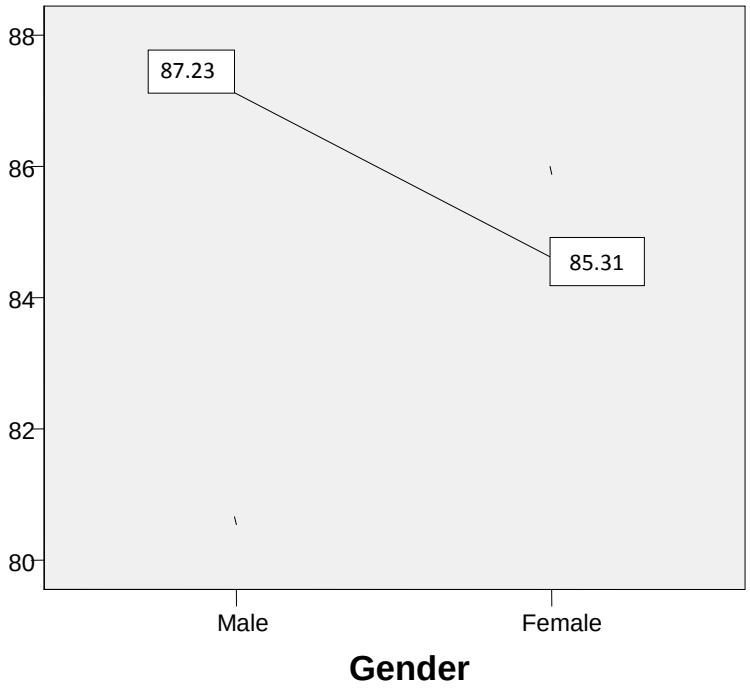


Fig. 4.4

Fig 4.4 shows male has mean score 87.23 while female has mean score 85.31

Hypothesis 10: There will be no significant main effects of EI on dissertation anxiety of the participants.

The result on Table 4.4 shows there is no significant main effect of EI on dissertation anxiety of the participants [$F_{(1,65)}$ =0.22, p < 0.05]. This means dissertation anxiety of low, medium and high EI of participants does not differ significantly; hence, this hypothesis is accepted.

Hypothesis 11: There will be no significant interaction effects of treatments and gender on dissertation anxiety of the participants.

From Table 4.4, the result shows there is no significant interaction effect of treatments and gender on the dissertation anxiety of the participants. This means that a 2-way interaction effect of treatment and gender on dissertation anxiety did not have any significance [$F_{(2,65)}$ = 2.81, p < 0.05], hence, the null hypothesis is accepted.

Hypothesis 12: There will be no significant interaction effects of treatment and EI on dissertation anxiety of the participants.

Table 4.4 shows the two-way interaction effect of treatment and EI level is not significant [$F_{(4,65)}$=1.20, p < 0.05]. This means the combination of treatment and EI do not cause significant effect on the dissertation anxiety of the participants, therefore, the hypothesis is accepted.

Hypothesis 13: There was no significant interaction effect of gender and EI on the dissertation anxiety of the participants.

Results from Table 4.4 shows the two-way interaction effect of gender and EI is not significant [$F_{(2,65)}$ =0 .30, p< 0.05]. This implies that the combination of the two moderating variables (gender and EI) do not cause significant effect on the dissertation anxiety of the participants, hence, the null hypothesis is accepted.

Hypothesis 14: There will be no significant interaction effects of treatment, gender and EI on the dissertation anxiety of the participants.

Result from Table 4.4 reveals there is no significant interaction effect of treatment, gender and EI on DAS [$F_{(18,73)}$ =0 .99, p < 0.05]. This implies that the 3-way interaction of treatment, gender and EI did not produce any effect on the dissertation anxiety of the participants, hence, the null hypothesis is accepted.

CHAPTER FIVE

DISCUSSION OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

This chapter presents the summary of findings, educational implications of the study and recommendations. The chapter also indicated the limitations of the study, personal contributions to literature and suggestions for further studies.

5.1 Discussion of Findings

The hypotheses were structured to verify the significant effects of treatments (Metacognitive strategy and Achievement Motivation Training) and the effects of the moderating variables (emotional intelligence and gender) on the dissertation efficacy and anxiety of doctoral students who were participants in the experiment.

Hypothesis 1

The first hypothesis for the study states there will be no significant main effect of treatments on the dissertation efficacy of the participants. The result shows there is a significant main effect of treatment (metacognitive strategy and achievement motivation training, AMT) on the dissertation self-efficacy of the participants (doctoral students). Thus, the first hypothesis is rejected. A major factor that may have aided the enhanced dissertation self-efficacy of the experimental groups could be the participants' exposure to skills of interrelated set of competencies for learning and thinking. They include many of the skills required for active learning, critical thinking, reflective judgment, problem solving, decision-making, goal setting, developing personal action plan and achievement thinking.

The rejection of the first hypothesis which underscores the effectiveness of treatment on dissertation self-efficacy of participants confirms the finding of Zimmerman and Schunk (2001) that students who have been taught metacognitive skills learn better than students who have not been taught these skills. The treatment prompted a high level of independence, self-regulation and a high degree of cognitive process of thinking necessary in the dissertation process. This finding indicates that increased self-confidence and a sense of personal responsibility are instilled through metacognitive strategy and AMT. The treatment package stimulated motivation for learning and also produced better learners. The finding supports the works of Pressley and Ghatala (1990), McCombs and Marzano (1990), Schunk (1990), Butler (1993), Mace, et al (2001) and Schmidt and Ford (2003).

Prominent among the objectives of this study is to enhance the dissertation self-efficacy of doctoral students in order to reduce the number of drop out among doctoral candidates. It was presumed that if doctoral candidates are given trainings that focus on confidence/eligibility derived from past success, verbal persuasion and emotional arousal, all

of which are the elements of self-efficacy and achievement motivation, they will persist and complete the dissertation process in good time. The effectiveness of the treatment has also affirmed the discovery of Hines (2006), Golightly (2007) and Hines (2008).

Achievement motivation interventions of the study also focused on improving self-efficacy of the participants. The result from this study is in conformity with the findings of Gist, Schoerer and Rosen (1989); Betz and Schifano (2000). In addition, Lizzio and Wilson (2004) find positive links between perceptions of the relevance of skills and motivation for further learning.

High dissertation self-efficacy indicates that students must possess the right perceptions of how available opportunities to influence their study conditions could interact with their motivation, confidence and approaches to studying. Students who have high self-efficacy beliefs develop more strategies to influence their study environment. These interactions are not only reflected in their approaches to studying but are also important in the graduates' process of transition to work as affirmed in the work of Pinquart, Juang, and Silbereisen (2003). The study further enabled the participants to appreciate the need for them to be conscious of various opportunities to influence their learning, determine pace of work and environment towards early dissertation completion as observed in the longitudinal study by Jungert (2009).

The social dimension of dissertation process requires a high level of emotional intelligence. Since the doctoral students cannot avoid relating with others such as colleagues, academic advisor (supervisor), librarians, typists and others, they need to be emotionally intelligent. The treatment incorporated training on emotional intelligence (EI) which enabled the participants know how to understand their emotions and that of others who may directly or indirectly influence their dissertation processes. The treatments also encouraged the need to interact with competent people who could help raise their confidence level. Findings from this study therefore lend credence to Bandura's (1977, 1997) proposition of self-efficacy theory that self-efficacy develops through socially constructed learning experiences.

Hypothesis 2

The second hypothesis states there will be no significant main effect of gender on the dissertation efficacy of the participants. The findings of this study for the second hypothesis indicate there is no significant main effect of gender on the dissertation efficacy of the participants. Given this finding, the second hypothesis is accepted. This result corroborates with the findings of Schaefer's (1993); Zhao, et al, (2005); Sequeira, et al (2005); Mueller &

Dato-On, (2007); and Iskender (2009) on the lack of significant statistical differences in self-efficacy among the genders. According to O'Hare (1995) and Marra and Bogue (2006) women usually embark on doctoral programme with high dissertation efficacy and self-esteem within the first two years. These researchers observed that female's self-efficacy declines sharply thereafter in a manner that even if it does begin to elevate, will never again reach the same heights (Brainard & Carlin, 1998).

This study has through self-regulated learning (metacognitive) skills empowered participating students to learn better than those who have not been taught these skills. The treatments fortified the dissertation efficacy of the female participants through collaboration as a measure to ensure that there is no decline. As observed by Vandergrift's (2003) that metacognitive strategy enhances collaboration among learners, findings of this study reveals that students trained in the use of metacognitive strategies were more focused on the advantages of collaborating with a partner for monitoring, and the confidence-building function of this approach for development.

Meanwhile, this study contradicts the general view that females have lower self-efficacy in academic activities. It is also believed in some cultures that females are weaker compared to their male counterparts in academic-related issues. The culture prevailing in the candidate's environment have been attributed to be responsible for the observed differences in the level of observed self-efficacy between genders. Notably, general opinion states that society will always present individuals holding positive belief about themselves thereby encouraging accomplishment of specific tasks towards their goals notwithstanding the gender involved.

Also, the result is not in support of the findings of Zeldin and Pajares (2000); Hutchison, et al, (2005) and AL-Kfaween (2010) that established that significant difference exists in the self-efficacy level of university students. The significant difference according to Bradburn (1995) is partially due to differences in negative persuasion (e.g. statements indicating that women cannot do certain things) and anxiety signals. But it is also reported that no matter the statistical differences observed, when the self-efficacy differences were eliminated through verbal persuasion, gender differences in attrition were also eliminated (Bradburn, 1995). It is imperative to acknowledge the role verbal persuasion plays in influencing human behaviour and motivation. It is the most widely used and a readily available source of efficacy information (Bandura, 1977, 1997). Several persons report being affected by motivational speeches which increase their beliefs that they are capable of

successfully putting up behaviours in supervision and training of graduate students (Bernard & Goodyear, 2004).

Hypothesis 3

The third hypothesis states there will be no significant main effect of EI on dissertation efficacy of the participants. Statistically, the result as presented in Table 4.1 shows there is a significant main effect of EI on dissertation efficacy of the participants. This hypothesis is therefore rejected. The observed significant main effect is in agreement with the findings of Abisamra (2000); Parker, Summerfeldt, Hogan and Majeski (2001, 2002) and Adeyemo (2007) that EI has significant relationship with academic achievement. This result further reiterates the finding of Adeyemo & Onongha (2010) that various emotional and social competencies are strong predictors of academic success.

The treatment packages exposed participants to ways of managing emotions in the dissertation process without emphasis on the academic capabilities of the participants. They were encouraged to rather focus on improving their self-confidence as they undergo the dissertation process without succumbing to negative emotions. The result of this hypothesis supports the finding of Lankisch (2007) that university students who completed an emotion-management programme reported slightly increased emotional intelligence scores and persisted from the spring to autumn semester when compared to students who did not complete the programme. Again, it is also predicated on the fact that cognitive abilities had been reported to be more closely related to emotional intelligence ability (Brackett & Mayer, 2003; Lopes, Salovey & Strauss, 2003; O'Connor & Little, 2003).

This study negates the findings of Newsome, Day and Catano (2000), Vander Zee, Thyis and Schakel (2002), Lam & Kirby (2002); Barchard (2003); and Brackett & Mayer (2003) which found that EI did not correlate with cognitive ability and academic performance. Factors that may be responsible for this result may include the correlational design of the study and the category of participants adopted. This is supported by the fact that EI is hypothesised to develop with age and experience; therefore the low scores in this sample of doctoral students could be expected (Mayer, et al, 1999).

Hypothesis 4

This fourth hypothesis states there will be no significant interaction effect of treatment and gender on dissertation efficacy of participants. Statistically, the result reveals there is no significant interaction effect of treatment and gender on dissertation efficacy of participants,

therefore, the hypothesis is accepted. Nevertheless, Cubukcu's (2008) and Chou's (2007) studies show there is no significant difference between female and male students in respect to how they view self-efficacy. The researchers have pointed out that when responding to instruments that assess students' self-efficacy, males and females could have different responses. Similarly, Gong (2002), Cubukcu (2008) and Liao (2009) conclude that no significant gender difference was found in students' academic self-efficacy. The result of this study supports the findings of studies by Rivers (2001); Kuiper (2002); and Rolheiser and Ross (2002). Their findings suggest that good learners regardless of gender engage in self-regulated learning. They get involved in active self-appraisals and management of their thoughts. As they monitor their learning, they learn to check their responses and become aware of errors or answers that do not fit.

Implication of this finding is that the dissertation efficacy of participants with respect to gender after been exposed to metacognitive skills and motivation reveals a significant difference. Finding of this hypothesis affirms AL-Kfaween's (2010) finding which reveals an insignificant difference in the self-efficacy of male and female. Several authors (Lane, et al, 2003; AL-Kfaween, 2010 etc) have indicated a yearning for interventions that will foster self-efficacy towards the dissertation process and other academic activities.

The result is a sharp contradiction to the claims of Teng (2000); Ong's (2004) and Lee's (2008) that female learners used learning strategies more often than male learners. Lee (2008) went further to compare learning strategy between genders and find female students tend to employ a variety of learning strategies more than male students which enhance their perceived self-efficacy. Result of this hypothesis also lends credence to the finding of Pajares and Valiante (1997) who report a modest difference between boy's and girls' writing self-efficacy and girls shown to have higher self-efficacy than the boys. Though Wright and Cochrane (2000) and Seagram, Gould and Pyke (1998) observe little difference in dissertation completion rate with regard to gender, other studies indicates that females complete their dissertation longer than males at rates ranging between 3% and 10% (Council of Graduate Schools, 2008; Siegel, 2005; Martin, Maclachan & Karmel, 1999).

The result is probably influenced by the various cultural backgrounds of the participants. There is a general notion that cultural backgrounds of learner influence their manifested efficacy beliefs. Some cultures impose restrictions on either the male or female as well as limited experience similarity or the absence of models but considering the dynamics of innovations, activisms and self-actualisation currently going on among intellectuals, no gender is limited or hindered towards fulfilling their dreams and aspirations. However, the

result is an agreement with finding of Nwankwo, Kanu, Marire, Balogun and Uhiara (2012) that since self efficacy is a strong personal belief in skills and abilities to initiate a task, strengthens academic performance and behaviour, it is affected by education and past experiences therefore. Students who are dedicated to their academic activities acquired different relevant skills and abilities necessary for dissertation process. When the skills and abilities are acquired the individual self efficacy is boosted and thoughts of innovating, creating and exploring the environment become paramount. A student with high self efficacy will always believe that he/she will succeed in any academic activity he/she participates in. This study is consistent with the study of Iskender (2009) and Peggy and Zimmerman (2007) that significant others such as teachers, family members and friends have contributed to the formation of this efficacy belief. An intervention provides the needed motivation and the courage required during the dissertation process.

Hypothesis 5

There is no significant interaction effect of treatment and EI on dissertation-efficacy of the participants.

The ANCOVA on the dissertation efficacy as contained in Table 4.1 shows that there is no significant interaction effect of treatment and EI on the dissertation efficacy of the participants. The result of data analysis on treatment by EI yielded [$F_{(2,65)} = 1.50$, $p < 0.05$]. Since the F value is not significant, the hypothesis is accepted. This implies that the interaction of treatments and EI on participants' dissertation efficacy is not significant. In other words, metacognitive strategy and achievement motivation training with emotional intelligence have no interaction effect on the perceived self-efficacy of the participants in the dissertation process.

This result may not be surprising as it may not be unconnected with the fact that majority of the participants in this study have high EI as shown in Table 4.1 Individuals with high EI are known to possess ability to correctly exhibit different emotions such as rage, fear, love, happiness and anxiety in their behaviour proportional to the situations and time. Moreover, it enables them know about others' emotions and react accordingly as posited by Goleman (1998) and Mayer, et al (2000). The ability to manage emotions is a prerequisite for overcoming the influence of unfavourable situation and un-cooperating behaviours of others that could lead to unhealthy emotional arousal.

Since feelings and emotions influence the conduct of individuals in the course of life, a student with low EI may develop worry and anxiety emotion that threatens his/her self-

efficacy towards an independent academic activity such as dissertation process. Such student is prone to procrastination or be unable to exhibit the necessary persistence through the course of preparing and presentation of dissertation.

Also, the components of EI include self-management that enables individuals cope with strong feelings. It makes individuals undisturbed in stressful situation and forthright about their mistakes. Notably, since the participants with high EI have gotten these abilities (i.e. self-management, self-regulation, self-awareness etc), there might not be any significant interaction effect in the treatment and EI. This result contradicts the earlier one by Nussbaum and Kardash (2005) and Bandura (1986) who observe that self-efficacy and EI correlate to predict academic performance. Again, the contradictions in the results and that of previous researchers may not be unconnected with the category of students that were participants in the study. Their personal factors in the form of cognition, affect and biological events; behaviour and environmental influences might have interfered during the interactions.

Hypothesis 6

There is no significant interaction effect of gender and EI on the dissertation efficacy of the participants.

The result of ANCOVA on the sixth hypothesis as presented in Table 4.1 shows that there is no significant interaction effect of gender and EI on the dissertation efficacy of the participants, hence, this hypothesis which sought to verify the interaction effect of treatment and EI is accepted. While some studies have revealed that there is a relationship or differences between gender and EI of students, some researches do not suggest a relationship or difference. The finding of this hypothesis implies that the combined effect of the two moderating variables does not create any difference in the dissertation efficacy of the participants. Though EI was found to have a significant moderating effect on the participants dissertation efficacy, gender does not have such a significant moderating effect. It is therefore not out of place to conclude that the combined effect of both variables is insignificant.

Result of this study is a contradiction to the findings of Mayer et al (2000); Abdullah, Elias, Mahyuddin and Uli (2004) that there is a significant relationship between gender and EI in academic activities. Though their findings indicate a significant relationship between the two moderating variables, the recorded level of significance is very low. The reported relationship or difference between gender and EI was found in relationship with different tasks and activities, it was also reported that the opportunity a gender (especially female) has to trainings whether formal or informal that focus on emotional management, influences the

relationship or difference. Since the treatment packages in the current study exposed the participants to strategies to manage emotions during their dissertation experiences, the insignificant interaction is justified.

Hypothesis 7

There is no significant interaction effect of treatment, gender and EI on the dissertation efficacy of participants.

The ANCOVA on dissertation efficacy as obtained in Table 4.1 shows there is no significant interaction effect of treatment, gender and EI on the dissertation efficacy of the participants, therefore, the null hypothesis is accepted. Findings of this hypothesis show no significant interaction effect of treatment, gender and EI on the dissertation efficacy of the study participants. In other words, the combination of treatment (comprising metacognitive strategy and AMT), gender and EI are not associated with the participants' dissertation efficacy. Since there is no significant interaction of the three variables, it means the observed non-significant main effect is valid for the group of participants.

The finding is not surprising as it can be inferred from the findings for hypotheses 2 and 3 that gender and EI separately could not influence the dissertation efficacy of the participants. The results corroborates those findings of Shaefers (1993); Zhao, Seibert and Hills, (2005); Sequeira, et al (2005); Mueller and Dato-On, (2007); and Iskender (2009) revealing lack of significant statistical differences in self- efficacy among the genders and the work of Newsome, et al (2000) Vander Zee, Thyis and Schakel (2002) showing that EI did not correlate with cognitive ability and academic performance.

Hypothesis 8

The findings of hypothesis 8 reveal there is significant main effect of treatment (Metacognitive strategy and achievement motivation training) on dissertation anxiety of participants, hence the hypothesis is rejected. From the findings, the participants that were exposed to metacognitive strategy training had the least anxiety mean score compared to those that were exposed to AMT and the two groups were better than those in the control group. Meanwhile, it should be noted that high anxiety score implies high anxiety level, therefore, the results of ANCOVA analysis on this hypothesis implies that the treatment programmes are effective at reducing the dissertation anxiety of the participants. One of the factors which may have aided the effectiveness of treatments on the reduction of participants' anxiety towards the dissertation process is their exposure to skills (self-regulated, goal setting

etc) that empowered them to be in charge and also persuaded them that they are capable of their self-development and self-determination.

Metacognitive approaches enhanced stress management skills which learners have personally identified through paying attention to negative self hypnosis (negative self-talk). Participants were helped through the use of mindfulness, reflective judgement, self-monitoring and self-evaluation skills to become conscious of their thoughts and how to manage them in order to be able to directly influence their emotions. On the whole, treatments comprised strategy selection for complex problems requiring resource tradeoffs, for dealing with unfamiliar situations, and for troubleshooting. This result supports findings by Kruger and Dunning (1999); Mevarech and Kramarski (2003) and Legg and Locker (2009) that individuals who received metacognitive training performed significantly better than those who received the traditional teaching method, regardless of whether they received the metacognitive training in groups or individually.

This result is consistent with those of some recent studies such as Wafa (2003); Wendy (2009); Yang (2009); as well as Kummin and Rahman (2010), claiming that metacognitive strategies are effective on students' academic achievement. They further state that when students are trained in metacognitive strategies, they endeavour to respond appropriately in their academic performances. And when they react in this way, they increase their performance and as a result, the related anxiety will decrease. The finding suggests that students who are confident in their ability to perform during the dissertation experience are less anxious than those who are less confident as discovered by Skinner and Croft (2009). Finding of this hypothesis have given support to claims made by Griffin's (2005) and Adeyemo and Onongha (2010) which states that anxiety towards dissertation will decrease as a consequence of increase in EI and dissertation efficacy beliefs.

Metacognitive strategy and AMT empower participants acquire strategies for checking behaviours, problem-solving or effective deployment of strategies at appropriate times. This being the case, these strategies potentially mitigated anxiety-related influences, probably by allocating mental attention to metacognitive processes, rather than anxiety-related thoughts. This finding is an indication that metacognition has a moderating relationship with anxiety that relates to accuracy as affirmed by Legg and Locker (2009).

Another characteristic of the training is a special emphasis on achievement thinking, competition, excellence, challenges, self-study, planning and decision-making. This input has helped the participants to be conscious of their negative emotions and its potential debilitating effect on their dissertation completion or otherwise drop out from the doctoral

programme. Moreover, the training inputs also contributed to the change in achievement motivation and locus of control of the participants. The result indicates that AMT in specific activities and procedures of the structured and directed approach were more effective than the activities given to the control group in increasing the level of achievement motivation and the feelings of internal control.

AMT includes the student's perceptions and conscious efforts to perform and feel better. Motivational strategies enable participants learn attention focusing, directing anxiety, effective time/self management, reducing stress, developing interest, encouraging internal motivation and setting meaningful ideals. With most of the participants being adults, they were able to set meaningful goals for themselves in relation to the dissertation process. Participants' exposure to the differences between mastery goal and performance goal conditions was effective and reported to help set personal mastery and performance goals in a realistic way. These skills have enhanced their self-confidence which invariably helped them achieve lower levels of anxiety at post-test compared to the control group.

Achievement motivation information is related to good performance and students who use the specific metacognitive approaches in diverse fields use better educational and training strategies. Observably, after all the training in the course, they showed less dissertation anxiety. Student-centred instructional strategies have been found to work well with anxious students, presumably because the greater certainty in those kinds of situations poses a weaker evaluative threat to the anxious students (Wigfield and Eccles, 1989).

It is also noteworthy that the category of university students selected as participants in this study could be an influence on the result of the hypothesis. They were assumed to be relatively more capable of selecting and using appropriate learning strategies compared to elementary and secondary schools students. Within the university environment, senior students (i.e. older year students) were thought to be more conscious and experienced in the use of various strategies.

Hypothesis 9

The finding of the ninth hypothesis which states there will be no significant main effect of gender on the dissertation anxiety of participants shows there is no significant effect, therefore, the hypothesis is accepted. The result shows there is no significant main effect of gender on dissertation anxiety of the doctoral students involved in the trainings. Hence, the hypothesis is accepted. The result supports the works of Fan, et al (1997); Hyde, et al (1990);

and Pajares & Graham, 1999) which indicate non-significant and slight differences in the anxiety of male and female.

The current finding contradicts findings of studies conducted by Pramod (1996); Ojha (2005) and Bhansali & Trivedi (2008) which conclude that males have more academic anxiety when compared to females. The researchers adduced job aspiration and security as the causes for high anxiety among male doctoral students. The treatment package purposely targeted equipping participants with necessary skills that were essential to the dissertation process and the will to work through the process regardless of the stress and challenges associated with it.

This result also runs contrary to the expected success of females in a given scientific task to be generally lower than that of their male counterparts, even if they are equally competent. This societal belief which led to the theory that females are more highly academically anxious than males has brought some researches to support the assertion that females are more test anxious with regard to mathematical studies and have lower levels of anxiety with regard to verbal assessment than their male counterparts (Richardson & Suinn, 1972; Dew & Galassi, 1983; Benson & Bandalos, 1989; Meece, Eccles, & Wigfield, 1990; Wolters, et al, 1996; Rouxel, 2000). The pattern is more prominent in the emotionality scores than in the worry scores. The treatments were targeted at influencing the thought process and the feelings the participants experience during the dissertation process. Summing up the finding, the non-significant differences in the effects of gender on the dissertation anxiety is that the treatments have taken care of the emotional superiority of either gender identified.

Hypothesis 10

The tenth hypothesis states there is no significant main effect of EI on dissertation anxiety of participants. Statistical result for this hypothesis shows there is no significant main effect of EI on dissertation anxiety of the participants; therefore the null hypothesis is accepted.

This finding contradicts the findings of Martinez-Pons (1997); Mayer et al., (1999); Ciarrochi, et al (2000); Schutte, Lopez, & Malouff (2000); Palmer, et al (2002); Saklofske et al. (2003); and Gannon & Ranzijn (2005) with all of them reporting low-to-moderate positive correlations. Notably, these studies have not comprehensively controlled for the possible effects of personality and cognitive abilities (if at all, generally only personality or cognitive abilities, but typically not both have been controlled). The current study attempted to control

to an extent personality and cognitive abilities through metacognitive skills and achievement motivation.

The result of this study affirms the position of Extremera and Pizzaro (2006) that in the use of self-reported ability to regulate mood (Emotional Repair), there is always a positive relationship to self-esteem. They report that self-reported emotional intelligence is negatively related to levels of depression and anxiety. Specifically, the ability to discriminate clearly among feelings (Emotional Clarity) and the ability to self-regulate emotional states were associated with better psychological adjustment, independent of the effects of self-esteem and thought suppression. The value of this finding is predicated upon the fact that self-esteem and thought suppression are well-documented predictors of anxiety and depression. Although the current study is limited in its reliance on self-report measures of EI, which focus on individual's beliefs about emotional intelligence but not tap directly into people's emotional competencies, because people usually act in accord with their stated beliefs (Bandura, 1997), though the self-report approach to measuring EI can still be a useful tool as a relatively easy way to predict psychological adjustment (Petrides & Furnham, 2003; Saklosfske, et al, 2003).

Emotional intelligence is reported to have correlation with personality than with academic achievement. The finding for this result is also given credence by the report of Bastian, et al (2005) that there is a non-significant statistical correlation between EI and academic achievement. Although higher emotional intelligence was correlated with higher life satisfaction, better perceived problem-solving and coping ability and lower anxiety. Meanwhile, Heppner and Lee (2002) specifically, posit that there is a negative correlation between EI and anxiety.

Hypothesis 11

The eleventh hypothesis states there will be no significant interaction effects of treatments and gender on the dissertation anxiety of participants. The ANCOVA on the post treatment scores of the participants in Table 4.4 shows there is no significant interaction effect of treatment and gender on dissertation anxiety of the doctoral students involved in the experimental groups, it yields [$F_{(2,65)} = 2.81$, $p < 0.05$]. Since the F value is not significant, the hypothesis is accepted. This implies that the interaction of gender and treatments did not create a significant effect on the dissertation anxiety of the doctoral students in this study. It also implies that the combination of treatment and gender did not significantly influence the

participant's dissertation anxiety. In other words, these variables have no interaction effect on doctoral students' dissertation anxiety.

This result is a confirmation of Olatoye's (2009) proposition that when psychological interventions are carried out towards reduction of academic anxiety, students will respond positively regardless of gender. The current study presents the doctoral students psychological techniques of approaching and monitoring their dissertation process. The application of those psychological techniques is not gender biased since the experience of dissertation anxiety is not limited to any gender.

Hypothesis 12

The twelfth hypothesis states there is no significant interaction effect of treatment and EI on the dissertation anxiety of participants. Findings from this study reveal there is no significant interaction effect of treatment and EI on the dissertation anxiety of participants with the ones in the control group. The ANCOVA on the participants' dissertation anxiety as contained in Table 4.4 [$F_{(2,65)} = 1.20$, $p < 0.05$] shows that there is no significant interaction effect of treatment and EI of the participants. The null hypothesis is therefore accepted since the result indicates the difference is not significant. This implies that the treatment is not sensitive to the EI of the participants' dissertation anxiety. In other words, the combination of treatment and EI did not significantly influence the participants' anxiety towards dissertation.

This result is not unconnected with the fact that majority of the participants in this study have high EI as shown in Table 4.4. Individuals with high emotional intelligence have the scholastic ability to achieve academically as against learners with low Intelligent Quotient (Petrides et al., 2004). A student with high EI possesses critical thinking capabilities that enable him/her to perceive challenging situation as unavoidable but as one which should be confronted with cognitive and affective capability. The assumption here is that dissertation anxiety of participants in this study may have been reduced due to the effect of the treatments that the participants were exposed to. The treatments controlled personality and cognitive factors which indirectly control the expression of negative emotions. A prominent characteristic of the treatment is self-regulation, a component of self-efficacy. When self-regulation is achieved, it enhances self-efficacy which in turn regulates anxiety. It provides the potential for self-directed changes in behaviour. Given that the participants with high EI have these abilities already, there might not be any significant interaction effect in treatments and emotional intelligence. Meanwhile, this finding contradicts the earlier findings of Salami (2007) that EI is a predictor of the outcomes of individual performance. The implication of

the finding is that if individual's attitude towards a particular task is positive then low anxiety would be recorded.

Hypothesis 13

This hypothesis states there will be no significant interaction effect of gender and EI on the dissertation anxiety of the participants. The ANCOVA result shows there is no significant interaction effect of EI and gender on the dissertation anxiety of the participants after the treatments. This shows that the combination of the adopted moderating variables did not influence the ability of the participants to benefit from the treatment programme. The hypothesis is therefore accepted.

The result also indicates that the training programme has reduced the participants dissertation anxiety thereby confirming the findings of Salam and Mahnaz (2013), Ohata (2005) and Young (1999) that students' anxiety can be reduced greatly regardless of gender if instructors have a relaxed and positive error-correction attitude (Young 1999). Moreover, the training programme included emotional knowledge, use of affective strategies such as friendly relationship, supportive, and self-awareness that encourage risk-taking are effective in decreasing anxiety and facilitating learning. Salam and Mahnaz (2013) further conclude that examined gender anxiety can be greatly reduced when students are exposed to socio-affective strategies.

Hypothesis 14

The fourteenth hypothesis states there is no significant interaction effect of treatment, gender and EI on dissertation anxiety of the participants. The present finding suggests that the combined factors of treatments, gender and EI did not cause any significant interaction effect on the participants' dissertation anxiety. With this finding, the hypothesis is accepted.

The implication of this finding is that the combination of treatments with EI of the participants and gender are not associated with the participants' anxiety towards the dissertation process. It therefore indicates that the interaction of the three variables is not strong enough to make any significant contribution towards reduction of dissertation anxiety among doctoral students. Since there is no significant interaction effect, it means the trend in the main effect is valid for the group of participants. Effect of treatment is therefore ensured regardless of gender and EI of participants since metacognitive strategy and AMT empowered the learners with the ability to discriminate clearly among feelings (Emotional Clarity). Further, participants' enhanced ability to self-regulate emotional states were

associated with better psychological adjustment, independent of the effects of self-esteem and negative thought suppression (Extremera and Pizzaro, 2006).

The result is also not surprising considering the fact that majority of the participants in this study are emotionally intelligent considering their pre-test scores. Again, the treatment attempted helping participants to acquire skills of managing emotions and also controlled for the possible effects of personality and cognitive abilities (Phakiti, 2003). As observed in previous findings on the effect of gender and EI on dissertation anxiety, a non-significant score was observed. This study further corroborates the finding of Ahmad, Bangash and Khan (2009) that strategy use is not gender biased just as EI is not gender biased. However, the result contradicts the findings of King (1999); Sutarso (1999); Singh (2002); and Wing and Love (2001) that gender is an influence on EI.

5.2 Summary of findings

The results for the 14 hypotheses as discussed are summarised as follows;

- There was a significant main effect of treatments on the dissertation efficacy of the participants.
- There was no significant main effect of gender on the dissertation efficacy of the participants.
- There was a significant main effect of EI on dissertation efficacy of the participants.
- There was no significant interaction effect of treatments and gender on Dissertation self-efficacy of participants.
- There was no significant interaction effect of treatments and EI on dissertation efficacy of participants.
- There was no significant interaction effect of gender and EI on dissertation efficacy of participants.
- There was no significant interaction effect of treatments, gender and EI on dissertation efficacy of participants.
- There was a significant main effect of treatments on dissertation anxiety of participants.
- There was no significant main effect of gender on dissertation anxiety of participants.
- There was no significant main effect of EI on dissertation anxiety of participants.
- There was no significant interaction effect of treatments and gender on dissertation anxiety of participants

- There was no significant interaction effect of treatments and EI on dissertation anxiety of participants.
- There was no significant interaction effect of gender and EI on dissertation anxiety of participants.
- There was no significant interaction effect of treatments, gender and EI on dissertation anxiety of participants.

5.3 Peculiarity of the study

There had been studies that focused on motivating students towards academic achievement but most researchers have not shown concern about doctoral students whose attrition had been reported to be at an average of 50% (Lovitts &Nelson, 2002; NUC, 1994). This study focuses on the interaction between the cognitive and affective aspects of the students. It is a tactical approach towards helping this category of students who are assumed to be knowledgeable and emotionally balanced. They are most times left alone to go through stress and sometimes blamed for being unserious or unprepared for doctoral programmes.

The study examined and enhanced the self-confidence of some doctoral students in universities that have a high patronage of postgraduate students. The unique approach towards helping the participants further create self-awareness

5.4 Educational Implications of the findings

The major objective of this study is to experimentally investigate the effectiveness of metacognitive strategy and achievement motivation training towards enhancing dissertation efficacy of doctoral students and also to help reduce the high level of anxiety they experienced towards dissertation writing, presentation and defence. The study focused on equipping the participants with skills that can enhance their self-confidence and intrinsic motivation in order to enhance timely dissertation completion. The findings of this study have shown that high academic ability alone is not sufficient to complete a doctoral programme. Doctoral candidates need high self-efficacy and considerable low anxiety in order to persist on their academic performance and to cope with academic stress required to undertake a doctoral programme.

The results of this study indicate that both treatments (metacognitive strategy and AMT) were observed to be effective in enhancing dissertation efficacy and also help reduce the dissertation anxiety of doctoral students. The two treatments seem to have addressed the cognitive and affective aspects of dissertation self-efficacy and anxiety. The results imply

that doctoral students need to be taken through metacognitive processes such as strategy use and checking own behaviours while performing their dissertation tasks. The implication of this is that individuals whether high or low-achievers benefit from instruction regarding the skills necessary to correctly evaluate themselves as well as how to positively use metacognitive strategies and self-motivate on their academic pursuits. Again, when students have been taught metacognitive (self-regulated learning) skills, they learn or perform better than students who have not been taught these skills. Students' self-confidence needs to be increased and a sense of personal responsibility should be instilled through Metacognitive strategies and AMT. These have been found to provide motivation for learning and also produce better learners.

5.5 Limitations of the study

Generalising the findings of an experimental study like this is a great limitation. The study used a small randomised sample of doctoral students from three public (government-owned universities. Schools involved were also selected from one of the six geo-political zones in Nigeria. Other geo-political zones were not considered while private universities were also exempted.

Another limitation of the study is the nature of participants. Majority of the participants were adults with families and also committed to various jobs. This category of participants was not able to attend the training sessions regularly due to those commitments. It was therefore difficult for all the participants in the experimental groups to attend all the sessions of the treatment.

5.6 Suggestions for further Research

This study found that metacognitive strategy, AMT and gender had significant effects on the dissertation efficacy and anxiety of the sampled doctoral students. It was also found that emotional intelligence had no significant effect. Since the study focused on the South-West part of Nigeria, it is suggested that the study be replicated in other universities from other geo-political zones in Nigeria including private universities.

5.7 Recommendations

Based on the findings of the study, the following recommendations are made:

- There is a need for various academic departments to organise pre-dissertation counselling programmes for doctoral students with the aim of equipping the participants with skills that

can enhance their self-confidence and intrinsic motivation in order to complete their dissertation within the expected time.

- Nigerian university system has been undoubtedly dynamic at improving and challenging students' intelligence. Unfortunately, attention has not been given to the emotional development of adult students. There is an urgent need to train doctoral students regardless of their fields on EI. Emotional knowledge education should be organised for doctoral students either at the point of admission or at the beginning of the dissertation process. Such education will enhance their self-consciousness and also help them manage their emotions and those of others.

- University counsellors should be empowered to work closely with postgraduate students through orientation, appraisal and follow-up services with the main objective of enhancing their self-efficacy towards a timely completion of the dissertation process. This will further help the university to monitor their (doctoral students) progress thereby keeping the doctoral students on their programmes and preventing high rate of attrition from doctoral programmes.

- University administrators are encouraged to organise seminars and workshops on the application of metacognitive strategies and achievement motivation techniques for academics (especially doctoral dissertation advisors/supervisors). This is necessary because they are expected to be close to the students. Acquisition of these skills will enhance the capabilities of the academic supervisors at helping the students remain in their programmes and to endure the stress, and also be able to handle the challenges and problems that can negatively impair students' self-efficacy towards the dissertation process and also maintain a moderate anxiety.

- Considering the on-going debate on gender equality, advisors are encouraged to give attention to emotions elicited by female doctoral students during the dissertation process. This will inevitably enhance the management of their emotions especially anxiety and serve as a way of preventing or reducing the rate of attrition from doctoral programmes.

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APPENDIX I
Treatment Packages
Experimental Group 1: Metacognitive Strategy (Training Sequence)

The group was taken through training on metacognitive strategy. Metacognitive strategy involves helping the participants on awareness and monitoring of their thoughts and performing tasks. The intervention will last for eight weeks. Summary of the treatment package for Experimental Group I is as follows

SESSION ONE: General Orientation and Administration of pre-test instruments

Objectives of the session are to:

- state the purpose of meetings
- explain the procedures and guidelines to follow by both the trainers and the participants, and
- administer the pre-test instruments on the participants

Step 1: The researcher shall welcome the participants who had been identified high dissertation anxiety. This will be done on one on one basis (that is on as individuals arrive to the programme venue. Participants will also introduce themselves at the beginning of this first session. This is to ensure familarisation among the participants.

Step II: The researcher will state and explain the purpose, objectives and benefits of the training in relation to their programmes of study. Day, duration (number of meetings), time and number of hour for each meeting, venue for the interactions etc will be discussed with the participants.

Step III: Participants will be told what is expected of them in the course of interaction: being regular and punctual, cooperation, participation during discussions, mutual respect for one another etc.

Step IV: The researcher shall thereafter administer the training pre-test. This will be preceded by explanation on the test and the procedure for responding to the items

SESSION TWO: Preparing and Planning for Dissertation

Objectives of the session

- To explain and help the participants in understanding the importance of dissertation
- To help participants in understanding the dissertation process
- To help participants in Preparing and planning for dissertation

A dissertation is the biggest academic project most students undertake. You may already have in mind a topic and perhaps feel a little daunted at the prospect of carrying out a major "independent" investigation. A dissertation is an opportunity for you to demonstrate that you know how to apply what you have learnt during your studies. It is a further development and synthesis of your existing skills rather than something new.

Importance of dissertation: The importance of the thesis or dissertation in the educational experience of the doctoral student should not be underestimated. Dissertation is viewed as a cumulative effort: representative of the entirety of the educational experience. The quality of the dissertation is measured on a number of different criteria: including format, consistency, language development, source quality and overall presentation. Even simple errors in this kind of a document can mean the difference between a publishable dissertation

and a document quickly dismissed and not given a second look. Steps involved in dissertation process are:

- Topic articulation and writing the proposal
- Locating and gathering information sources
- Do your literature review
- Working on the methodology
- Carrying out the research
- Gathering data for analysis
- Writing it all up
- Doing some quick revisions towards the defence
- Dissertation presentation and defence
- Submission of the dissertation

Challenges/Barriers toward dissertation completion are categorized into external and internal **External Challenges**: Finance, Family concerns and demands, supervisors influence **Personal/ Internal Challenges**: Personal lifestyle, Anxiety- Writer's block, Library Anxiety, Fatigue/stress, Defence/Presentation anxiety

Preparing for the dissertation

- Research and explore your topic: methods and methodologies. Research is a form of learning, or finding out. When you find out anything, you do it in a particular way, or using a particular methodology, even if you are not aware of it. You should be aware of the methodology you are adopting in your search for evidence, and of where that methodology fits in the spectrum of possible approaches.
- Develop dissertation plan. At the outset, and preferably in collaboration with your supervisor, map out a timetable of sub-tasks and interim deadlines on the following grid, or something like it adapted to your own needs.
- Set specific goals for the dissertation process. Goals are specific objectives that help us to plan our activities and strategies. It could be short term goal: a goal that only takes a few days or weeks to achieve, or a long term goal that takes several months, or years to achieve.
- Find an appropriate way of mapping and monitoring your own progress; for example, by using a checklist of tasks to be completed. How is my plan working? Is it working well? Does my plan need to be revised? Is the goal still necessary, important or appropriate? Is the incentive right? Have I reached my goal?
- Plan your time: Draw a typical week's timetable on a large sheet of paper. Show every day, whether or not you have any lectures or classes, and write or draw in the 'fixtures' for each week – your seminar timetable, and other regular commitments such as part-time work and regular social events. Take account of when you are at your best for studying – for example, can you work early in the morning or late at night? Think, too, about where you will study, and make sure that you know of a place where you can actually get on with your own work, whether it is a study area at University, a library or computer room, or a quiet place where you live. Ensure you get a reasonable number of study sessions in each week in which you will only work on your dissertation.

- More importantly, try to find ways to enjoy your research. Research is almost always at some point tedious and discouraging. Don't let yourself be frustrated with the tedium, logistical headaches, or disappointing findings, but keep focused on what you find personally interesting in your work and let yourself enjoy it.

SESSION THREE: Metacognitive strategy and the dissertation process

Objectives: At the end of the lesson, participants were able to:

- explain and discuss metacognitve strategies
- help participants have knowledge about one's self and others thinking
- assist participants understand the components of metacognition

Step I: The session will commence with an overview of previous session.

Step II: Trainer introduces and defines metacognitive strategy as a learning strategy. The importance and applicability of metacognitive strategy were discussed.

Metacognition: Cognition is a general term for thinking while metacognition is thinking about thinking. Metacognition refers to the transfer of skill learned in one context to solve a problem in another context. Metacognitive skills are usually conceptualized as an interrelated set of competencies for learning and thinking, and include many of the skills required for active learning, critical thinking, reflective judgment, problem solving, and decision-making. Learners whose metacognitive skills are well developed are better problem-solvers, decision makers and critical thinkers, are more able and more motivated to learn, and are more likely to be able to regulate their emotions (even in difficult situations), handle complexity, and cope with conflict. Although metacognitive skills, once they are well-learned, can become habits of mind that are applied in a wide variety of contexts, it is important for even the most advanced learners to "flex their cognitive muscles" by consciously applying appropriate metacognitive skills to new knowledge and in new situations.

Step III: Trainer explains the various components of metacognition in relation to the dissertation process.

Components of metacognition: metacognition is a regulatory system that includes (a) knowledge, (b) experiences, (c) goals, and (d) strategies.

Metacognitive knowledge is stored knowledge or beliefs about oneself and others as cognitive agents. Metacognitive knowledge about persons Includes a person's beliefs about intra-individual differences, inter-individual differences, and universals of cognition tasks (the information available to apply to a cognitive activity and an individual's knowledge about the task demands of a given situation actions or strategies (awareness of and beliefs about available strategies) how all these interact to affect the outcome of any intellectual undertaking. Knowledge is considered to be metacognitive (as opposed to simply cognitive) if it is used in a strategic manner to meet a goal. It is about figuring out how to do a particular task or set of tasks, and then making sure that the task or set of tasks are done correctly

Metacognitive experiences are conscious cognitive or affective experiences that concern any aspect of an intellectual undertaking. Most likely to occur when one is engaged in intentional, reflective intellectual activities such as problem-solving and learning. Can lead one to establish new goals and to revise or abandon old ones, can cause one to add to one's existing metacognitive knowledge base, and can activate strategies that would otherwise have

remained inactivated Memory-monitoring, self-regulation, meta-reasoning, consciousness/awareness, and auto-consciousness/ self-awareness.

Metacognitive regulation is the regulation of cognition and learning experiences through a set of activities that help people control their learning. It occurs when a person is motivated to engage in an activity purely by choice and by virtue of his or her interest in the activity. We shall treat self-regulatiion in one the subsequent sessions.

Benefits of metacognitive traning are

- Metacognitive training can increase students' self-confidence and sense of personal responsibility for their own development. Increased self-confidence and a sense of increased personal responsibility may provide motivation for learning
- Because metacognitive skills involve the conscious structuring of knowledge, they are likely to be more developed in areas of greater knowledge
- Students with good metacognitive skills are better critical thinkers, problem-solvers, or decision makers than students who are not. It is possible to produce better critical thinkers, problem-solvers, and decision makers by teaching metacognitive skills.
- Students who have been taught metacognitive (self-regulated learning) skills learn better than students who have not been taught these skills. It is possible to produce better learners by teaching metacognitive skills.
- Metacognitive training can increase students' motivation to learn. Training in metacognitive skills may enhance students' sense of self efficacy, thus increasing their motivation to learn.
- Metacognition helps people to perform many cognitive tasks more effectively. Strategies for promoting metacognition include self-questioning (e.g. "What do I already know about this topic? How have I solved problems like this before?"), thinking aloud while performing a task, and making graphic representations (e.g. concept maps, flow charts, semantic webs) of one's thoughts and knowledge. The physical act of writing plays a large part in the development of metacognitive skills.

Step IV: Participants will be asked these personal assessment Questions: (1) carefully observe yourself, how would you describe your thinking? (2) Are you a conscious thinker?

Step V: Trainer appreciates participants and closes the session.

SESSION FOUR: Metacognitive Self-Regulation

Objectives: At the end of the lesson, participants should be able to:

- explain self-regulation as a metacogntve strategy
- develop self-awareness about their individual academic ability and potentials, strategies they need in making academic progress
- mention self-regulation skills they can use during the dissertation process
- Identify time management techniques suitable for them towards completing their dissertation

Step I: The session will commence with an overview of previous session.

Step II: Trainer described and explained metacognitive self-regulation as an academic tool.

Metacognitive Self-regulation processes include planning and managing time; attending to and concentrating on instruction; organizing, rehearsing, and coding information strategically; establishing a productive work environment; and using social resources

effectively. Students who possess learning-to-learn skills, executive skills, and metacognitive skills are more likely to learn effectively than those who lack these skills. The implication of this means is that it is crucial to transfer as much responsibility for learning to the students themselves. A more structured and supportive approach is desirable.

Students at almost any age are capable of taking charge of their own learning. That's what babies do when they play with their crib mobiles, and that's what you should be doing if you hope to gain as much as possible from reading this book. However, the fact that almost all people are capable of self-regulation does not mean that all students actually do take effective charge of their own learning. By carefully examining the components of self-regulated learning, we can develop more effective strategies for helping students this important skill.

When faced with a learning task, self-regulated learners typically do the following:

- They begin by analyzing the task and interpreting task requirements in terms of their current knowledge and beliefs.
- They set task-specific goals, which they use as a basis for selecting, adapting, and possibly inventing strategies that will help them accomplish their objectives.
- After implementing strategies, they monitor their progress toward goals, thereby generating internal feedback about the success of their efforts.
- They adjust their strategies and efforts based on their perception of ongoing progress.
- They use motivational strategies to keep themselves on task when they become discouraged or encounter difficulties.

Self-regulated learners are flexible. They don't do these tasks just once. Rather, they go through the above list recursively, looping back to make adjustments as necessary. Self-regulation refers to the use of processes that activate and sustain thoughts, behaviours, and affects in order to attain goals. In other words, it refers to taking charge of our own learning by coordinating the thinking skills here described. Self-regulation has three components:

- Self-observation— Deliberate attention to specific aspects of one's own behaviors, systematically monitoring own performance; and keeping records is a big part of this.
- Self-judgment—systematically comparing performance with a standard or goal (e.g., re-examining answers; checking procedures; rating answers in relation to answer sheet, another person's)
- Self-reaction—engage in personal processes (i.e., goal-setting; metacognitive planning; behavioral outcomes); self-administering praise or criticism; rehearsing, memorizing; proximal goal-setting; structuring environment (e.g. change the academic task's difficulty; change the academic setting, the immediate physical environment; create a study area); asking for help.

Learners regulate their own learning by observing what they are able to do, then comparing this what they have observed to a standard of some kind and making judgments about the quality of this performance, and finally making plans regarding what to do next.

Step III: Trainer will mention and explains the various self-regulation skills. Academic self regulation includes skills such as the following:

- Valuing learning and its anticipated outcomes
- Setting performance goals
- Planning and managing time

- Holding positive beliefs about one's abilities
- Attending to and concentrating on instruction
- Effectively organizing, rehearsing, and encoding information
- Setting up a productive work environment
- Using social resources effectively
- Focusing on positive effects

Step IV: Time management skills were discussed

Time management: With numerous assignments, family commitments, job demands and multiple academic works, graduate students realize importance of time organization especially towards dissertation writing. Your dissertation writing could be the most time consuming, you will encounter in your student life and the way to never let this drag you down is through careful planning and proper time management. By this, you can finish your dissertation ahead of time and have sufficient time for revisions and preparation for its defense. Some treat their dissertation like a task but this should be handled in such a way that you are merely writing a summary of your learning. The main reason why students procrastinate is that they regard dissertation writing as an overwhelming undertaking and by delaying it they are justifying their lack of motivation. The initial step in writing your dissertation (and the first quick step to end procrastination) is to plan how to gradually finish the work without consuming most of your time. Students should consider this as a hobby and find inspiration through daily learning.

Step V: Trainer appreciates participants and closes the session

SESSION FIVE: Other Metacognitive Strategies for Dissertation Process

Objectives: At the end of the lesson, participants were able to:

- explain problem-solving technique as a metacognitive strategy and its uses in the dissertation process
- describe the various steps involved in employing problem solving strategy in academic activities
- discuss mindfulness as a relevant metacogntive strategy in the dissertation process
- Describe critical thinking as a metacognitive strategy that can be effective in implementing the dissertation goal
- Discuss how to implement critical thinking in academic activities

Step I: A review of previous session will be done as a discussion between trainer and trainees.

Step II: Trainer introduces problem solving as a strategy for learning.

Problem-Solving: Problem-solving is a tool, a skill, and a process. As a tool is helps you solve a problem or achieve a goal. As a skill you can use it repeatedly throughout your life. And, as a process it involves a number of steps. It is not unusual for problems to arise when you are working towards a goal and encounter obstacles along the way. Students usually have many and varied goals (mastery or performance), both related to school and to other areas of their lives, and it is likely that you will encounter barriers to your success at times. As these barriers are encountered, problem-solving strategies can be utilized to help overcome the obstacle and achieve your goal. With each use of problem-solving strategies,

these skills become more refined and integrated so that eventually their use becomes second nature.

Step III: Trainer will mention and explains the various steps in problem solving.

Problem-solving process includes the following actions:

Action 1 - Problem Definition: Before you are ready to take any steps to solve the problem, you first have to be sure that you are clear about what the problem really is. It can be easy to get distracted by solving a different problem than what is actually causing distress if it is easier than dealing with the real problem. Thinking about the following questions will be of help:

1. How is the current situation different from what I actually want it to be?
2. What do I actually want, or how do I actually want things to be?
3. What is preventing me from achieving my goals, or from things being the way I want them to be?

It can be very helpful to write down the answers to these questions so that you are forced to clarify that the problem you are defining is the actual one you want to solve. Just thinking about things in your head can cause confusion and end up distracting you from the actual problem at hand. If you are dealing with more than one problem at a time, it may be helpful to prioritize them. That way you can focus on each one individually, and give them all the attention they require.

Action 2 – Problem Analysis: Once the problem had been defined, you need to think about it from different perspectives in order to ensure that you understand all the dimensions of the problem. The following questions can be useful to help you analyze the problem. How is this problem affecting me? How is this problem affecting other people? Who else is experiencing this problem? How do other people deal with this problem? After you have completed this step, check to make sure that your definition of the problem still fits. It is not unusual at this point to find that the problem you really want to solve is different than the one you initially identified.

Action 3 – Establish your goals**:** Once you have looked at the problem from different perspectives you can decide what you want to achieve and establish your goals. You need to answer the very specific question – "What is my immediate goal?" Examples:

- Improve my time management skills
- Complete my dissertation at a particular time
- Improve my writing/academic skills

Action 4 – Generate possible solutions**:** During this stage the goal is to generate as many possible solutions as you can. Do not worry about whether or not they are realistic, practical, or effective. An initial solution you might want to eliminate, with work can be developed into a very effective solution. It can be very helpful to ask yourself what you have done in the past when faced with similar problems, and how other people you know have dealt with similar situations. In addition, you can also approach friends, family, a counsellor, teachers, books, or the internet, etc. to obtain ideas for solutions. Be sure to write down all the possibilities you generate so that you can approach this task systematically.

Action 5 – Analyze the solution**:** During this stage, you will examine each alternative and write down both the advantages and disadvantages to each. Some considerations to keep in mind include: Is it relevant to my situation? Is it realistic? Is it manageable? What are the

consequences – both good and bad? What is the likelihood that it is going to help me reach my goal?

Action 6 – Implementation**:** The last step is to implement the solution you have chosen. This step involves identification of all the steps necessary to implement it, and also on-going monitoring of the effectiveness of the solution to make sure that it actually solved the problem. During this stage of the process, ask yourself the following questions: How effective is the solution? Did it achieve what I wanted? What consequences (good and bad) did it have in my situation?

If the solution was successful in helping you solve your problem, then you can feel satisfied with your efforts and what you learned. If you feel dissatisfied in some way, you can either modify the solution to work better, or you can scrap it and turn to other alternative solutions, or begin the process again. Remember that problem-solving is a cycle – it involves searching for a solution to a problem that will lead to various possible solutions which then need to be evaluated. If the problem is solved, then you have found an effective solution. If the problem has not been solved, then you start the process again.

Step IV: Trainer and trainees will discuss mindfulness as a metacognitive strategy that is very essential for dissertation process

Mindfulness is initiated by bringing awareness to current experience—observing and attending to the changing field of thoughts, feelings, and sensations from moment to moment—by regulating the focus of attention. Mindfulness guides into a feeling of being very alert to what is occurring in the here-and-now. It is often described as a feeling of being fully present and alive in the moment. Mindfulness is further defined by an orientation to experience that involves making commitment to maintain an attitude of curiosity about where the mind wanders. Mindfulness can be thought of as creating an optimally receptive state for new learning and experience, increasing the likelihood that appropriate metacognitive skills will be selected and employed. Mindfulness practice requires the activation of metacognitive knowledge, monitoring, and control.

Step V: Trainer introduces and explains critical thinking as a useful strategy for learning

Critical thinking is a disciplined manner of thought that a person uses to assess the validity of something: a statement, news story, argument, research, etc. critical thinking is not necessarily being "critical" and negative. In fact, a more accurate term would be evaluative thinking. The result of evaluation can range from positive to negative, from acceptance to rejection or anything in-between. Yes, critical evaluation can produce a glowing recommendation. In productive problem solving you generate ideas (by creativity) and evaluate ideas (by criticality). Although creativity occurs first in the process, it's best to begin with a foundation of critical thinking. Why? Wise evaluation, in critical thinking, can prevent "creativity plus enthusiasm" from converting questionable ideas into unwise action.

Critical thinking is the ability to (1) identify and formulate important questions and problems; (2) gather and assess information; (3) test proposed conclusions against relevant criteria and standards; (4) think within alternative systems of thought, assessing their assumptions, implications and practical consequences; and (5) communicate effectively, without appealing to logical fallacies or manipulating others.

Step VI: Trainer will present to the participants how to employ critical thinking during the dissertation process. Critical thinking studies a topic or problem with open-mindedness. Strategies for critical thinking in learning and dissertation process:

- Develop your frame of reference, your starting point, by listing what you already know about the subject
- What opinions and prejudices do you already have about this? What have you been told, or read about, this topic?
- What resources are available to you for research? When gathering information, keep an open mind. Look for chance resources that pop up! Play the "reporter" and follow leads. If you don't seem to find what you need, ask librarians or your lecturer/supervisor.
- How does your timeline and due date affect your research? Keep in mind that you need to follow a schedule. Work back from the due date and define stages of development, not just with this first phase, but in completing the whole dissertation.

SESSION SIX: Monitoring self and strategy use

Objectives: At the end of the lesson, participants were able to:

- explain how to monitor self to ensure progress during the dissertation process
- describe self-monitoring and explain techniques of self-monitoring
- explain self-evaluation and Self- consequating
- reflect and identify their individual reflective judgements

Step I: The trainer welcomed the participants and embarked on a review of previous sessions in the form of discussion.

Step II: Trainer introduces and explains self-monitoring as a metacognitive skill and also how to monitor self in the course of dissertation.

Self-monitoring: The basis of self-regulation is self-monitoring. Self-monitoring is the ability to observe oneself, i.e., one's psycho-physiological processes. Two distinct types involving high self-monitors (those individuals who use cues from others to regulate their behavior) and low self-monitors (those individuals who are controlled from within by their affective states and attitudes). Splitting self-monitoring criteria into these two simplified domains leaves out a considerable number of variables that influence the self-monitoring process. One of these variables is the definition of self-monitoring, normally taken as the level of self-awareness that an individual has over psychological content. High self-monitors concern themselves with more external than internal events, and low self-monitors with internal rather than external events.

Self-monitoring can be influenced by personality type, that is, a particular predisposition or temperament an individual possesses that allows pursuit and maintenance of conscious self-monitoring. Once goal setting has been developed, the ability to self-monitor becomes essential because attention to internal and external cues, through greater self-awareness, leads to faster and more appropriate control of intervention strategies.

Step III: Trainer explain self evaluation and self-consequating as metacognitve strategies necessary for the dissertation process

Self-evaluation is defined as students judging the quality of their work, based on evidence and explicit criteria, for the purpose of doing better work in the future.

Benefits of self-evaluation

- Self-evaluation is a potentially powerful technique because of its impact on student performance through enhanced self-efficacy and increased intrinsic motivation.
- Self-evaluation has positive effects on student performance is particularly convincing for difficult tasks in academically oriented schools
- Self-evaluation plays a key role in fostering an upward cycle of learning. When students evaluate their performance positively, self-evaluations encourage students to set higher goals (1) and commit more personal resources or effort (2) to them.

Self- consequating means choosing your own rewards and punishments based on your performance. Another way to think of self-consequating is that you are making a promise to yourself. Promising yourself a reward once your goal/task is satisfactorily completed, or promising a punishment (delay of gratification) if you do not complete it, can help you get motivated to achieve your own goals. Social comparisons can affect the self-reward process, as for example, when self-reward after successful performance is diminished if others are known to have performed better, and self-punishment after poor performance is diminished if others are known to have performed worse.

Step IV: Trainer and trainees will discuss reflective judgement as a metacognitive strategy that is very essential for dissertation process and daily living.

Reflective judgment is metacognition. The quality of conclusions about how to handle a problem is called Judgment. The process of consideration before reaching a conclusion, sometimes called reasoning, is also known as eflection. Conclusion after due consideration is therefore called Reflective Judgment. . Beliefs about learning significantly impact the quality of learning strategies and learning outcomes in general. Students whose reflective judgment skills are more developed are likely to be better learners. The following objectives can be consideredwhile embarking reflective judgement:

1. Use evidence, not intuitions, in reasoning to a point of view.
2. View one's experience as one potential source of information, but not the only valid source.
3. Learn that uncertainty is real in some domains.

Step V: Participants will practically discuss their adopted self-monitoring strategies

Attention to internal states (thoughts, feeling, and sensations) and external states (bodily movement and environment) is a different phenomenon from attentional styles, though there is overlap between the two.

Attentional styles involve the relationship of concentration and focus, or perception selection, to a dynamic environment. Attentional styles can range from broad-external focus of attention (optimal for reading complex academic situations and assessing the environment, i.e., good anticipation skills), broad-internal focus of attention (optimal for analyzing dissertation within the context of strategies and plans, and for future anticipated events, i.e., quick learners), narrow-external focus of attention (able to pay attention on the necessary stimuli at the right moments with the correct responses), and narrow-internal focus of attention (ability to psyche oneself up and calm oneself down). There are degrees and combinations of the aforementioned foci of attention across and within individuals. How much of these types of attentional styles, and their combinations, is a product of personality and/or trainable is still unclear, but attentional styles appear to be related to the degree of

internal and external distraction, and the degree of conscious and automatic control an individual possesses for a given task.

The combination of goals (1) and effort (2) equals achievement (3). A student's achievement results in self-judgment (4), such as a student contemplating the question, "Were my goals met?" The result of the self-judgment is self-reaction (5), or a student responding to the judgment with the question, "How do I feel about that?" Goals, effort, achievement, self-judgment, and self-reaction all can combine to impact self-confidence (6) in a positive way. Self-evaluation is really the combination of the self-judgment and self-reaction components of the model, and if we can teach students to do this better we can contribute to an upward cycle of better learning.

SESSION SEVEN: Managing stress and dissertation anxiety

Objectives: At the end of the lesson, participants should be able to:

- Identify and describe various emotions
- describe their anxiety level and causes of anxiety toward dissertation
- explain how to react and manage dissertation anxiety
- reflect and identify the importance of relaxation in the course of writing their dissertations
- explain emotional intelligence

Step I: The session begins with review of previous sessions to enable adequate reinforcement.

Step II: Trainer defines and explains emotions

Emotions: Strong emotions are both a cause of, and a result of conflict. People in conflict may have a variety of strong and often negative emotions--anger, distrust, disappointment, frustration, confusion, worry, or fear. These emotions often mask the substantive issues in dispute. However, the emotions, too, are real and must be dealt with.

Step III: Trainer leads the group in the discussion on dissertation anxiety as experienced by individuals in the course of the dissertation process.

Exercise: Identify the source of your anxiety towards the dissertation process

Step IV: Trainer introduces and explains emotional management.

Managing emotions is an important skill that is necessary if you want to develop psychological resilience. By their nature, emotions are overwhelming. When someone is consumed by emotions, it feels as if he or she can't act and think different from what the emotions dictate. Individuals may be found doing and saying things he/she will regret about later. By developing a greater self-awareness you can notice the emotion as it happens to you as if it was happening to another person. Noticing the emotion separates you from it, so you can evaluate it, challenge it and take steps to gain back your balance.

Managing emotions is recognizing them, understanding them, and then taking the steps to improve them. At the core of emotional management is the ability to recognize the emotions right from the beginning. To do this attention must be paid to the signs of the emotion that get expressed in the posture and body. Emotions get reflected in your thoughts. It is common that certain thoughts come to you only when you are experiencing negative feelings, like thinking that things will never get better. When you are in your normal condition you don't think this way, but once you are upset you get these negative thoughts. In

such a case these thoughts are also signs of the negative emotions that start to overwhelm you. Observe what triggers these bad feelings. The triggers could be particular situations, people, places, objects, words or thoughts. Once you know the triggers, this could help you prepare yourself for facing them, so they don't catch you off-guard.

Step V: Trainer presented ways of handling dissertation anxiety

How to handle anxiety: Anxiety has many causes, but we tend to blame external factors for our anxiety rather than how we react to them. What leads to anxiety for you? Here are some typical anxiety generators: The unknown, change, uncertainty, supervisor, other colleagues, work and time pressures, fear of failure, being found incompetent, being rejected, not achieving what you want, financial problems, relationship problems, deteriorating health, status anxiety, dissertation defence etc. Anxiety can paralyze us. We think that everyone else is OK because everyone tries to hide their anxiety. But this only increases our anxiety. It is a constant battle that everyone has to work at to keep anxiety at bay. To cope effectively with stress and even thrive on it requires skill.

- Self Awareness: A key stress management skill which they have identified is the ability to recognize the mental, emotional and physical habits that contribute to, or even cause, our stressful responses. Become aware of your thoughts and begin managing them and you will be directly influencing your emotions.
- Paying attention to negative self hypnosis: Our nnegative self-talk is pernicious and demoralising and debilitating. And because we are so used to it we don't consciously pay attention to it and therefore do not challenge it. It goes on and on in the background and the effect is that we are giving ourselves powerful hypnotic suggestions to feel bad!
- Gently replace the negative self-talk: Each time you recognize that you are doing your self-criticising or self-undermining pause, remind yourself that it's just that old habit you've got into, and that from now on you're changing this habit. Your inner voice should sound as if you are calming an upset 2-year old! Reassure yourself. Calm yourself. Remind yourself of the rationales and facts of the situation. Remind yourself of the value of handing things in a cool, calm, and confident manner. Doing this once or twice won't make a lot of difference. It takes quite a while to replace the habits of a lifetime - but it's definitely worth doing so.
- Emotional intelligence is the ability to manage our emotions and those of others. The first step is to understand how our own emotions affect how we think and act. Also vital to understand how our emotions affect others. How can you become more aware of other people's emotions, what impact they have on how they behave and on how we feel? It's important not to suppress feelings. Understand, support and channel emotions as productively as possible.
- Learn to *really* relax: The practice of relaxation or meditation is not a mysterious or mystical experience available only to a select few adepts. The ability to relax, or practice simple meditation, is a natural and valuable ability which we all possess, even though we may not have practised it for many years. It's an innate skill which most of us have forgotten how to use. As very young children we could relax at will, anywhere: but most adults rely on artificial props to help them relax, such as alcohol, drugs, television, or even comfort-eating. With just a little persistence, about 15 minutes a day, and maybe some relaxing music you can easily reawaken this natural skill. Relaxation has been scientifically proven to be health enhancing

Step VI: Participants learnt about the need to practice relaxation consistently

Importance of relaxation

- Relaxation enables you to take an break and switch off from the stresses of life whenever you wish
- It provides a few precious moments in which to re-charge your mental and physical batteries
- Relaxation is the bed-rock of effective stress management
- It enables you to stand back and switch off from problems - so that, often, when you return to them you can perceive solutions that had previously escaped you.
- If you have intense fears or phobias you will find your relaxation skills essential for using methods such as systematic desensitization to dissolve your fears

SESSION EIGHT: Review of previous sessions and administration of post-test instruments.

Objectives: At the end of the session, participants were able to:

- Summarize what they had benefited from the numerous skills they had learnt since the commencement of the programme.
- Partake in post-test instruments

Step I:The session commenced with verification of progress made by individual participants. The various assignments given to participants in the course the training were reviewed. Researcher asked questions bothering on what they had been taught; to know how the participants have been making use of the skills they were taught. The different skills they were taught have helped them to develop the expected skills that enhance their social and emotional competence towards dissertation process.

The programme was brought to an end with encouragement to continue with the utilization of what they have acquired during the training session.

Step II: Post-test instrument was administered on the participants. The responses obtained served as the post-treatment scores.

Step III: Participants were asked to make their comments and assessment of the training package. Participants were appreciated for their consistency and patience in participating in the programme. Thereafter, they were entertained.

APPENDIX II

Experimental Group 2: Achievement Motivation Training Sequence

SESSION I: General orientation and administration of pre-test instruments

Objectives of the session

- To state the purpose of meetings
- To explain the procedures and guidelines to follow by both the trainers and the participants, and
- To administer the pre-test instruments on the participants

Step I: The researcher welcomes the participants and established rapport. This was done on one on one basis (that is on as individuals arrive to the programme venue. Participants also introduced themselves at the beginning of this first session in order to ensure familarisation among the participants.

Step II: The researcher states and explains the purpose, objectives and benefits of the training in relation to their programmes of study. Day, duration (number of meetings), time and number of hour for each meeting, venue for the interactions etc were discussed with the participants.

Step III: Participants were told what is expected of them in the course of interaction: being regular and punctual, cooperation, participation during discussions, mutual respect for one another etc.

Step IV: The researcher thereafter administered the training pre-test. This was preceded by explanation on the test and the procedure for responding to the items

SESSION TWO: Dissertation Process and Completion.

Objectives: At the end of the lesson, participants were able to:

- Describe the dissertation process.
- Identify the essentials and steps involved in the dissertation process.
- Develop personal plans for the dissertation process.
- Identify potential dissertation barriers

Step I: The trainer asked the participants to explain their perceptions and understanding of the dissertation process. A dissertation is the biggest academic project most students undertake. You may already have in mind a topic and perhaps feel a little daunted at the prospect of carrying out a major "independent" investigation. A dissertation is an opportunity for you to demonstrate that you know how to apply what you have learnt during your studies. It is a further development and synthesis of your existing skills rather than something new.

Step II: The researcher explains the importance of the dissertation in developing a career in the academia. The researcher emphasized on the skills to be derived from the dissertation process. The importance of the thesis or dissertation in the educational experience of the doctoral student should not be underestimated. Dissertation is viewed as a cumulative effort: representative of the entirety of the educational experience. The quality of the dissertation is measured on a number of different criteria: including format, consistency, language development, source quality and overall presentation. Even simple errors in this kind of a document can mean the difference between a publishable dissertation and a document quickly dismissed and not given a second look.

Step III: The researcher will present to the participants steps involved in dissertation process.

Preparing for the dissertation

- Research and explore your topic: methods and methodologies. Research is a form of learning, or finding out. When you find out anything, you do it in a particular way, or using a particular methodology, even if you are not aware of it. You should be aware of the methodology you are adopting in your search for evidence, and of where that methodology fits in the spectrum of possible approaches.
- Develop dissertation plan. At the outset, and preferably in collaboration with your supervisor, map out a timetable of sub-tasks and interim deadlines on the following grid, or something like it adapted to your own needs.
- Set specific goals for the dissertation process. Goals are specific objectives that help us to plan our activities and strategies. It could be short term goal: a goal that only takes a few days or weeks to achieve, or a long term goal that takes several months, or years to achieve.
- Find an appropriate way of mapping and monitoring your own progress; for example, by using a checklist of tasks to be completed. How is my plan working? Is it working well? Does my plan need to be revised? Is the goal still necessary, important or appropriate? Is the incentive right? Have I reached my goal?
- Plan your time: Draw a typical week's timetable on a large sheet of paper. Show every day, whether or not you have any lectures or classes, and write or draw in the 'fixtures' for each week – your seminar timetable, and other regular commitments such as part-time work and regular social events. Take account of when you are at your best for studying – for example, can you work early in the morning or late at night? Think, too, about where you will study, and make sure that you know of a place where you can actually get on with your own work, whether it is a study area at University, a library or computer room, or a quiet place where you live. Ensure you get a reasonable number of study sessions in each week in which you will only work on your dissertation.
- More importantly, try to find ways to enjoy your research. Research is almost always at some point tedious and discouraging. Don't let yourself be frustrated with the tedium, logistical headaches, or disappointing findings, but keep focused on what you find personally interesting in your work and let yourself enjoy it.

Steps involved in dissertation process

- Topic articulation and writing the proposal
- Locating and gathering information sources
- Do your literature review
- Working on the methodology
- Carrying out the research
- Gathering data for analysis
- Writing it all up
- Doing some quick revisions towards the defence
- Dissertation presentation and defence
- Submission of the dissertation

Step IV: the researcher led the group in identifying various potential obstacles/ barriers to completing the dissertation process:
External Challenges: Finance, Family concerns and demands, supervisors influence
Personal/ Internal Challenges: Personal lifestyle, Anxiety- Writer's block, Library Anxiety, Fatigue/stress, Defence/Presentation anxiety
Homework: Identifying roles of motivation in academic and life achievements.

SESSION THREE: Achievement Motivation and the Dissertation Process

Objectives: At the end of the lesson, participants were able to:

- Define achievement and motivation as concepts.
- Describe achievement motivation
- Identify components of achievement motivation.
- Mention roles of motivation in their personal achievement

Step I: The trainer asks the participants questions on the previous sessions as a way of revision.

Step II: The trainer introduces the topic by asking participants the following questions

Why do people do what they do?

Why do we go on everyday, living our lives and trying to find justification for our existence?

What is your motivation for embarking on a doctoral programme?

Step III: The trainer explains the concepts of motivation and achievement.

Motivation: Many people know motivation as the driving force behind an action. This is probably the simplest explanation about motivation. Motivation can be considered the state of having encouragement to do something. Some people think that they can find purpose in the things that motivate them. Others just see the motivation and react automatically. There is no one thing that motivates people to perform certain actions. People are different, so it follows that their motivations have to be different. Here are some types of motivation

Achievement: This is the motivation of a person to attain goals. The longing for achievement is inherent in every man, but not all persons look to achievement as their motivation. They are motivated by a goal. In order to attain that goal, they are willing to go as far as possible. The complexity of the goal is determined by a person's perception. To us, the terms "simple" and "complex" are purely relative. What one person thinks is an easy goal to accomplish may seem to be impossible to another person. However, if your motivation is achievement, you will find that your goals will grow increasingly complex as time goes by.

Step III: The trainer explains achievement motivation as:

Achievement motivation is influenced by those factors that affect students' perceptions of their relationship to the achievement setting (e.g., the classroom). Several internal and external factors contribute to a student's motivational orientation in the classroom. These include recognizing the relationship between effort and ability, understanding the classroom reward structures, balancing academic mastery and social competence, and choosing tasks of appropriate difficulty.

Step IV: The trainer discusses the components of achievement motivation as follows:

- Social Comparison: With regard to social comparisons, a positive motivational orientation would be represented by beliefs that personal growth and mastery are

more important than comparing one's performance to others. For example, doing well would mean improving on one's best attempt or learning new material. Negative motivational orientation includes beliefs that one's performance is meaningless unless compared to the performance of others. This includes a student's preference for comparing his or her grades to classmates and judging his or her learning on the basis of others' performance.

- Ability and Effort: Concepts of ability and effort are interrelated. Some individuals believe that ability can be improved by applying more effort, and others believe that ability is a fixed quantity and no amount of effort will change it. A positive motivational orientation includes the belief that one's effort does affect one's outcomes, and a negative motivational orientation is demonstrated by a belief that effort will have little or no effect on achievement outcomes.
- Reward Salience: Reward salience is the component of achievement orientation that reflects students' beliefs about academic. Students with a positive motivational orientation interpret receiving a reward as information about performance on a specific task. A negative motivational orientation is characterized by a more global interpretation of the meaning of rewards that includes conclusions about worth, status, and general ability.
- Task Preference: With regard to task preference, positive orientation is reflected by task choices that are attention, function as rewards. The presence of rewards alone does not alter achievement orientation as much as the significance of these rewards to the students who do or do not receive them.

Stimulant for participants' contribution towards next meeting: **Identify your self-talk and how it affects your life progress.**

SESSION FOUR: Achievement Thinking

Objectives: At the end of the lesson, participants should be able to:

- Define achievement thinking.
- Identify and deal with progress inhibiting self-talk
- Describe various thinking skills necessary for the dissertation process

Step I: The trainer asks the participants questions on the previous sessions as a way of revision.

Step II: The trainer introduces and explains achievement thinking

Achievements thinking: There are ways highly intelligent people can be rigid and restrictive in their thinking, such as being highly sensitive (and fearful of social reactions to unusual ideas, for example), perfectionistic or narcissistic. But there are strategies to help maintain and encourage divergent thinking skills. Your thinking affects your physical state. If you spend a while going around silently telling yourself that you can't cope or that you're a failure or that 'it's all too much' then this will undoubtedly cause you to feel tense, demoralised, and physically tired. It is not just what you think about but also how, exactly, you do to this thinking. And each of us is unique and we each have our own ways of thinking. So, for example: Is your thinking mainly in mental images? Or mainly in self-talk? Or a mixture of both? Are your mental images bright and colourful? Do you have a steady stream of images on a wide range of subjects? What about your self-talk? Is your self-talk 'loud' or quiet? Is it

fast of slow? Is it critical or supportive? Is it angry or calm? Begin to pay attention to your self-talk. That's the constant stream of chatter that goes on in your head (and mine, and everyone else's, by the way).

Step IV: The trainer explains the concepts of achievement thinking.

Step V: The trainer explained achievement thinking skills as essentials in the dissertation process. They are necessary in writing the dissertation and in life generally. These include

- Information-processing skills
- Reasoning skills
- Enquiry skills
- Creative thinking skills
- Evaluation skills

Step VI: The trainer leads the group to change their negative self-talk into positive through the following exercises:

1. Write down your negative self-talk towards the dissertation process
2. Write your negative self-talk towards the dissertation process in a positive way.

Homework: Make a statement of your dissertation goal(s)

SESSION FIVE: Personal Goals and Goal-setting

Objectives: At the end of the lesson, participants were able to:

- Define personal goals.
- Decide on a personal dissertation goal and plan of achieving such goal within a specified time
- Describe reasons for setting goals and various ways of setting realistic goals

Step I: The trainer revises the previous sessions with the participants.

Step II: the trainer introduced and explained the meaning of personal goals

Mastery and Performance Goals

The type of goals you set can have a major impact on your long term performance. The most basic type of goal is known as a performance goal. These are goals that are directly correlated to an outcome. These goals can be great in the short term, but they also have some downsides. Performance goals by their nature are rather shallow. If you had to cheat, at least you still hit your goal. Performance goals also tend to undermine long-term performance. If you hit your initial goal, you become less motivated to continue towards excellence (after all you hit your goal). And if you don't hit your initial goal, you become discouraged and de-motivated because your self-worth is based on external inputs. On the other side of the goal-setting coin is what's known as mastery goals. A mastery goal is when you set out to become the best you can be at a single task. Mastery goals are more effective because your satisfaction isn't related to external indicators. Therefore you're less apt to give up in difficult circumstances, and you persevere through setbacks.

Mastery goals are always just beyond reach. This makes motivation over the long term easier to maintain. They're like a line that's asymptote. The curve of the line gets closer to the goal, but you never quite reach it. There is always something to strive for. People that reach the pinnacle of their skills rarely set performance goals. They're more interested in competing with themselves, than gaining external feedback and validation. This orientation

allows them to compete at a higher level over a longer period of time. Even if it's as simple as being better at something tomorrow, than you were today

Step III: trainer explains goal setting and its importance for the dissertation process

Goal setting is an important aspect of achievement-oriented behavior. A goal's efficiency is affected by three features: proximity, difficulty and specificity. An ideal goal should present a situation where the time between the initiation of behavior and the end state is close. Goal setting is a powerful process for thinking about your ideal future, and for motivating yourself to turn your vision of this future into reality. The process of setting goals helps you choose where you want to go in life. By knowing precisely what you want to achieve, you know where you have to concentrate your efforts. You'll also quickly spot the distractions that can, so easily, lead you astray.

Importance of Goal setting: Goal setting is used by top-level athletes, successful business-people and achievers in all fields. Setting goals gives you long-term vision and short-term motivation. It focuses your acquisition of knowledge, and helps you to organize your time and your resources so that you can make the very most of your life. By setting sharp, clearly defined goals, you can measure and take pride in the achievement of those goals, and you'll see forward progress in what might previously have seemed a long pointless grind. You will also raise your self-confidence, as you recognize your own ability and competence in achieving the goals that you've set.

Step IV: the trainer explained rules of setting realistic goals with the acronym SMART

A useful way of making goals more powerful is to use the SMART mnemonic. While there are plenty of variants (some of which we've included in parenthesis), SMART usually stands for:

- **S** - Specific (or Significant).
- **M** - Measurable (or Meaningful).
- **A** - Attainable (or Action-Oriented).
- **R** - Relevant (or Rewarding).
- **T** - Time-bound (or Trackable).

Goal Setting Tips: The following broad guidelines will help you to set effective, achievable goals:

- **State each goal as a positive statement -** Express your goals positively – "Execute this technique well" is a much better goal than "Don't make this stupid mistake."
- **Be precise:** Set precise goals, putting in dates, times and amounts so that you can measure achievement. If you do this, you'll know exactly when you have achieved the goal, and can take complete satisfaction from having achieved it.
- **Set priorities -** When you have several goals, give each a priority. This helps you to avoid feeling overwhelmed by having too many goals, and helps to direct your attention to the most important ones.
- **Write goals down -** This crystallizes them and gives them more force.
- **Keep operational goals small -** Keep the low-level goals that you're working towards small and achievable. If a goal is too large, then it can seem that you are not making progress towards it. Keeping goals small and incremental gives more opportunities for reward.

- **Set performance goals, not outcome goals** - You should take care to set goals over which you have as much control as possible. It can be quite dispiriting to fail to achieve a personal goal for reasons beyond your control!
- In business, these reasons could be bad business environments or unexpected effects of government policy. In sport, they could include poor judging, bad weather, injury, or just plain bad luck.
- If you base your goals on personal performance, then you can keep control over the achievement of your goals, and draw satisfaction from them.
- **Set realistic goals -** It's important to set goals that you can achieve. All sorts of people (for example, employers, parents, media, or society) can set unrealistic goals for you. They will often do this in ignorance of your own desires and ambitions.
- It's also possible to set goals that are too difficult because you might not appreciate either the obstacles in the way, or understand quite how much skill you need to develop to achieve a particular level of performance.

Step V: The trainer explains the concepts of achievement thinking.
Exercise: The trainer asked the participants to set a realistic personal dissertation goal(s).
Step VI: Achieving Goals: When you've achieved a goal, take the time to enjoy the satisfaction of having done so. Absorb the implications of the goal achievement, and observe the progress that you've made towards other goals. If the goal was a significant one, reward yourself appropriately. All of this helps you build the self-confidence you deserve. With the experience of having achieved this goal, review the rest of your goal plans:

- If you achieved the goal too easily, make your next goal harder.
- If the goal took a dispiriting length of time to achieve, make the next goal a little easier.
- If you learned something that would lead you to change other goals, do so.
- If you noticed a deficit in your skills despite achieving the goal, decide whether to set goals to fix this.

Of the strategies that have been discussed, you may be doing some of them pretty well but there are probably at least one or two ways you could still improve your skill in this area. Think about what you've learned and write down the skill(s) you want to work on during the next few weeks. Keep them in a place where you'll be reminded of your goals frequently and practice them every day.
Assignment: Prepare a plan to execute your dissertation within your chosen time.

SESSION SIX: Developing a personal action plan

Objectives: At the end of the lesson, participants were able to:

- Understand personal characteristics
- Set achievement / dissertation goals
- Setting-mastery goals and performance goals).
- Developing a personal action plan

Step I: The trainer revises the previous sessions with the participants.
Step II: the trainer introduced and explained the various personal characteristics

Understanding personal characteristics: Dr Meredith Belbin postulates the following characteristics possessed by various individuals:

- **Coordinator (CO):** able to get others working to a shared aim; confident, mature - (originally called 'Chairman' by Belbin)
- **Shaper (SH):** motivated, energetic, achievement-driven, assertive, competitive
- **Plant (PL):** innovative, inventive, creative, original, imaginative, unorthodox, problem-solving
- **Monitor-Evaluator (ME):** serious, prudent, critical thinker, analytical
- **Implementer (IMP):** systematic, common sense, loyal, structured, reliable, dependable, practicable, efficient (originally called 'Company Workers')
- **Resource Investigator (RI)**: quick, good communicator, networker, outgoing, affable, seeks and finds options, negotiator
- **Team Worker (TW):** supportive, sociable, flexible, adaptable, perceptive, listener, calming influence, mediator
- **Completer-Finisher (CF):** attention to detail, accurate, high standards, quality orientated, delivers to schedule and specification
- **Specialist (SP):** technical expert, highly focused capability and knowledge, driven by professional standards and dedication to personal subject area

How to Develop a Personal Action Plan

- Determine what you want to accomplish. In other words, set your goal for your personal action plan. Make the goal so clear in your mind that you won't have a problem knowing when you've reached it. Define your goal so that a stranger can read your goal and let you know when you've achieved it. Foggy or unclear goals are confusing and tough to reach.
- Plan the route by which you intend to achieve the goal. For example, if your goal of your personal action plan is to complete your dissertation in two years, decide how you're going to do it. It may take you a little time and thought to figure it out, but it's important to plan. For instance, if you want to earn the additional money through writing content on the internet, find the sites whereby you can earn money and decide how many articles or how much writing you will have to do to reach the goal.
- Break your plan down into digestible snippets. If you realize that you have to write 300 words in order to complete your dissertation, and then break it down into monthly, weekly and daily goals. Writing few words a day is much more digestible than looking at the 300 words.
- Track your progress and hold yourself accountable. The best way to see how close you are to where you want to be is to be able to see how much you've done. Track your progress. Keep in mind that there will be unexpected bumps in the road and you

need to forgive yourself if you veered off track for a bit. Just remember to get back on track and remember the goal. Don't continue going down the wrong path.

- Make changes when necessary. If the initial goal in your personal plan was to write 300 words every week for you to complete your dissertation within a specified time and you realize that it will take 400 words instead, adjust your plan accordingly. Not adjusting your plan will mean that you won't reach the goal you set out for yourself.
- Review your original goal. Take out your personal action plan so often and do a reality check. Is your original goal still valid or has it changed? If it has changed, make the appropriate modifications. Always remember to write your goals in such a way that anyone reading your goals can tell if you're on track or not. Always be clear.

SESSION SEVEN: Handling Emotions and Stress

Objectives: At the end of the lesson, participants should be able to:

- Identify and describe various emotions
- describe their anxiety level and causes of anxiety toward dissertation
- explain how to react and manage dissertation anxiety
- reflect and identify the importance of relaxation in the course of writing their dissertations
- explain emotional intelligence

Step I: The session begins with review of previous sessions to enable adequate reinforcement.

Step II: Trainer defines and explains emotions

Emotions: Strong emotions are both a cause of, and a result of conflict. People in conflict may have a variety of strong and often negative emotions--anger, distrust, disappointment, frustration, confusion, worry, or fear. These emotions often mask the substantive issues in dispute. However, the emotions, too, are real and must be dealt with.

Step III: Trainer leads the group in the discussion on dissertation anxiety as experienced by individuals in the course of the dissertation process.

Exercise: Identify the source of your anxiety towards the dissertation process

Step IV: Trainer introduces and explains emotional management.

Managing emotions is an important skill that is necessary if you want to develop psychological resilience. By their nature, emotions are overwhelming. When someone is consumed by emotions, it feels as if he or she can't act and think different from what the emotions dictate. Individuals may be found doing and saying things he/she will regret about later. By developing a greater self-awareness you can notice the emotion as it happens to you as if it was happening to another person. Noticing the emotion separates you from it, so you can evaluate it, challenge it and take steps to gain back your balance.

Managing emotions is recognizing them, understanding them, and then taking the steps to improve them. At the core of emotional management is the ability to recognize the emotions right from the beginning. To do this attention must be paid to the signs of the emotion that get expressed in the posture and body. Emotions get reflected in your thoughts. It is common that certain thoughts come to you only when you are experiencing negative feelings, like thinking that things will never get better. When you are in your normal condition you don't think this way, but once you are upset you get these negative thoughts. In

such a case these thoughts are also signs of the negative emotions that start to overwhelm you. Observe what triggers these bad feelings. The triggers could be particular situations, people, places, objects, words or thoughts. Once you know the triggers, this could help you prepare yourself for facing them, so they don't catch you off-guard.

Step V: Trainer presented ways of handling dissertation anxiety How to handle anxiety: Anxiety has many causes, but we tend to blame external factors for our anxiety rather than how we react to them. What leads to anxiety for you? Here are some typical anxiety generators: The unknown, change, uncertainty, supervisor, other colleagues, work and time pressures, fear of failure, being found incompetent, being rejected, not achieving what you want, financial problems, relationship problems, deteriorating health, status anxiety, dissertation defence etc. Anxiety can paralyze us. We think that everyone else is OK because everyone tries to hide their anxiety. But this only increases our anxiety. It is a constant battle that everyone has to work at to keep anxiety at bay. To cope effectively with stress and even thrive on it requires skill.- - Self Awareness: A key stress management skill which they have identified is the ability to recognize the mental, emotional and physical habits that contribute to, or even cause, our stressful responses. Become aware of your thoughts and begin managing them and you will be directly influencing your emotions.

- Paying attention to negative self hypnosis: Our nnegative self-talk is pernicious and demoralising and debilitating. And because we are so used to it we don't consciously pay attention to it and therefore do not challenge it. It goes on and on in the background and the effect is that we are giving ourselves powerful hypnotic suggestions to feel bad!

- Gently replace the negative self-talk: Each time you recognize that you are doing your self-criticising or self-undermining pause, remind yourself that it's just that old habit you've got into, and that from now on you're changing this habit. Your inner voice should sound as if you are calming an upset 2-year old! Reassure yourself. Calm yourself. Remind yourself of the rationales and facts of the situation. Remind yourself of the value of handing things in a cool, calm, and confident manner. Doing this once or twice won't make a lot of difference. It takes quite a while to replace the habits of a lifetime - but it's definitely worth doing so.

- Emotional intelligence is the ability to manage our emotions and those of others. The first step is to understand how our own emotions affect how we think and act. Also vital to understand how our emotions affect others. How can you become more aware of other people's emotions, what impact they have on how they behave and on how we feel? It's important not to suppress feelings. Understand, support and channel emotions as productively as possible.

- Learn to *really* relax: The practice of relaxation or meditation is not a mysterious or mystical experience available only to a select few adepts. The ability to relax, or practice simple meditation, is a natural and valuable ability which we all possess, even though we may not have practised it for many years. It's an innate skill which most of us have forgotten how to use. As very young children we could relax at will, anywhere: but most adults rely on artificial props to help them relax, such as alcohol, drugs, television, or even comfort-eating. With just a little persistence, about 15 minutes a day, and maybe some relaxing music you can easily reawaken this natural skill. Relaxation has been scientifically proven to be health enhancing

Step VI: Participants learnt about the need to practice relaxation consistently

Importance of relaxation

- Relaxation enables you to take an break and switch off from the stresses of life whenever you wish
- It provides a few precious moments in which to re-charge your mental and physical batteries
- Relaxation is the bed-rock of effective stress management
- It enables you to stand back and switch off from problems - so that, often, when you return to them you can perceive solutions that had previously escaped you.
- If you have intense fears or phobias you will find your relaxation skills essential for using methods such as systematic desensitization to dissolve your fears.

SESSION EIGHT: Review of previous sessions and administration of post-test instruments.

Objectives: At the end of the session, participants were able to:

- Summarize what they had benefited from the numerous skills they had learnt since the commencement of the programme.
- Partake in post-test instruments

Step I:The session commenced with verification of progress made by individual participants. The various assignments given to participants in the course the training were reviewed. Researcher asked questions bothering on what they had been taught; to know how the participants have been making use of the skills they were taught. The different skills they were taught have helped them to develop the expected skills that enhance their social and emotional competence towards dissertation process.

The programme was brought to an end with encouragement to continue with the utilization of what they have acquired during the training session.

Step II: Post-test instrument was administered on the participants. The responses obtained served as the post-treatment scores.

Step III: Participants were asked to make their comments and assessment of the training package. Participants were appreciated for their consistency and patience in participating in the programme. Thereafter, they were entertained.

The Control Group

Participants in this group were not exposed any of the trainings given to the experimental groups. Two sessions were held with this group as follow

Session One: administration of research instruments. There was no discussion or premonition that they were to be invited for another meeting eight weeks after.

Session Two: text messages and e-mails were sent to the participants inviting them for a seminar on 'Timely Dissertation Completion' fifteen days before the fixed date for the seminar. Post-test administration was done before the seminar commenced. The seminar paper was delivered by a lecturer from the department of Adult Education, University of Lagos.

APPENDIX III

DISSERTATION SELF-EFFICACY SCALE

University _____

Sex: _____ Female _____Male

Instruction: The following questions were phrased around the statement 'how confident are you in your ability to…?' Examples include 'how confident are you in your ability to schedule your work to ensure deadlines are met?'; 'how confident are you in your ability to make time for other activities e.g. exercise/socialising?', and 'how confident are you in your ability to use computers effectively?'

A response scale ranging from 'not at all confident' (1) to 'very confident' (4) was used. Find the number between 1 and 4 that best describes you.

S/N	ITEMS DESCRIPTION	1	2	3	4
1	How confident are you in your ability to motivate yourself to do the dissertation?				
2	How confident are you in your ability to maintain enthusiasm for the dissertation?				
3	How confident are you in your ability to avoid distractions and remain focused on the task?				
4	How confident are you in your ability to remain positive about the dissertation?				
5	How confident are you in your ability to keep calm about the dissertation?				
6	How confident are you in your ability to enjoy writing your dissertation?				
7	How confident are you in your ability to successfully complete the dissertation?				
9	How confident are you in your ability to obtain resources e.g. journals from the library?				
10	How confident are you in your ability to set yourself realistic goals?				
11	How confident are you in your ability to schedule your work to ensure deadlines are met?				
12	How confident are you in your ability to find appropriate participants?				
13	How confident are you in your ability to collect relevant and accurate data?				
14	How confident are you in your ability to know when to stop work and take a break?				

S/N	ITEM DESCRIPTION	1	2	3	4
15	How confident are you in your ability to arrange tutorials with your dissertation supervisor?				
16	How confident are you in your ability to gain support from family and friends?				
17	How confident are you in your ability to understand the subject area?				
18	How confident are you in your ability to understand and use statistics?				
19	How confident are you in your ability to use computers effectively?				
20	How confident are you in your ability to critically analyse past research?				
21	How confident are you in your ability to critically analyse your own performance?				
22	How confident are you in your ability to organise your time and use it effectively? Time				
23	How confident are you in your ability to plan what needs to be done?				
24	How confident are you in your ability to prioritise your workload?				
25	How confident are you in your ability to find time to complete assignments for other modules?				
26	How confident are you in your ability to make time for other activities e.g. exercise/ socialising?				
27	How confident are you in your ability to communicate the subject area to others?				
28	How confident are you in your ability to use an appropriate writing style?				
29	How confident are you in your ability to structure paragraphs and chapters of the dissertation?				
30	How confident are you in your ability to follow the recommended dissertation format?				

APPENDIX IV

DISSERTATION ANXIETY SCALE (DAS)

The dissertation process has proven to be a challenging experience to every doctoral student. This questionnaire is a diagnostic and research tool to investigate the level of anxiety experienced by dissertation students.

The research value of this questionnaire will depend on how frank you are in stating your feelings and attitudes. The requested information on this questionnaire is only necessary for research purposes. Needless to say, your answers to the questions will be kept strictly confidential; they will not be made available to any instructor or other official of the University.

Thank you.

Section A: Personal Information

Date:……Sex:……
School/university:……
Year admitted for PhD:……Course of study……
Present stage of programme:……...
Phone Number……
E-mail Address……

Instruction: Kindly indicate your experiences in response to the feelings as expressed in the items below. Read each statement and set of alternatives carefully. Then select the answer which best describes your actual feelings or behavior, and circle the letter that corresponds to that statement. Please answer all items, giving only one answer for each item but be sure that you read each alternative carefully before making your choice.

Section B

S/N	Items	Always	Often	Sometimes	Rarely	Never
1	The consequences of failing some component part of the dissertation process makes me uptight					
2	Thinking about the upcoming dissertation process makes me feel anxious					
3	My heart beats faster as I think about the dissertation process					
4	Fear of unknown, not understanding the procedure and requirements at this time do cause me anxiety					
5	Most times I feel like procrastinating/postpone my work					
6	Nervousness during academic activities hinders me from doing well.					

S/N	Items	Always	Often	Sometimes	Rarely	Never
7	I am unsure about how to begin my research.					
8	I am afraid of writing essays when I know they will be evaluated					
9	Topic selection is always a source worry to me					
10	Composing my dissertation gives me headaches and lead to blockade of ideas					
11	Completing and presenting the dissertation references is a cause for me to worry					
12	Data collection is a challenging process to me					
13	I find that my mind goes blank at the beginning of the dissertation writing, and it takes me a few minutes before I can function.					
14	Embarking on literature review makes me feel uncomfortable					
15	Whenever I'm under pressure I find it hard to organize my thoughts more clearly than usual.					
16	I am nervous about writing					
17	I have a terrible time organizing my ideas in writing an essay					
18	Expressing ideas through writing seems to be a waste of time					
19	I feel uncomfortable using the library					
20	I'm embarrassed that I do not know how to use the library					
21	I get confused trying to find my way around the library.					
22	Materials needed for my dissertation writing is not on the library shelf.					
23	I don't know what to do next when the book I need is not on the shelf.					
24	The directions for using the computers in the library for research are not clear.					
25	It is hard using online databases when I am looking for information.					
26	I do not know how to use digital services provided in the library for my dissertation.					

S/N	Items	Always	Often	Sometimes	Rarely	Never
27	Using technology for research worries me whenever I think of my dissertation					
28	Using the technology for research frustrates my will to embark on the dissertation					
29	I feel insecure about my inability to interpret a computer printout					
30	I have difficulty in understanding the technical aspects of computers					
31	I hesitate to use a computer for fear of making mistakes that I cannot correct					
32	I feel it will be hard drawing inferences from statistics for my dissertation.					
33	I feel uneasy about my inability to analyse data in relation to hypotheses					
34	I am worried about how well I will perform during my dissertation defence					
35	I am not sure that I will be able to answer some of the difficult questions posed by dissertation committee					
36	During any oral examination I become conscious of my heart-beat.					
37	Discussing my writing with others is an enjoyable experience					

APPENDIX V

EMOTIONAL INTELLIGENCE SCALE (EIS)

Date:……Sex:……
School/university:……
Year admitted for PhD:……Course of study……..
Present stage of programme:……
Phone Number……
E-mail Address……

Section B

This section covers items on Emotional Intelligence. Indicate your response as it applies to you.

SD – Strongly Disagree

D – Disagree

U – Undecided

A –Agree

SA – Strongly Agree

S/N	Items	SD	D	U	A	SA
1	I am aware of my emotions as I experience them					
2	I know why my emotions change					
3	I easily recognize my emotions as I experience them					
4	I am aware of the non-verbal messages I send to others					
5	When I am faced with obstacles, I remember times I faced similar obstacles and overcame them					
6	I have control over my emotions					
7	I seek out activities that make me happy					
8	Some of the major events of my life have led me to re-evaluate what is important and not important					
9	I motivate myself by imagining a good outcome to tasks I take on					
10	I know when to speak about my personal problems to others					
11	By looking at their facial expressions, I recognize the emotions people are experiencing					
12	When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself					

S/N	Item	SD	D	U	A	SA
13	I know what other people are feeling just by looking at them					
14	It is difficult for me to understand why people feel the way they do					
15	I can tell how people are feeling by listening to the tone of their voice					
16	I find it hard to understand the non-verbal messages of other people					
17	I am aware of the non-verbal messages other people send					
18	I like to share my emotions with others					
19	I arrange events others enjoy					
20	I help other people feel better when they are down					
21	Other people find it easy to confide in me					
22	I compliment others when they have done something well					
23	When my mood changes, I see new possibilities					
24	When I experience a positive emotion, I know how to make it last					
25	When I am in a positive mood, solving problems is easy for me					
26	When I am in a positive mood, I am able to come up with new ideas					
27	When I feel a change in emotions, I tend to come up with new ideas					
28	I use good moods to help myself keep trying in the face of obstacles					
29	I present myself in a way that makes a good impression on others					
30	Emotions are one of the things that make my life worth living					
31	When I am faced with a challenge, I give up because I believe I will fail					
32	I expect that I will do well on most things I try					
33	I expect good things to happen					