INTRODUCTION

The psychologists, educationists and other stake holders of formal education have been in invariably investing their efforts to unearth the dynamics of academic success of the students around the globe. Many psychological constructs have been discovered and reported to be linked with the academic success and academic adjustment of the students. In recent past, metacognition has gained importance in regulating various sorts of human performance including academic success and adjustment. Metacognition refers to a set of processes comprising thinking, knowledge or beliefs about one’s own cognitive processes. It has been argued that metacognition plays a pivotal role in shaping active learning process and helps to achieve a sense of control over learning and facilitates linking with the learning materials and helps to promote efficient learning on a variety of tasks. It also helps to identify and get familiar with a broad range of learning strategies, regulate thinking and other cognitive processes in ways that help associate with the learning materials, plan for the future learning, allocate time, efforts and cognitive resources, and motivate the learners in a variety of learning situations.

In essence, metacognition refers to a higher mental process comprising the knowledge about cognition and knowledge about knowledge involving self-regulation and self-reflection of strengths, weaknesses and the types of strategies that peoples generate which are critical for successful learning. The term ‘metacognition’ was introduced and popularized in psychological research by Flavell (1979). The researchers have posited that metacognition entails a way of thinking about thinking enabling the individuals to become successful learners, and plays key role in shaping intelligence, decision making and other important cognitive behaviours of the individuals (Borkowski, Carr & Pressely, 1987; Sternberg, 1986a, 1986b).
Studies on metacognition have shown that it plays an important role in educational setting as it helps a learner to become competent in developing a plan, monitor and evaluate the magnitude of effectiveness of cognitions consequent upon which he/she becomes more involved in learning process (Costa & Kallick, 2002). In addition, metacognition plays an important role in communication, reading comprehension, language acquisition, social cognition, attention, self-control, memory, self-instruction, writing, problem-solving and personality development (Rahman et al., 2010). Metacognition consists of unique set of knowledge and ability consonant with which personal experience is shaped. The effective use of metacognition is closely linked with academic achievement, work performance and enhanced learning outcomes. The metacognitive processes have been shown to determine the nature of performance, functioning and behaviours of the individuals in an array of situations including performance in educational setting.

It has been reported that metacognition involves a set of conscious and deliberate processes with which the individuals analyze and manipulate their thought processes to solve the problems and perform tasks of various sorts. Metacognition constitutes a higher order cognitive ability reflecting the recognition of one’s own thoughts and abilities, tasks, situations and environments (Flavell, 1979). According to Ormrod (2006), metacognition refers to one’s knowledge and beliefs about one’s own cognitive processes and one’s resulting attempts to regulate those cognitive processes to maximize learning and memory outcomes. It has been suggested that embedding metacognitive instruction into the content matter to ensure connectivity; informing learners about the usefulness of metacognitive activities to make them exert the initial extra effort, and prolonged training to guarantee the smooth and maintained application of metacognitive activity which constitute three fundamental principles of successful metacognitive instructions having practical significance and applicability in enhancing academic success of the students (Veenman et al., 2006).
Thus, the metacognitive processes comprise a set of knowledge and beliefs of one’s own thoughts that underlie one’s thinking.

It has been argued that metacognitive strategies help learners to monitor their progress and take control over their learning processes as they exert their efforts in reading, writing and problem-solving in academic settings. It has been shown that metacognition is a powerful predictor of academic success which has a unique role in learning in addition to the intellectual ability of the learners. A good number of researchers have reported that training in efficient metacognitive strategies has the capacity to compensate for cognitive limitations of the learners (Veenman, Wilhelm, & Beishuizen, 2004; Wang, Haertel, & Walberg, 1990) irrespective of their age, cognitive abilities and learning domains including reading comprehension, writing, mathematics, problem-solving and memory (Dignath & Buettner, 2008; Dignath, Buettner, & Langfeldt, 2008). It has also to be argued that metacognitive skills help the learners to transfer their skills and knowledge from one context to the other or from a previous task situation to the new ones. The researchers have reported that metacognitive skills initially develop within specific domains and get transferred and generalized to new domains of learning (Veenman & Spaans, 2005).

The researchers carry contradictory viewpoints regarding the nature of metacognition. Some argue that it is conscious and deliberate in nature while others argue it to be less conscious and automatic processes (Whitebread et al., 2009). Developmental differences have also been reported in the appearance of metacognitive skills. It has been argued that metacognitive skills are expressed during late childhood spanning from 8 years to 10 years of age (Veenman & Spaans, 2005). Some researchers have shown that the error correction strategies, awareness of forgetting and a variety of verbal/non-verbal signs of metacognitive processes appear during the age of 18 months to 5 years (Whitebread & Pino Pasternak, 2010). The efforts to enhance the use of metacognition with the focus on explicit cognitive
and metacognitive instructions facilitate the development of metacognitive skills of the learners. The metacognitive abilities are cultivable and help synthesize the efforts of the teachers with efficient practices in academic settings. The combined applications of monitoring, evaluating performance and using learning strategies to promote metacognitive skills are very useful for the students in classroom settings and other spheres of life. The metacognitive processes play an important role in oral communication, oral persuasion, oral comprehension, reading comprehension, writing, language acquisition, attention, memory, problem-solving, social cognition and various types of self-control and self-instruction (Flavell, 1979). It has also been observed that these processes have equal implications in the areas of social psychology, cognitive behaviour modification, personality development and education.

1.1 Models of Metacognition

Many theoretical models have been proposed to throw light on the nature and dynamics of metacognition. The prominent of them are classical model by Flavell (1979), Schraw (1998) and Nelson and Narens (1990). The multifaceted and multilevel model of metacognition of Nelson and Narens (1990) proposed object level and meta level of metacognition. The former involves cognitive strategies such as decoding a textual material to appreciate its meaning whereas the later entails higher order metacognitive strategies to ensure the attainment of learning goals. Perkins (1992) has proposed four levels of metacognitive strategies employed by learners: tacit, aware, strategic and reflective. In tacit strategy, the learners are not familiar with their metacognitive knowledge and do not employ any particular strategies for learning. In aware strategy, the learners express their cognizance about some sort of thinking used for generating ideas and finding evidence with no purposeful or planned efforts. The strategic learners are capable of organizing their thinking by means of problem-solving, grouping and classifying, evidence seeking and decision
making. Lastly, in reflective strategy, the learners not only exhibit metacognitive strategies about their thinking but also reflect upon their learning.

The metacognition model proposed by Schraw (1998) views it as a multidimensional phenomenon with general domain. Metacognitive knowledge and regulation can be improved using a variety of instructional strategies. This model makes a distinction between two components of metacognition: knowledge of cognition and regulation of cognition. The former refers to what individuals know about their own cognition or about cognition in general with three types of metacognitive awareness: declarative, procedural and conditional knowledge. Declarative knowledge refers to the knowledge about things while procedural knowledge refers to knowing how to do things. Conditional knowledge pertains to knowing the why and when aspects of cognition.

Schraw and Dennison (1994) have proposed eight components of metacognitive awareness: declarative knowledge, procedural knowledge, conditional knowledge, planning, monitoring, evaluation, regulation of cognition and knowledge of cognition. Declarative Knowledge includes knowledge about oneself as a learner and about what factors influence one's performance whereas procedural knowledge refers to knowledge about doing things. Conditional knowledge pertains to knowing when and why to use declarative and procedural knowledge which enables the individuals to adjust to the changing situational demands of each learning task. Planning involves the selection of appropriate strategies and allocation of resources that affect performance while monitoring refers to one's on-line awareness of comprehension and task performance. Evaluation refers to appraising the products and efficiency of one's learning. Examples are re-evaluating one's goals and conclusions. Regulation of cognition refers to a set of activities that help the individuals to control their learning.
According to Schraw and Dennison (1994), regulation is divided into planning, information management, monitoring, debugging and evaluation with three essential skills of planning, monitoring and evaluation carrying each. In essence, metacognition represents knowledge and regulatory skills that are used to control one's cognition. The metacognitive processes are employed in a general sense to subsume a number of individual components; all of these are inter-correlated and carry two general components corresponding to knowledge about cognition and regulation of cognition. Preliminary evidence suggests these two components are inter-correlated somewhere in the $r = 0.50$ range (Schraw & Dennison, 1994).

### 1.2 Implications of Metacognition

Metacognition enhances and enriches the learning experiences of the learners and facilitates the applications of metacognitive strategies to enhance self-awareness and self-monitoring to develop them into independent learners as well as enables them to control their own learning (Papaleontiou-Louca, 2008). The implications of metacognitive research have many theoretical and practical implications to understand human behaviour and performance. The researchers have reported that metacognition has significantly useful in treatment of mental illness like schizophrenia. It has been argued that cognitive remediation therapy becomes more effective by improving metacognition as people with schizophrenic symptoms show metacognitive problems of poor self-awareness and difficulties in planning for complex tasks (Cella, Reeder, & Wykes, 2015). The metacognition is also responsible for insight (David et al., 2012), self-related cognitive processes (Pickup & Frith, 2001) and functioning levels (Lysaker et al., 2013) relevant for treatment of schizophrenia. The recent years have witnessed the proliferation of the importance of the study of metacognition in other areas of psychology namely memory (Johnson, Kounios & Reeder, 1994), developmental psychology (Butterfield, Nelson & Peck, 1988), aging (Backman & Lipinska, 1993), neuropsychology
(Shimamura, 2000), social psychology (Bless & Forgas, 2000; Schwarz, 2004), judgement and decision making (Winman & Juslin, 2005), and forensic psychology (Pansky, Koriat & Goldsmith, 2005).

The metacognitive strategies carry significant applications in educational setting as they can be taught and developed (Hofer & Yu, 2003; Israel, 2007) with efforts (Vos, 2001). Flavell (1979) has suggested that metacognitive knowledge and monitoring skills can be instilled in children through systematic training to enhance their intellectual ability, decisions of life, comprehension and learning in formal educational setting. Further, metacognition plays an important role in broad dimensions of learning of oral communication of information, oral persuasion, oral comprehension, reading comprehension, writing, language acquisition, attention, memory, problem-solving, social cognition, and various types of self-control and self-instruction (Flavell 1979). Sternberg (2009) has suggested that feasibility and accomplishment of metacognition in educational success is beyond question.

The significant role of metacognition in various fields has been demonstrated by an enormous body of research (Biggs, 1986; Hartman, 2001a) which held that metacognition carry the potential to empower students to take charge of their own learning and to increase the meaningfulness of their learning (Amado Gama, 2005). Chamot et al. (1999) have argued that metacognition represents reflecting on one’s own thinking and learning which forms the hallmark of the successful learner. On the value of metacognition, Kuhn (2000) has suggested that metacognition helps to frame awareness and reflective ability of one’s own thinking and monitoring and managing the life outcomes which is influenced by external sources in academic, work and personal life settings. It is imperative that the instruction and development of metacognition undoubtedly develop with practice (Papaleontiou-Louca, 2003).
Metacognition consists of strategies which include planning, monitoring, and evaluating of language use and language learning which are assumed to be the key elements in developing autonomy (Harris, 2003). It helps the learners to take charge of their own learning as it enables them to plan, monitor, and evaluate their learning processes (Hacker, Dunlosky & Graesser, 2009). Ariel (1992) has suggested that metacognitive instruction aims to develop the sensitivity of students to learning situations, to heighten students’ awareness of their own cognitive repertoire and the factors that affect the learning process and contribute to successful learning, to teach strategies for learning, and to develop students’ capacity to regulate and monitor their activities. It provides the learners with answers which enable them to resolve immediate learning problems.

Metacognition can provide students with knowledge and confidence that enables them to manage their own learning and empowers them to be inquisitive and persistent in their pursuits (Paris & Winograd, 1990a). The culture of development of metacognition in the learners must involve the opportunity to learn both the components of metacognition namely metacognitive knowledge and metacognitive regulation. Anderson (2008) has proposed five primary components of metacognition in language learning: preparing and planning for learning, selecting and using strategies, monitoring learning, orchestrating strategies, and evaluating learning. These five components of metacognition represent an interactive and cyclical nature moving from preparation and planning to evaluation. Anderson (2008) has asserted that learning from a good teacher is very important whereas metacognition helps to make the learning experiences meaningful and move beyond source and contents of learning and developing the metacognitive skills to regulate learning automatically.

1.3 Academic Locus of Control

Introduced by Rotter (1954), locus of Control refers to the beliefs of an individual about control over life events and good or bad consequences of the outcomes of life in
general or specific area. According to Landine and Stewart (1998), locus of control involves the belief about one’s ability to perform a task. As locus of control is associated with one’s belief system, it may be argued to be related to metacognitive processes which represent one’s knowledge or beliefs about one’s cognitions. Closely associated with attribution, locus of control examines people’s control belief as to what extent they perceive themselves in control or not in control of what happens to them (Lefcourt, Miller, Ware, & Sherk, 1981).

In his theory of social learning, Rotter (1971) proposed that there are two frames of mind: the internal locus of control and the external locus of control. Rotter (1971) assumed that people vary in the degree to which they perceive the things that are happening to them as being under their own internal control or under the control of outside forces. He further argued that the individuals with internal locus of control lie at one end of the continuum who believe themselves as being captains of their own ships whereas at the other end of the continuum are the externals who see themselves as being ruled by powerful people or outside forces. Rotter (1990) explicated the meaning of internal locus of control in his words by saying “the degree to which persons expect that reinforcement or an outcome of their behaviour is contingent on their own behaviour or personal characteristics”.

People with high external locus of control believe that control over events and what other people do lay outside them, and that they personally have little or no control over such things. They also believe that others have control over them and that they can do nothing but obey. Rotter (1990) described the external locus of control as “the degree to which persons expect that the reinforcement or outcome is a function of chance, luck, or fate, is under the control of powerful others, or is simply unpredictable”. In more technical sense, people with internal locus of control believe that they can command over the reinforcements in their lives through their own efforts while people with external locus of control see the reinforcements in their lives as being driven by causal sources that are independent of their own actions.
Academic locus of control is an important component of locus of control which plays an important role in the academic success of the students. Academic locus of control refers to an expectation carried with by the students that their behaviours can influence academic outcomes and reflects their beliefs about the factors that determine academic success (Trice, 1985). Academic locus of control manifests in the beliefs of the students regarding their control over the academic situations and outcomes. A student with an internal academic locus of control believes that success or failure is not beyond his control whereas a student with an external academic locus of control believes that success or failure is controlled by external forces beyond his control and may believe that grades do not reflect effort and are affected by external factors such as luck, examination system, biased attitude of teacher etc.

The students with an internal academic locus of control believe that grades reflect one’s effort, attending classes is important, studying regularly is important and they do not think that teachers give free rides to some students. On the other hand, the students with an external academic belief system believe that teachers give free rides to students; attending classes are not worth paying and feel helpless over academic situations. It can be argued that the students with an internal academic locus of control are the captains of their academic destinies whereas the students with an external academic locus of control are at the mercy of external forces (Trice, 1985). People with a high internal locus of control believe in their own ability to control themselves and influence the world around them. They see their future as being in their own hands and that their own choices lead to success or failure.

1.4 Academic Adjustment

Adjustment with the demands of life of higher educational institutions can be a strong indicator of the academic level of the students along with new social relations and achieving personal goals. Academic adjustments are modifications in the way the students participate in their academic pursuits. These modifications allow them to meet the standards of academic life. The concept of adjustment is a complex and difficult term to define. According to
Simons, Kalichman, and Santrock (1994), adjustment is a psychological process of adapting to, coping with, and managing the problems, challenges, and demands of everyday life. The adjustment of the students with the environment of higher educational institutions is an important factor in predicting outcomes and is crucial to their future achievements. The stage of life of higher educational institutions is an important part of the students’ life as they move from the total dependence on the teacher, family and curriculum to the complete independence. Previous studies have shown that many students move away from their cities into new places causing a change in their cultural, social and psychological environment which may affect their adjustment with the life of higher educational institutions (Al-shinawi & Abdurrahman, 1994).

Academic adjustment refers to the degree of a student’s success in coping with various educational demands pertaining to the motivation, application, performance and satisfaction with the academic environment (Baker & Siryk, 1999). Academic adjustment gives the students equal access to the educational opportunities of the higher education. Tinto (1975) has discussed two types of academic adjustment: structural and normative. The former is reflected in the student's academic performance whereas the later focuses on the student's perception of their intellectual development. The researchers have attempted to explore the status of the academic, social and psychological level of undergraduate students to uncover the problems of adjustment and its role in shaping the academic success (Al-nabhan, 2001; Saldern, 1992).

Socioeconomic status (SES) is a term used by sociologists, economists, and other social scientists to describe the class standing of an individual or group. It is measured by a number of factors including income, occupation, and education, and it can have either a positive or negative impact on a person's life. Socioeconomic status is an economic and sociological combined total measure of a person's work experience and of an individual's or
family’s economic and social position in relation to others, based on income, education, and occupation. When analyzing socioeconomic status, the household income, earners’ education, and occupation are examined, as well as combined income versus individual, when their own attributes are assessed. Sociologists often use socioeconomic status as a means of predicting behaviour. Thus, socioeconomic status is the social standing or class of an individual or group. It is often measured as a combination of education, income and occupation. Examinations of socioeconomic status often reveal inequities in access to resources and issues related to privilege, power and control.

The metacognitive processes, locus of control, academic outcome and academic adjustment have close connection with the socioeconomic factors. The socioeconomic realities shape the bio-psychological structure of the individuals. The socioeconomic status (SES) is a complex and dynamic construct encompassing income, educational attainment, financial security and subjective perceptions of social status and social class. The socioeconomic status entails quality of life as well as the opportunities and privileges affordable to people within society. In addition, SES is a consistent and reliable predictor of a vast array of outcomes across the life span including physical and psychological health. Thus, SES is relevant to all realms of behavioural and social science, including research, practice, and educational outcomes which significantly influence the accessibility, affordability, acceptability and actual utilization of various resources.

Socioeconomic status is typically broken into three categories, high socioeconomic status, middle socioeconomic status, and low socioeconomic status to describe the three areas a family or an individual may fall into. When placing a family or individual into one of these categories, any or all of the three variables can be assessed. Additionally, low income and little education have shown to be strong predictors of a range of physical and mental health problems, ranging from respiratory viruses, arthritis, coronary disease, and schizophrenia. These may be due to environmental conditions in their workplace, or in the case of mental illnesses, may be the entire cause of that person’s social predicament to begin with.