CLASSROOM GOAL ORIENTATION AND STUDENTS' ACHIEVEMENT GOAL: A STUDY OF INTRINSIC MOTIVATION OF SECONDARY SCHOOL STUDENTS IN NAGALAND

Dissertation submitted to Jawaharlal Nehru University

in partial fulfilment of requirements

for the award of degree of

MASTER OF PHILOSOPHY

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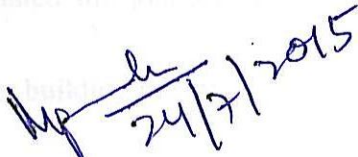
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DECLARATION

I, Vinika Chophy, declare that the dissertation entitled **"Classroom Goal Orientation and Students' Achievement Goal: A Study of Intrinsic Motivation of Secondary School Students in Nagaland"** submitted for the award of the Master of Philosophy has not been previously submitted for any degree of this or any other university and is my original work.
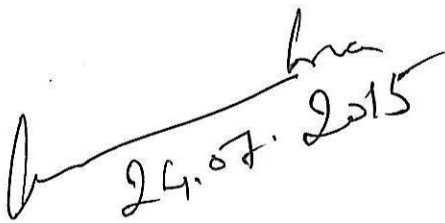
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CERTIFICATE

We recommend that the dissertation be placed before the examiner for the award of M.Phil Degree of this University.

24/7/2015

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ACKNOWLEDGEMENTS

that we spend together during this time of dissertation writing helped us to know and open up to each other even more and made us great friends. I hope we continue to share this beautiful friendship even in the years ahead. I am so grateful to my brother Charlie Chophy for his endless support and encouragement throughout my research work. I thank you brother for helping me out in every way possible and for providing me with necessary materials for my research work.

I acknowledge and thank you all for lifting me up and giving me strength to carry on with my work. I hope and pray for a continued relationship in the years to come. I hope you feel a personal responsibility for the success I have experienced on this day. I am looking forward for more help and guidance from you all even in the future. Thank you all.

We share this accomplishment together.

"What we do for ourselves dies with us. What we do for others and the world remains and is immortal".

Albert Pine

Vinika Chophy

ABSTRACT

Does promoting interaction mediate the relationship between classroom goal orientation and students' intrinsic motivation? The present research addresses this important question by conducting an empirical study. A conceptual model of the three variables of this study was developed and tested using mediation analysis.

The study was conducted on a sample of 60 students belonging to the age group 12-14 years of 8th grade of a private Higher Secondary School. Data were collected using questionnaires that were administered to each subjects consisting of three different parts that measured classroom goal orientation, students' intrinsic motivation and promoting interaction. The inter-correlation of the three variables was tested and mediational analysis was calculated employing three equations that were suggested by Baron & Kenny (1986). The results were interpreted according to the four conditions outlined by them.

The correlation test result revealed that there is a positive relation between classroom goal orientation and promoting interaction. It also exhibited a strong relation between classroom goal and students' intrinsic motivation. But it displayed a negative significant result between students' intrinsic motivation and promoting interaction.

The first regression equation revealed that there is a direct positive effect of promoting interaction on classroom goal orientation. The second equation also exhibited a strong effect of classroom goal orientation on students' intrinsic motivation. In the third equation a direct positive effect of classroom goal orientation on students' intrinsic motivation was predicted, but result showed a negative significant effect of promoting interaction on students' intrinsic motivation indicating the absence of mediating effect of promoting interaction between classroom goal orientation and intrinsic motivation of the students.

These findings revealed that classroom environment affects the perception of the students about their achievement related behaviour and outcomes. This further influences the intrinsic motivation of the students. However, the effect of classroom context on students' motivation is not always mediated through promoting interaction. This indicates that classroom goal orientation can enhance the intrinsic motivation of the students and this can further influence their achievement outcome in the academic settings. But it did not yield any support for promoting interaction as a mediator between classroom goal structure and students' intrinsic motivation.

The findings of the present study do not support the results and suggestions of the previous researchers. This study provides clarity regarding the previous research on the direct and mediation effect of promoting interaction between classroom goal orientation and students' intrinsic motivation. It has highlighted the need for a rigorous and systematic investigation on the link between classroom goal orientation and students' intrinsic motivation by identifying a mediating variable. Also, it has emphasized on the need for taking into consideration both the classroom and personal goal orientations that affect students' perceptions as this may further influence their motivation and learning.

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Chapter 1

INTRODUCTION

1.1 Statement of the problem

Many researchers and goal theorists have recognized the effect of classroom goal structure on the students' perception of their goal orientation and how it further affect their achievement behaviour (like Dweck & Leggett, 1988; Dweck & Grant, 2003; Covington, 2000; Rendall et al., 2009 etc.). Most of these researches are informed by the achievement goal theory about the reasons why students try to succeed and how they respond towards failure. Achievement goal theory is a theoretical framework which was developed by Dweck & Nicholls in the late 70's and early 80's to study how students perceive their performances in the academic setting (Dweck & Elliot, 2005). It is a framework which mainly focuses on the way individuals interpret and react to events which may have an effect on the patterns of behaviour and their level of competence (Dweck & Leggett, 1988).

There have been numerous researches (see Ames & Archer, 1988; Ames, 1992; Dweck & Leggett, 1988; also see Elliot et al., 1998, Anderman & Midgely, 1997 etc.) done on the classroom goal and students' motivation based on the achievement goal theory. These classroom goals include performance goals which focus on demonstrating one's competence and learning goals that emphasizes more towards the development of one's competence and task mastery (Alkharusi, 2010). Students who observed classroom as emphasising mastery goals used learning strategies which are more effective and proficient, and also have a preference for demanding task. Contrary to that, students

perceiving classroom as salient on performance goals are likely to focus on their ability. They often attribute failure to lack of ability (Ames & Archer, 1988).

Among many models that have been developed and presented by different goal theorists, Dweck's model has been found as the best articulated model (Leondari & Gialamas, 2002). As postulated by Dweck (1986), Leondari & Gialamas (2002) in their study stated that the level of student engagement, their determination and their course of success can be elucidated based on the goal orientations of different academic settings. Even so this may be due to the different views that students hold about their intelligence. They opined that the implicit theory of intelligence (such as, the entity view and the incremental view) is significant as it links with the effort and preferences for challenges. In other words, those students who hold an incremental view tend to put in more effort while facing difficult and challenging task and this ultimately helps in the enhancement of knowledge. In contrast, those students believed to have an entity view are more concerned about their performance and they tend to avoid challenging task which demands a high degree of risk as they might result in poor performance and an evaluation of incompetence. In this regard, the entity vs. incremental notion of intelligence that the students possess has a distinct impact on their learning, understanding and conduct in the academic settings. According to Tollefson (2000),

"Once children develop the implicit theories about whether they can be successful in school or not their classroom behaviours reflect their personal, implicit theories about variables that produce success or failure in school."

The study conducted by Hong et al. (1999) revealed that the individuals defined ability differently. While the entity theorists defined ability as something fixed and attributed failure to lack of ability, the incremental theorists indicated ability as level of

proficiency which could be improved by putting more effort. This finding present evidence that implicit theory situates a meaning system in which attributions arise. It also underlines the suggestions of the previous researchers (e.g. Erdley et al., 1997; Henderson & Dweck, 1991; as cited in Hong et al., 1999), that having high confidence within the structure of entity view does not prevent helpless attributions.

Two studies were conducted by Blackwell et al. (2007) to investigate how the implicit theories of intelligence function towards the attainment of success in mathematics during the stage of adolescence; it was shown that during late childhood, adolescents tend to behave well and regard themselves as equally good as others. As such, they tend to put effort and excel in school during those years. On the contrary, the early adolescent years seemed to be more of disapproval and detachment from schools and exhibiting lower grades (Blackwell et al., 2007). As such, how students negotiate the changes in the transition from early to late adolescent stage has major implications for their academic futures. However, it is critical to the academic performances and achievement of the students as they experience decline in grades when they encounter difficult situations and their intrinsic motivation is effected after the setback.

In this study they have used Dweck's model to test why students respond differently to challenges and setbacks. They also tried to understand the factors that help or hinder the motivation of the students and their level of attainment or success in the achievement settings. From this study it was found that encouraging an incremental view appeared to have a positive effect as it enhanced the intrinsic motivation in the classroom. This implies that the students' view about their intelligence is a means towards their achievement goals. It also showed success in cutting short the decline in grades and level of achievement of the students.

It has been over 30 years that Dweck has dedicated to research on how people perceive and evaluate their intellectual abilities, and performances that ultimately affect their achievement motivation. Her studies have revealed that people who consider their intelligence as fixed often experience lower level of achievement in comparison to those who deem that it is malleable and can be changed and improved with effort. Inorder to define what intelligence is, Dweck tried to identify certain types of behaviours which students exhibit and attempted by defining two types of goals. Dweck (1986) defined mastery-oriented behaviour as an adaptive behaviour that is characterized by challenge-seeking and effective persistence in difficult situations. She defined the second type as maladaptive and termed it "helpless" that is characterized by challenge avoidance and low persistence in the face of difficulties. In other words, performance oriented students believe that their intelligence is fixed. Thus, Dweck describes that the pattern emerging from research shows that children's beliefs on intelligence steer them towards these two goals. (Shaughnessy & Moore, 2012).

As such, it can be said that according to the different views students hold about their intelligence, they either orient themselves towards mastery or performance goals which then determines the success and failure of the students in the academic setting. The implicit belief about one's skill would envisage about where the individuals will be oriented to, that is; the development of that skill or towards comparing the proficiency of their ability with others. In short, students orienting themselves to certain type of goals according to the different views they hold about intelligence may be the cause of positive or negative attribution towards their success or failure.

In 1988, Ames & Archer devised a student-report measure to calculate important role and effect of mastery and performance goals in the classroom. They argued that the classroom goal orientation can be understood as a function of perceiving and acting by

the students in response to the classroom environment. In this regard, goal orientation is defined by how the meaning is attached by the individual students to the classroom experiences and the achievement motivation he or she orients to. In addition, it may be mentioned that children differ in a way they construe and react towards the classroom goal structure (Blumenfeld, Pintrinch, Meece, & Wessels, 1982,; Marshall & Weinsten, 1984, 1986; Ryan & Grolnick, 1986, as cited in Ames & Archer, 1988).

The development of different goals of the students within the same classroom may be due to the type of teaching that the teachers bring in the classroom. It may be argued that teachers who pursue learning goals and attempt to develop professional competences often focus on mastery goals in the classroom. As such, they use mastery oriented instructional practices. On the contrary, teachers who endorse performance goals and try to demonstrate superior teaching emphasise on performance oriented instructional practices. Thus, the teachers' goal orientations and their teaching practices highly determine the achievement behaviour of the students in the classroom. It can be assumed that the type of classroom environment created by the teachers and their goal orientation highly effects the motivation of the students (Nitsche et. al.; 2013).

In a classroom situation, the teachers can affect students' motivation depending on whether they emphasize on skill development or ability differences. However, it is also true that the students' perceptions of the goal dimension of the school environment are strongly related to their perceptions of the relationship dimension of the school environment which clearly indicates that features of the classroom environment can influence the goals adopted and pursued by students (Midgley et al., 1996). As such, classroom goal orientation is believed to have some effect on the achievement goals of the students. Infact, the classroom goal orientation has been found as a facilitator

towards the preservation of adaptive motivation patterns in a context where mastery goals are prominent and adopted by the students.

However, it is paradoxical as Urdan (2004) in his argument has stated *"It is possible that students may perceive a culture of competition and social comparison in the classroom that is driven more by student attitudes and behaviours than by the teachers"* (as cited in James & Yates, 2007). Merging with the existing literature on classroom goal structure and students' personal goal orientation, the present research focuses on the classroom goal orientation and how the interaction process affect the link between intrinsic motivation of the students and classroom goal orientations.

Many studies have been conducted on the classroom goal structures and students' achievement goals and attempt has been made to link with different variables such as classroom environment (Roeser et al., 1996), praise on intelligence, motivation process (Ames & Archer, 1988; Mueller & Dweck, 1998, assessment practices (Alkharusi, 2008) etc. However, a common limitation of the previous studies is that they have failed to take into account the teaching strategies of the teachers in the classroom such as promoting interaction. There is one study that has been conducted recently by Ohtani et al., (2013) where they have suggested that the teachers' promoting interaction can have a positive effect on the intrinsic motivation of the students and this can lead them towards the achievement outcome. Therefore, the current research hypothesizes that encouraging interaction between the teachers and the students and among the students will increase the intrinsic motivation of the students in the classroom. In other words, classroom goal orientation will influence the intrinsic motivation of the students through teachers' promoting interaction in the classroom.

There has been an ongoing debate about the adaptiveness of mastery goal or performance goal. Here, mastery goal involves focussing more on effort and performance goal refers to emphasizing more on abilities. It is ironical that the previous researches on achievement goal have focussed mostly on the mastery and performance goal dichotomy depending on the classroom situation that has been provided to them. However, they have focussed very little on the multiple goal contexts in relation to student learning though it cannot be denied that there has been lot of studies on classroom goal structures and its influence on the achievement goal of the students. It may be mentioned that inorder to understand the ways in which the students view the functioning of the whole classroom environment, not merely the goal structures but also the features of the classroom should be examined. In this aspect, we should focus on the teaching strategies of the teachers in the classroom which includes promoting interaction in the classroom.

We live in a society where there is competition in terms of individual's level of achievement that is relative to others and as such they tend to define success and failure in terms of grades or marks instead of the understanding and learning skills which they have developed. In fact, parents and even students view low ability as one of the principal causal factors for failing grades, that is, students fail because they can't do the work (Tollefson, 2000). In short, success is typically defined in terms of performance, and grades represent the most universally accepted indicator of academic performance in educational contexts (Elliot et al., 1998). Thus, success in this competitive educational environment may depend on the goals that students pursue. But it cannot be ignored that the social context in which the individuals live and have experiences in different social as well as academic settings sometimes determine the type of goals they adopt.

The classroom context in which students to a large extent spend time everyday can be the most powerful predictor of achievement behaviours and academic outcomes. As such, promoting interaction has been considered as one of the social climate of classroom that affects students' motivation and achievement which includes teachers encouraging peer interaction among students such as sharing ideas and working together, help-seeking and helps giving. In addition, the mastery goal structure is believed to include a nature of cooperative goal structures, that is, teachers' cooperative educational strategies (promoting interaction) in a classroom (Ohtani et al., 2013).

There have been series of studies on the classroom goal structures, goal orientations and the achievement related behaviours by many researchers and goal theorists. However, there have been some inconsistencies and debates on the studies which they have conducted on the existing literature. There have been series of studies on the classroom goal structures, goal orientations and the achievement related behaviours by many researchers and goal theorists. However, there have been some inconsistencies and debates on the studies which they have conducted on the existing literature. There is no clarity about why students try to succeed in the academic settings and how classroom goal orientation affects the intrinsic motivation of the students. Therefore, the present research tries to examine the mediation effect of promoting interaction between classroom goal orientation and intrinsic motivation of the students.

Most of the studies conducted on classroom goal structure and goal orientation of the students have taken the elementary level and college level of education (e.g. Midgely et al., 1998; Barron et al., 1997; Elliot et al., 1998; Leondari & Gialamas, 2002 etc.). Therefore, this study has taken the secondary school students. The purpose of this study is to extend the work of Ryan & Patrick, 2001; Elliot & Murayama, 2009; Ohtani et al.,

2013 on how the classroom goal orientation influences the intrinsic motivation of the students when it is mediated by teachers' promoting interaction in the classroom.

1.2 Dissertation Overview

The present research is based on the achievement goal theory which was developed by Dweck & Nicholls in the late 1970's and early 1980's (Elliot, 1999). Here, I have mainly focussed on how the classroom goal orientation influences the intrinsic motivation of the students by promoting interaction between teachers and students and students and students. I have conducted the study at the student level only and have not partitioned the student level from the classroom level eventhough these are two different variables. The main purpose of this study is to examine the effect of promoting interaction in terms of classroom goal orientation that increases the learners' intrinsic motivation and achievement goals.

In this chapter the concepts and the theory of achievement goal is introduced and concisely given; and also the different connotations and meanings attached to it are presented. Alongside, the problem of research is also being introduced and the previous studies on classroom goal structures are discussed briefly. As mentioned earlier, the present research is based on the Achievement goal theory which provides a framework for studying the academic achievement of the students at different levels. It is concerned with the understanding of goal orientation and also how it relates to the achievement of the learners. Thus, two goals were identified such as mastery goals and performance goals. Here, mastery goals focus on the personal improvement and development of competence and therefore it is considered to have positive effect on the students' motivation. Performance goals, on the other hand focus on relative ability and competition and thus, it is widely accepted to have a negative effect on students' motivation.

The second chapter includes the theoretical framework which undergirds the research questions and hypotheses related to the effect of different goals students adopt in the classroom contexts on their achievement outcomes. Here, it addresses the influence of classroom goal structures on the type of achievement goals that students adopt and the effect of interaction process on students' intrinsic motivation. It is argued that performance goals are not always maladaptive as some positive results have been found in some studies. It is also argued that the mediating role of the interaction process influence the intrinsic motivation of the students according to the type of achievement goals they adopt in the classroom. The conceptual model that has been developed based on the review of literature will provide a broader understanding and precision to the present research.

The third chapter provides an overview of the empirical study that was conducted. The results obtained from the study and the analyses of the data have been discussed in this chapter. A test was run to see how classroom goal orientation affects the intrinsic motivation of the students through the mediating role of promoting interaction. This study examined (1) how the academic achievement of the students are affected by their classroom goal orientation, (2) the effect of interaction process on students' intrinsic motivation, and (3) the effect of classroom goal orientation on the intrinsic motivation of the students. The correlation between classroom goal orientation and students' intrinsic motivation were investigated for all the students participating in the study and then the effect of classroom goal orientation on the intrinsic motivation through promoting interaction was examined.

The fourth chapter will provide a critical evaluation based on the current study and detailed discussion of the study. It will present how this research is able to contribute and integrate with the existing literature. It will also focus on the limitations of the

current research and questions for future research so that further extension of research on achievement goals can be done.

Chapter 2

Literature Review

2.1 Theoretical Background

The concept of achievement motivation was present at the beginning of psychology, when James (1890) proposed speculation about how achievement strivings are linked to self-evaluation. Infact, this concept has been discussed in scientific psychology for over a century (James, 1890), and systematic empirical and theoretical work commenced over 60 years ago (Hoppe, 1930; Lewin et al., 1944; Murray, 1938, as cited in Elliot, 1999). As such, there were various research studies focussing on achievement relevant issues such as the effect of intentions on perseverance (Ach, 1910) and the effect of increasing difficulty on task performance (Hillgruber, 1912). A decade later, this area of research was solidified by McClelland, Atkinson, and colleagues' (Atkinson, 1957; McClelland, Atkinson, Clark, & Lowell, 1953; McClelland, Clark, Roby, & Atkinson, 1949) work on need for achievement. From that time onward the research on achievement and motivation has been referred to as "the achievement motivation literature' (Dweck & Elliot, 2005). Elliot has defined Achievement motivation as *"The energization and direction of competence-based affect, cognition, and behaviour"* (Elliot, 1999).

Competence may be termed as a multifaceted idea or mental picture developed within an individual. It can be referred to the skills and abilities which a person has developed upto that level where he or she demonstrates effectiveness in his or her transactions with the environment; also, to how successfully a person performs. In Sternberg's definition of Developing Competence, he states that it is *"the ongoing process of the acquisition and consolidation of a set of skills needed for performance in one or more life domains at the journeyman-level or above"* (Sternberg R.J., 2005: pp. 15). Thus, there have been

various psychological constructs used over the years to explain the achievement behaviour of the students in the academic settings and all these constructs have focussed to some degree on competence. However, the construct receiving the most research attention is the achievement goal construct (Dweck & Elliot, 2005).

Achievement goal construct is a form of psychological construct which has been used to explicate and envisage the achievement behaviour in the academic settings such as the classroom. Anderman & Midgley (1997) suggested that achievement behaviour is defined in terms of effort, persistence, choice and performance. As mentioned above, this goal construct and many other constructs (for e.g. the achievement motive construct, the perceived competence construct etc.) focus to some degree on competence. From this perspective, classroom goal construct can be assumed as a form of achievement goal construct for the learners.

Classroom goal structures are often conceptualized as competence-relevant environmental emphasis which are made salient through general classroom practices and the specific messages that teachers communicate to their students (Ames, 1992; Covington & Omelich, 1984; Epstain, 1988; Maehr & Midgely, 1996; as cited in Elliot & Murayama, 2009). In the article by Ke Fengfeng (2008) it has been mentioned, as defined by Johnson et al., (1985) that classroom goal structure is *"the specification of the ways in which students will interact with each other and the teacher to achieve the goal."* Achievement goals are conceptualized as the purpose or cognitive-dynamic focus of the individual's competence-relevant engagement (Dweck & Legget; Elliot & Murayama, 2009). From this observation, it can be presumed that both the achievement goals and classroom goal structures can exert an important influence on students' achievement-relevant outcomes in the classroom.

The achievement goal construct was developed in the mid to late 70s by Dweck, Ames, and Maehr & Nicholls. They conducted research programs at the University of Illinois that focussed on achievement motivation. However, towards the proceeding years, Dweck and Nicholls proffered distinct achievement goal conceptualizations that have been highly influential in this field of research. The series of studies conducted by Dweck and her colleagues demonstrated that children of equal ability respond differently to failure on achievement tasks. It may be argued that some of the children attributed failure to insufficient effort and sustained persistence and performance, while some children attributed failure to lack of ability and showed decrements in persistence and performance, thus avoiding subsequent challenge (Dweck & Elliot, 2005).

The achievement goal approach took shape gradually and originated in the late 1970's and the early 1980's with the initiative of Dweck (1986), Nicholls (1984), and others (Ames, 1984; Maehr, 1984), and within this tradition, achievement goals are commonly defined as the purpose of task engagement (Maehr, 1989) and the specific type of goal adopted is posited to create framework for how individuals interpret, experience and act in their achievement settings (Elliot, 1999). Meece et al., 2006 has pointed out Nicholls' (1984) definition on Achievement goal as *"the distinguishing feature of achievement behaviour is its goal of competence or perception of competence, and ability can be defined in several different ways"*

According to Pekrun et al., (2009), Achievement goals may be termed as competence-relevant aims that individuals strive for in achievement settings. They posited that these goals influence achievement emotions which, in turn influence students' performance attainment. Besides, Harackiewicz & Sansone (1991) have opined that goals can have different effects depending on the characteristic motivational orientation of the individuals (Elliot et al., 1998).

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Achievement goals were posited to interact with confidence in one's ability in predicting achievement-relevant affect, cognition, and behaviour (Dweck & Elliot, 2005). In a study conducted by Dweck & Legget (1988), they have stated that different theories about oneself, by generating different concerns, would orient individuals toward different goals. In fact, it has been accepted that achievement goals play a significant role in determining students' classroom attitudes, attributions, study strategies, and performances (Miller et al., 2010).

In the fourth chapter of "Handbook of competence and motivation", Elliot and Dweck have argued that a person's achievement goal represent his or her purpose for engaging in behaviour in an achievement situation (Elliot and Dweck, 2005). They made an attempt to explain why children of equal ability display divergent responses towards failure. Thus, two types of goals were identified; performance goals (also known as task goals) in which the purpose of behaviour is to demonstrate one's competence (or avoid demonstrating one's incompetence), and mastery goals (also known as learning goals), in which the purpose of behaviour is to develop one's competence and task mastery. It has been found out that these two goals differ in terms of the principle of conduct that is used by the students to judge one's competence. Therefore, the perceptions of competence are central to achievement goal theory (Miller et al., 2010).

Achievement goal constructs were specifically developed to explain achievement motivation and behaviour. As such, this goal construct including mastery and performance goals mirrors a structured system, theory, or schema for approaching, engaging, and evaluating one's performance in the academic setting. It is in this sense that the term goal orientation theory is often used to signify the idea that these goals include a general orientation to the task and a number of related beliefs about purposes, competence, success, ability, effort, mistakes and principles. For example, the model

presented by Dweck & Leggett in 1988 illustrated that the personality variables can influence the motivational processes of an individual which can be produced into a major pattern of cognitive affect and behaviour. Therefore, by judging one's own ability and intelligence, an individual implements certain kind of goals.

Others (e.g., Ames, 1992, in classroom structures) have suggested that goals can be more of contextual factors and the functions related to it, and yet some models (e.g., Nicholls, 1990) assumed that goals are a way of viewing success and thus, the judgements of competence, ability and effort flow from these goals (Pintrinch, 2000). It was Elliot & his colleagues (see Elliot & Church, 1997; Elliot & Harackiewicz, 1996; also see Middleton & Midgely 1997) who suggested that performance goals need to be separated into approach and avoidance performance goals as it was found out that these goals may result in contradictory outcomes, yet all of them are not less adaptive as predicted by a standard goal theory.

2.2 Goal orientation theory:

Achievement goal theory has been developed within a social-cognitive network that mainly focuses on how students perceive success or their performances in the academic setting. Infact, goals provide a framework within which individuals interpret and react to events, and result in different patterns of cognition, affect, and behaviour (Dweck & Leggett, 1988). As such, goal orientation is a type of achievement motivation which the learners construct to achieve their goals which includes mastery goal orientation and performance goal orientation. It refers to the reason why an individual is pursuing a particular achievement task in the academic setting.

However, it has been found that performance goals and mastery goals differ importantly from the task goals that are often operationalized in ways that contain neither striving to

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learn nor challenge-seeking. The impact of learning goals on performance may be seen when a high degree of challenge is present, when a task is personally important, or when the processing of complex material is necessary (Dweck & Grant, 2003). In this context, the classroom goal orientation may be regarded as a facilitator towards the maintenance of adaptive motivation patterns when mastery goals are salient and are adopted by the students (Ames & Archer, 1988). In fact, goal theories of motivation focus on the types of goals individuals pursue in achievement situations (Meece et al., 2006).

Achievement goal theory was developed to understand students' adaptive and maladaptive responses to achievement challenges. According to this theory, students orient themselves towards different types of goals. However, the dominant theoretical approach to orientation of goals in any academic settings may be the one that distinguishes between mastery and performance orientations (Was, 2006). Although the goal theorists (e.g., Ames & Archer, 1988; Dweck, 1986; Nicholls, 1984) have made use of different theoretical frameworks and have used different labels for the goals, they meet on the very idea that mastery goals promote greater educational benefits than performance goals, particularly for those students who often develop self-doubts (Senko et al., 2011).

The goal orientation theory which has been developed some decades ago has surfaced as a significant theoretical standpoint on students' competence behaviour at school. This theory has infact, provided a framework for extensive research on motivational orientations that contributes to students' adaptive and maladaptive patterns of engagement. Also, this theory highlights environmental characteristics that foster these motivational orientations (Midgley, 2002; Pintrich & Schunk, 2002; as cited in Meece et al., 2006; Kaplan & Maehr, 2007). Therefore, one can presume that goal orientation

is important in determining the achievement goal of the students as it guides the intrinsic motivation of the students in responding towards the problems in the academic setting.

Some researchers (e.g., Covington, 2000) maintain that the students retain achievement goals for engaging in competence-based achievement settings which includes academics. In his view, the classroom goal structures influence the amount and quality of student learning and the will to continue learning though at college level it involves more than performance. As such, one can agree and say that achievement goal theory serves as an important lens for analyzing the influence of different classroom structures and school environments on student motivation and learning.

2.3 Mastery and performance goal orientation:

Goal orientations characterize students' approaches to learning. However, the relationship between the mastery and performance goals is complicated, as it is not simply a continuum along which students either want to learn for their own sake or need outside attention to motivate learning. But it is interesting that both mastery goals and performance goals are ways of seeking competence, depending on how students define competence, whether it is according to the absolute standard, that is, seeking mastery or normative standard, that is, seeking to outperform others (Brookhart & Durkin, 2003).

Goal theorists have distinguished two types of approach motivation, that is, mastery and performance goals (Elliot & Conroy, 2004). Thus, it has been assumed that individuals are oriented towards different types of goals. On one hand, they may be motivated to endorse mastery goals; as such, their focus may be towards the development of competencies on the basis of an individual frame of reference. On the other hand, they may be motivated to adapt performance goals, where the focus may be towards the

demonstration of one's abilities in comparison to others (Dweck & Legget, 1988; Elliot, 2005; Schwinger & Pelster, 2011). In this sense, one can say that mastery and performance goals may be regarded as the primary reasons why students engage in academic behaviours (James & Yates, 2007).

Goal orientation theorists posited that mastery goals are associated with positive achievement beliefs that lead to adaptive behaviour which ultimately leads one towards better educational outcomes, whereas performance goals are associated with negative achievement beliefs that can often lead to maladaptive behaviours which includes low task engagement, less persistence, and avoidance of challenging task (e.g. Ames & Archer, 1988; Dweck & Leggett, 1988 etc.).

Achievement goal theorists generally focus on two distinct orientations that students develop towards competence, such as; performance goals which are focused on the demonstration of competence relevant to others, and mastery goals that is focused on the development of competence and task mastery (Ames & Archer, 1988; Dweck & Elliot, 2005). In a mastery goal structure, an emphasis is placed on personal improvement and understanding in the classroom, as Ames & Archer (1988) puts it "*A mastery structure provides a context that can foster a long-term use of learning strategies and a belief that success is related to one's effort*", and in a performance goal structure an emphasis is placed on relative ability and competition in the classroom (Elliot & Murayama, 2009).

Researchers have used different terms like learning goals (Dweck, 1986), task involved goals (Nicholls, 1984) and task-involved learners (Nicholls & Miller, 1984) to describe mastery and performance goal orientation (Was, 2006). It has been assumed that according to the goals they have they behave in the academic settings, especially when

it involves challenging tasks or difficult tasks and taking risks whether they are willing to persist or they get frustrated in the face of failure and attribute success and failure towards the lack of ability.

Mastery goal orientation refers to the purpose of developing competence, performance goals orientation refers to the purpose of demonstrating competence (Ames, 1992a; Dweck, 1986; as cited in Kaplan & Maehr, 2007). According to the theory proposed by Dweck & Leggett (1988), mastery goals are adaptive as they promote effective functioning and performance. In contrast, performance goals can be maladaptive as they give a setback to the individuals when they face failures, and as such they are likely to withdraw effort (Dweck, 1986).

In the society where we live, grades define the ability of the students and this is the reason why most of the children judge their worth as students on the basis of the grades they achieved (Covington, 2000). Good grades get valued with the notion that children have abilities, whereas poor grades imply lack of abilities and that triggers the feeling of worthlessness. Therefore, children orient themselves to either mastery or performance goals. Thus, children at school behave in the academic setting towards the achievement of goals depending on the type of goals that they have adopted. As such, performance goals were assumed to lead towards helpless response pattern upon failure as it implies lack of normative ability; but learning goals were conceived to lead towards mastery response pattern because failure feedback may act as useful information in the process of developing competence (Dweck & Elliot, 2005).

Positive expectancies have been shown to be an important factor in the determination to reach a goal (Ingledew et al., 2005; Locke & Latham, 2002; Wofford et al., 1992; Lounsbury et al., 2005 as cited in Rendall et al., 2009). Thus, this more general

expectation of success can motivate an individual and this may result in achievement of goals (Rendall et al., 2009). In contrast, fear of failure has been described as the motive of avoiding failure in achievement settings as it is associated with shame due to failure. It is also triggered when one is confronted with the possibility of failing at a given task (Elliot, 1997; Atkinson, 1957; Mc Gregor & Elliot, 2005; Murray, 1938, as cited in Belanger et al., 2013). Thus, some of the findings underline the fact that individuals characterized with an obsessive passion seem particularly inclined to seek to avoid failure in order to protect the self.

However, in a study conducted by Dweck & Legget (1988) on "A social cognitive approach to motivation and personality" it has been demonstrated that those who avoid challenge and show impairment when they face difficulty are initially equal in ability to those who seek challenge and show persistence, Infact, even some of the brightest, most skilled individuals exhibit the maladaptive pattern. Moreover, students adopting mastery goals were found to be more interested in the class and students adopting performance goals achieved higher levels of performance. From the theoretical approach that has been widened by Dweck & Leggett it may be inferred that both these goals can lead to important positive outcomes, especially at college levels (Barron et al., 1997).

The different perspectives that include the dichotomous and trichotomous framework on achievement goals which the learners adopt in the academic setting are further discussed below.

2.4 Achievement goal: Different perspectives

2.4.1 Dichotomous framework

Achievement goal theory has emerged as a major new direction in motivational research (Midgley et al., 1998). This theory is concerned with the purposes which the learner adopts for achievement behaviour (Middleton et al., 2004).

Most of the achievement goal theorists focussed their attention on the performance and mastery goal dichotomy, where they categorised the two goals as learning versus performance (Dweck & Elliot 1983), task involved versus ego involved (Nicholls 1984), mastery versus ability focused (Ames 1992a, Ames & Archer 1988), and task focused (Maehr & Midgley 1991) versus ability focused (Meece et al., 2006).

In a study conducted by Roeser et al. (1996) they have suggested that the features of the classroom environment can influence the goals adopted and pursued by students. They have found out that the students adopt either mastery or performance goals depending on the way they perceive the environment. Giving the recognition and special privileges to those students who are found to be more able may undermine other students' perceptions and may be limiting the number of students who feel a sense of success and belonging at school. In this context, the type of environment provided in the classroom plays a central role in determining the achievement goals of the students.

In 1988, Ames & Archer conducted a study on how the motivational processes are related to the salience of mastery and performance goals in the actual classroom settings. In this study they have shown that a mastery goal orientation might foster a way of thinking that is required to maintain student involvement in learning as well as increase the probability that students will pursue tasks that foster increments in learning.

However, when a performance orientation was salient to students, they tended to focus on their ability, judging their ability to be lower and implicate failure due to lack of ability. Although one may expect that high achieving students are more knowledgeable and seemed to be aware of effective learning strategies, their reported use of strategies was dependent on how they perceived the goal emphasis of the class. Thus, it may be mentioned that changing the nature of students' experiences in the classroom may provide a possible way of guiding the achievement goal orientation of the students.

Dweck & Leggett (1988) have argued that a performance goal orientation can be maladaptive, especially for individuals who are lower in perceived competence and doubt their ability because when individuals encounter difficulties in their performances they are likely to interpret negative outcomes as a reflection of their level of ability and may give up rather than taking a risk. However, individuals pursuing mastery goals focus on learning as they want to develop and improve their competence. As such, these individuals seek out challenges and persist at tasks even in the face of difficulty (Elliot et al., 1998).

Some studies have suggested that performance goals can have some positive consequences that complement the positive effects of mastery goals (Elliot et al., 1998). Performance goals do not always have negative effects, even for individuals low in perceived competence. Like mastery goals, even the performance goals can have beneficial effects on performance when individuals are meeting with success. In a study conducted by Barron et al., (1997) students adopting mastery goals were found to be more interested in the class and students adopting performance goals achieved higher levels of performance. Thus, both these goals can lead to important positive outcomes at college levels. Nevertheless, these same goals can predict impaired motivation and performance after setbacks. However, it cannot be denied that both mastery and

performance goals have the potential to enhance intrinsic motivation if they guide people towards task mastery and promote a sense of competence.

In a study conducted on praise on intelligence and students' motivation and its effect on children's achievement behaviour and beliefs, Mueller & Dweck (1998), found out that those children who received praise for their intelligence adopted performance goals and attributed failure to the lack of ability. They judged their intelligence on the basis of their performance, whereas those received praise for their efforts or hard work developed mastery goals and attributed failure due to low effort. In short, they valued learning over performance. It can be presumed that they are less likely to get discouraged when they experience a setback or low performance. On the basis of their study, they have proposed that children should be praised for the process of their work, which would include focussing on the task, using effective strategies, or persisting on challenging problems, rather than for the end product and the ability that produced it.

However, it is also important to examine the feedback context in which the praise is given. From their research they have found that performance goals can promote intrinsic motivation and good performance. Thus, it may be mentioned that performance goals cannot always be maladaptive. Sometimes, it depends on the context and also on the belief that one's worth or the basic competence depends on good performance (Mueller & Dweck, 1998). The study on classroom goals was further extended which proposed a trichotomous framework by Elliot & Harackiewicz (1996), and Elliot & Church (1997).

2.4.2 Trichotomous framework:

In 1996 Elliot and Harackiewicz presented a trichotomous framework of the achievement goal framework which comprised of mastery goal, performance-approach goal and performance-avoidance goal where mastery goal focuses on intra-personal

competence, performance-approach goal focuses on normative competence and performance-avoidance goal focuses on avoiding normative incompetence. It is believed that both mastery and performance-approach goals focussed on attainment of competence and these approach orientations facilitate most favourable task engagement and foster intrinsic motivation. On the contrary, performance-avoidance goal is assumed to focus on avoiding incompetence, and this evokes processes that are incompatible to the nature of intrinsic motivation. Their experimental research showed that it is performance avoidance goals, not performance goals in general that have a negative influence on performance. Also, performance-approach goals promoted intrinsic motivation, where as performance-avoidance goal is portrayed as undermining intrinsic motivation. Failures elicited a performance-avoidance orientation (e.g., repeated failure explicitly signifies incompetence).

In a study conducted by Elliot et al., (2002) on trichotomous achievement goal and intrinsic motivation, they have argued that the divergent effects on intrinsic motivation of the students are the failure to differentiate the performance-approach and performance-avoidance goals. It cannot be denied that performance-avoidance goals have a tendency to undermine the intrinsic motivation of the students. The individuals focussing on the possibility of failure evoke evaluation apprehension in them and this undercuts the desire for following task engagement (Elliot et al., 2002).

In a study conducted by Elliot & Church in 1997, mastery and performance goals were found to have links with the achievement motivation and fear of failure, whereas the performance-approach goal was linked to both achievement motivation and fear of failure. Also, mastery and performance-approach goals were linked to high competence expectancies, where as the performance-avoidance orientation was linked to low competence expectancies. They put forward their argument that mastery goals were

grounded in achievement motivation and high competence expectancies; performance-avoidance goals in fear of failure and low competence expectancies; and performance-approach goals in achievement motivation, fear of failure, and high competence expectancies. They also added that both mastery and performance-avoidance goals are important predictors of intrinsic motivation, where mastery goals exhibit a positive impact and performance-avoidance goals exhibit a negative impact.

Also, there is a study conducted by Elliot et al., (1999) where they have mentioned that mastery-approach goals can be viewed as similar to mastery goals since both are grounded in the need for achievement and focuses on positive possibility. However, they may be different from each other as they focused on extrinsic achievement outcome and can be linked to fear of failure. As uncovered by some previous researchers (Elliot & Church, 1997; Elliot & Harackiewicz, 1996) it was found that performance-approach goals were positively related and performance-avoidance goals were negatively related to academic performance. According to them persistence and effort would be positively related and disorganization would be negatively related to academic performance. As such, they have quoted Entwistle, (1988) as *"Disorganization refers to the learner's difficulty in establishing or maintaining a structured, organized approach to studying."*

The study on achievement goals by Elliot & McGregor (2002) revealed that mastery goals evoked positive processes in the context of achievement and it was found to be consistent with some of the previous findings. They also found that performance-approach goals did not fully have positive effect at the stage of achievement sequence. Also, the result that they obtained for performance-avoidance goals was found to be consistent with the previous research on the trichotomous model. The pursuit of this goal is detrimental for achievement regulation throughout the achievement sequence.

Thus, the performance-avoidance goals have been consistently linked to the undermining of critical outcomes such as intrinsic motivation, exam performance and the retention of exam-related information. As there have been inconsistencies in the result of positive and negative influence of mastery and performance goal orientations a very important area of research would be to investigate the characteristics of the students and the classroom context.

In 2003, Grant & Dweck's research on achievement goals discovered that performance goals and mastery goals depends on how they are operationalized. Conversely, they did not find any evidence about the differences between the two but they have mentioned that they differ importantly from the work or task, as established in past research where they are often operationalized in ways that contain neither striving to learn nor challenge-seeking.

Further research on achievement goals showed that both mastery and performance-approach goals evoked positive processes as they represent approach type of regulation that is increased by challenge appraisals, while performance-avoidance evokes negative processes that undermine performance in most achievement settings (Elliot et al. 2005).

However, the extent to which any student adopts mastery or performance goal orientation depends on how each student constructs the social reality of the classroom for himself or herself (Rosenholtz, & Simpson 1984 as cited in Ames & archer 1988). A focus on why and how personal goals versus classroom goals relate to student outcomes may be more important than the continued debate regarding performance-approach goals, especially given the possibility that the findings for personal goals cannot be directly applied to classroom goal structures (Linnenbrink, 2005).

The classroom goal condition may foster between-group competition, whereas personal goals may foster individual competition (both within one's own group and with individual students in other groups). The study on classroom goals suggests that there may be an underlying trait-like element to personal goals but that the classroom context may also influence the types of goals students adopt. The achievement goal theorists need to be more concerned with the potentially unique effects of personal and classroom goals if there is a need to continue to apply achievement goal theory to classroom contexts (Linnenbrink, 2005).

In 2008, a study was conducted on the effects of classroom assessment practices on students' achievement goals by Hussain Alkharusi where it was found that the class contextual features and teachers' teaching experiences and assessment practices interacted significantly with the students' characteristics in influencing students' achievement goals. From this study it was found that student characteristics such as self-efficacy and class characteristics such as class, gender and class average perceived learning assessment environment provided the best model for explaining differences in mastery goals. Also, it has been found that classes that emphasize on traditional assessments (closed ended test items) might encourage students to pursue performance-avoidance goals, and classroom assessment emphasizing the importance of grades rather than learning. And this in turn might orient students towards the adoption of performance goals. Thus, class characteristics like teaching experience and frequent use of traditional assessments also affects the type of goals that the students adopt in the classroom.

In a study conducted by Nitsche et al. (2013), it was found that the teachers' goal orientations and how their teaching practices influence the students' goal orientations and ultimately effect the motivation of the students. The study provided support for the

assumption that teacher's goal orientations affect the motivation and learning behaviour of the students, but the impact was found to be mediated by the teaching practices provided by the goal structures which the teachers emphasise in the classroom. It may be mentioned that there is a positive relationship between the teachers' goal orientations and the students' goal orientation and the effect on students' intrinsic motivation is mediated by the instructional practices of the teachers.

In a combined study of Elliot & Murayama on the influence of personal achievement goals (2009), they found out that a mastery goal structure was a positive predictor of intrinsic motivation and academic self-concept at the direct effect level, and a performance–approach structure was found as the positive predictor at the indirect effect level. But performance-avoidance goals were found as negative predictors at both direct and indirect outcomes. However, it is not clear how a classroom goal structure can influence the motivation and outcomes without the mediational role of personal achievement goals. Therefore, a study on the influence of classroom goal structure and intrinsic motivation needs further investigation. Also, it is important to identify the role of the mediators in determining the achievement goal of the learners.

The recent study by Ohtani et al., (2013) on the classroom goal structure have suggested that the teacher promoting interaction in the classroom mediates the effect of classroom characteristics (i.e., mastery goal structures) on the students' intrinsic motivation. In his view, since classroom is a social place by nature, instructional strategies that support peer relationships and student interactions are especially important. However, his study showed that performance goal structures did not predict teachers promoting interaction at either the classroom or student levels; but mastery goal structure was partly mediated by teachers promoting interaction and that mastery goal structure was directly related to intrinsic motivation. The effects of the characteristics of mastery goal structures shared

by students in a classroom are mediated by teachers' instructional strategies i.e., promoting interaction. It implies that the regular encouragement from the teachers in the classroom to interact with the peers having the characteristics of mastery goal structures could help the students in increasing the level of intrinsic motivation for learning, especially mathematics.

"Promoting peer interaction is an important teaching strategy that influences students' learning and motivation" (Ohtani et al., 2013)

2.5 Classroom context: promoting interaction

Various researches on classroom goal orientation have shown that students' perceptions of classroom goal structures are predictive of the types of personal goals students adopt in the classroom. It has been shown that classroom goal structures influence student behaviour and learning in shaping the type of personal goals that students adopt (Meece et al., 2006). Students' personal goal orientations correspond with their perceptions of the classroom goal structure and these relations are found even when differences in student characteristics are controlled (Anderman & Midgely, 1997, Roeser et al. 1996; Meece et al. 2006).

In a study conducted on goal structures and teachers' sense of efficacy, it was established that the teachers' sense of efficacy could be used to explain classroom mastery structure. Also, the differences in goal structures were associated with academic level. It may be stated that the motivational constructs associated with classroom mastery framework are a function of both individual differences in teachers, i.e., experience in teaching, as well as variations in the contexts within which teachers work, i.e., academic level (Wolters & Daugherty, 2007).

There was another study conducted on the effects of classroom condition and entering personal goal orientations of the students by Linnenbrink (2005). On her study, the personal performance-approach goals were found to be maladaptive as the classroom condition mainly focused on mastery. As such, she has emphasized the effects of classroom condition and entering personal goal orientations of the students. She has further emphasized on the importance of examining the stable effects of personal goals, based on motives or views of intelligence, as well as the changing nature of personal goal orientations based on the classroom environment.

As mentioned earlier, the recent study on classroom goal structure by Ohtani et al. (2013) revealed that the interactions between students and teachers are significant for students' achievements related behaviour and motivation. They further argued that the teachers' promoting interaction mediated the effects of classroom characteristics in mastery goal structures. In contrast, performance goal structures did not predict teachers' promoting interaction or intrinsic motivation at either the classroom or student levels, but it did not have any negative effect on students' motivation. However, some studies (e.g., Kaplan et al., 2002; Roeser et al., 1996; Ryan et al., 1998) on the promotion of classroom interaction have reported the negative effects of performance goal structures on students' motivation (Ohtani et al., 2013). Thus, the mediation processes of promoting interaction are not totally confirmed in a classroom goal structure with students adopting different goal orientations.

In a study conducted by Ryan & Patrick (2001), a positive relationship was confirmed between the promotion of interaction and the students' academic tasks, teacher support and interaction with peers in the classroom, and the promotion of mutual respect among classmates. According to their first dimension of study, the social environment involving a belief that their teacher cared and supported them was important to the

students. In fact, it helped in building up their confidence in relating to teachers, engaging in more self-regulated learning, and less disruptive behaviour.

The second dimension of the study was concerned with the extent to which students were encouraged to interact with their classmates regarding academic work. Here, the students' perception of being encouraged to interact with each other in the classroom and share their ideas was correlated with the indicators of motivation, such as interest etc. and engagement. However, their findings suggested that the teachers' promoting interactions are not sufficient to help the students feel more confident in engaging with peers, such as explaining their point of view or sharing ideas and working together with classmates. It may be mentioned that further investigation on the mediating role of the interaction process in a classroom goal structure is indispensable. Also, it is important to examine how it effects the motivation of the students with different goal perspective.

In the article on motivation by Tollefson (2000), he has indicated that the teachers can use theories of motivation to analyze their interactions with the students and to develop patterns of interactions with each other that may enhance the students' willingness to expand effort in achievement-related tasks. He has also opined that the explanations teachers construct for student success or failure influence how teachers interact with their students. Infact, the classroom goal structure is predominantly accentuated by teacher behaviour. Moreover, James & Yates (2007) have pointed out that the teachers, who involve students, encourage interactions between students, emphasize effort in task engagement, and show support and concern about student learning are thought to exhibit a high mastery focus. Also, they have put in that the learning context is the primary influence on students' outcome including personal goal orientations.

When students perceive that the difficulty of the work exceeds their abilities, or feel that the teachers do not ask them to take the responsibility for their learning they may lose confidence in their abilities and this may result in withdrawing the effort. Therefore, proper scaffolding on part of the teacher can be effective to learning and motivation as it provide structures for learning goals and accordingly the students internalize and control. Scaffolding is a kind of assistance or guidance given to the learners in the process of learning in times of problems and difficulties.

One may agree and say that the relationship between teachers and students influences classroom climate, for example; attitudes towards learning, norms of social interaction, acceptance of ideas and mistakes, and learning structures set by the teacher in the classroom. This may indicate that students' perceptions of teaching styles and the classroom environment guide how they learn and their attitudes towards school and academics. In addition Urdan & Schoenfelder (2006) have pointed out Wentzel's (1994, 1997) study where he found that these perceptions of positive relationships with their teachers were correlated with their pursuit of pro-social classroom goals such as getting along with others and being socially responsible, and were more strongly linked to student interest in school than perceived support from parents and peers. Also Wentzel (1997) has found that perceived support from the teachers is a positive predictor of effort in school and the pursuit of social responsibility goals, including acting in pro-social ways that encourage peer cooperation.

From the above discussion on the interaction and its effect on goal orientations that the students adopt in the classroom it may be presumed that the students' and teachers' belief about the probability of students' success in school influences teacher-student interactions and this subsequently effects student achievement. In the words of Ryan & Patrick (2001), *"Promoting interaction in the classroom may include students sharing ideas,*

working together, help-seeking or help giving etc. As such, interaction among the students is a critical component of student-centred instructional approaches."

2.6 Classroom goal structures and students' intrinsic motivation

In a review of literature on "Achievement goals and classroom goal structure", Alkharusi H. (2010) has asserted that the classroom contexts that are structured toward challenge are likely to activate need for achievement, which can in turn lead to adoption of mastery and/ or performance-approach goals; whereas classroom contexts that are structured toward threat are likely to activate fear of failure, which can in turn lead to performance-avoidance and/or performance-avoidance goals pursuit. It has been argued by some researchers (Fryer & Elliot, 2007) that people who are high in fear of failure exhibit the greatest amount of change in achievement goals, that is, they might switch from approach to avoidance goals (Alkharusi, 2010).

However, children in the same classroom are treated differently and therefore have different experiences (Ames, 1992). In fact, the classroom environment influences the perceptions and interpretations of the students. As such, Pulkka & Niemivirta (2013) have argued that students' personal achievement goal orientations are often associated with the students' self evaluations about their course related performances. For instance; in Brophy's (1981) analysis of teacher praise, he has argued that praise and reward are equally important but are not evenly distributed. As such, it can be interpreted quite differently by students, as a function of their prior experiences. There is also considerable within-class variability in how students perceived opportunities for making choices, and feedback from the teacher (Marshall & Weinstein, 1982; cited in Ames, 1992).

In this condition, the students might switch from a performance-approach goal to a performance-avoidance goal depending on the positive and negative feedback they get. This is because the perceived competence should determine whether one frames comparisons against others in an approach or avoidance manner (Elliot & Church, 1997). Individuals may start working out with an approach orientation but slip into an avoidance orientation when they encounter difficulties that threaten their demonstration of high ability (Nicholls, 1984 & Dweck, 1986; as cited in Alkharusi, 2010).

Thorkildsen & Nicholls (1998) concluded from their study on motivational orientation of the students that classrooms, like students, have motivational orientations, and that children, regardless of their personal motivational orientation, see school climates as competitive (Tollefson, 2000). Moreover, in the combined work of Elliot, Harackiewicz, & Barron (1998), they discovered that competition enhanced intrinsic interest for achievement-oriented individuals but undermined interest for those low in achievement orientation, relative to the non-competitive condition. However, in a classroom situation where the students' perception of an emphasis on comparison and competition was felt, they expressed less confidence in their ability to relate well to their teacher. It can be argued that competition can be both beneficial and detrimental to performance of the students in the classroom, especially if the competition evokes threat appraisals it is likely that they will pursue performance-avoidance goals (Elliot & Murayama, 2012).

This indicates that the students may be less willing to engage in the task and may become more disruptive when they believe that their performance will be viewed as an indicator of their relative ability. This finding is consistent with Butler's (1995) proposition that students' relationship may be affected adversely by a class performance

focus and are therefore, the evidence that an emphasis on competition has drawbacks for students (Ames, 1992; Dweck & Leggett, 1988; Ryan & Patrick, 2001).

Adding to it, Alkharusi (2010), in his literature review cited a study conducted by Ames & Ames (1984), where she has reported that *"Even children with generally positive self-views have found to become self-punitive when they experience failure in competitive settings (C. Ames, 1978), suggesting that high self-concepts can react negatively to a competitive loss".* It has also been declared by some researchers (e.g., Fryer & Elliot, 2007), that people who are high in fear of failure exhibit the greatest amount of change in achievement goals, and therefore, they might switch from approach to avoidance goals (Alkharusi, 2010).

Fear of failure is an avoidance-based motive disposition in the achievement settings which is followed by shame and it is not merely to do with failure per se but the shame that is accompanied (Elliot & Thrash, 2004). It often determines how the individual defines failure and consequently thinks, feels and even acts in competence based settings. Those who are high in fear of failure develop a feeling of incompetence and make judgements of their own inabilities when they fail to achieve something.

Goals, in conjunction with self-efficacy often mediate the effects of other potentially motivating variables, which may include personality traits, feedback, participation in decision making. It was found by Drach-Zahavy & Erez (2002) that, when a task posed new challenges, with goal difficulty held constant the individual exhibited high performance, but those who were made to view a situation as a threat, focussed on failure and demonstrated low performance (Locke & Latham, 2006). In other words, providing different types of situation makes a difference at the person's performance.

In a study conducted by Tapola & Niemivirta (2008), they proposed that it is the students' situational construal of the environment, and not the environment per se, which are affected by both contextual and dispositional factors that determines the goals which the students choose. As such, they have defined goal orientation as personal tendency to favour and select certain types of goals. A student may have a dispositional tendency to favour one goal over another; however the situational factors can also alter significance of these preferences. However, Urdan (2004) has argued that it is due to the cultural differences that affect the pursuit and consequences of achievement goals and this domain does not seem to have been sufficiently explored and therefore there is a need to examine this area (Alkharusi, 2010).

Many factors contribute towards the students' lack of effort. For e.g. difficult or boring school work, demanding teachers etc. However, lack of interest and absence of academic motivation also sometimes reflect on students' neglect of their studies. Therefore, there is a need to carefully examine the importance of the roles that others, such as parents, teachers and even peers can play in eliciting and shaping the mastery and performance goals of the students. This may help in motivating the children who are less interested or uninterested in the academics (Hidi & Harackiewicz, 2000).

As many teachers validate tasks in the class by stating that there will be an upcoming tests and that there will be a negative consequences for poor classroom performance, the students get threatened and their confident level is effected and as such, they may focus more on negative consequences associated with no learning rather than focussing on positive reasons to learn (Deemer, 2004).

Students' level of confidence also seem to get effected due to fear of failure as it is often believed that the level of confidence which one hold in their abilities may underpin how

they approach problems and tasks. If a person lacks confidence in his/her ability to do a task then there will not be high expectations for the outcome of that task (Rendall et al., 2009). We can argue that the confident level of the students get affected due to fear of failure and this may bring change or difference in their achievement level.

In this type of situation students will switch from performance-approach to performance-avoidance goals depending on the situation like fear of failure and will avoid challenging task. Students' performance goals are affected by the feedback that they receive from the teachers in the classroom. They will switch from performance-approach to performance-avoidance goals if negative feedback is given inspite of the high self-efficacy he or she has.

Some studies have suggested that although achievement goals are found to be stable, there is less stability when students move from one learning environment, such as classroom, grade, or school, to another. This is attuned with a social-cognitive perspective which proposes that with the change in contexts individuals re-evaluate and reconstruct their goals and actions. Some researchers have suggested that the distinction between endorsing approach and avoidance forms of performance goals is largely due to individual differences such as fear of failure (Middleton et al., 2004). Also, a study conducted by Anderman & Midgely in 1997 has highlighted the inconsistencies in the perceived competence across the transition among the students. Thus, this has indicated that many students reorganize their perceptions of competence after the transition, where in some, it increases and in some it decreases.

Some studies have shown that achievement goal is affected by students' beliefs about their ability, effort and task difficulty (Rendall et al., 2009). Optimism (the belief in the

ability to succeed) can be considered a personality trait that leads individual to expect positive outcomes (Lounsbury et al., 2005 as cited in Rendall et al., 2011).

However, a study focussed on the classroom goal structure has shown that when teachers focus on improvement, effort, and learning for intrinsic reasons, students focus on mastery oriented goals, but when teachers focus on grades, ability differences, and outperforming others students are likely to focus on performance oriented goals.

Wentzel (2000), argued that if goals are defined by content, it serves to direct behaviour towards a specific outcome and levels of challenge and goal orientations define specific ways to regulate efforts to achieve. In fact, goals are cognitive representations of what it is that an individual is trying to achieve in a given situation. Thus, a goal content perspective is indispensible for a better understanding of motivation within a given context and the multiple goals that the students try to achieve at school.

It is an accepted fact that a large amount of the classroom time is assigned to assessment-related activities (Mertler, 2003). Therefore, identifying assessment and teaching practices conducive to the adoption of desirable achievement goals becomes crucial (Alkharusi, 2008). It is also true that the achievement level of the students in the academic setting is affected intensely depending on whether the teacher is focussing on grades/marks or the understanding ability of the students. However, the effect of performance goals on intrinsic motivation is reliant on whether the students are attempting to attain a positive outcome or avoid a negative one (Elliot & Rawsthorne, 1999).

It may be argued that the assessment and teaching practices of the teacher that include promoting interaction in the classroom, have a strong impact in determining the type of

goals that students adopt. The goal orientation that teachers bring in the classroom can also have a mediating effect on the achievement goal of the students in the classroom.

As such, there is a need to teach the students to adopt mastery oriented goal so that maladaptive strategies can be targeted as early as possible inorder to establish a positive foundation for future academic development (Kitsantas et al., 2009).

There is also a need to increase students' perceptions of a mastery goal structure in the classrooms in grade level beyond the transition year (Alkharusi, 2010). Furthermore, the study conducted on the students' perception of classroom goals have suggested that the performance-approach and performance-avoidance goals should be incorporated as separate classroom goals due to the differences in their nature (Schwinger & Pelster, 2011).

Ciani et al., (2011), in their study that focused on a self-determinative theory perspective on achievement goals have argued that the need for competence does not have an effect on students' self-determined motivation. They have concluded that those students who understand the importance a class may have on their future or where the interest and fun is involved in a particular class, may be more likely to adopt learning goals and less likely to adopt or be concerned about appearing competent or incompetent. Therefore, inorder to understand the academic goals of the students, it is important to examine the reasons why they take part in the learning process.

Elliot & Sheldon in 1999 presented an integrated model of the conative process. They expressed that all motivated individuals pursue goals, although they differ in the degree to which they are explicitly aware of those goals in daily life. Accordingly, this model focused on the individuals' self-concordance goal-systems, that is, the degree to which the stated goals express enduring interests and values. The integrated model was

represented with a diagrammatic framework based on the concepts of self-determination theory (Deci & Ryan, 1985) that defines goals as self-concordant when they are pursued because of intrinsic motivation. In this sense, goals are said to be integrated with the self. The given figure is the representation of self-integrated versus or non-integrated action.
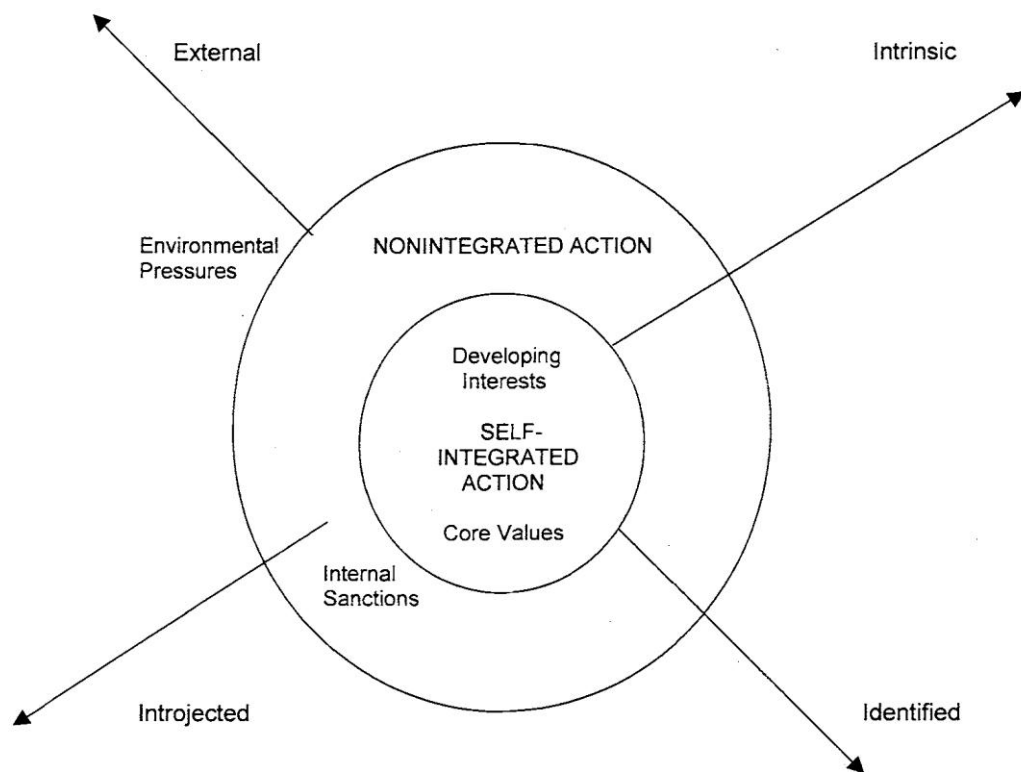
Figure 2. A diagrammatic representation of self-integrated versus nonintegrated action.

Figure 1 An integrative model of Elliot & Sheldon (1999) representing goals as self-concordant when they are pursued due to intrinsic motivation

According to them, goals that appear from self-choices are relatively enduring aspects of personality; self-concordant goals are likely to receive sustained effort over time. In contrast, goals that appear from the outside of the sense of self, the individual may feel himself or herself to be in the grip of forces to which he or she does not give full consent. From their study they found out that both intrinsic motivation (i.e. self-concordant) and extrinsic motivation (i.e. outside force, it may include the environment) have independent influences on the goal orientation of the individuals. However, need satisfaction has been found as an important cause of well-being outcomes.

It is evident from the study conducted on the achievement goals that the achievement goal-performance relationship is more complex than it was expected. Therefore, a full understanding of this important relationship needs additional experimental and field research attending to various features of the achievement task, context, and situation (Elliot et al., 2005). Also, future research should try to develop and validate measures of task-based goal adoption so that this would help in clarifying precisely what effect existing motivational orientations, task structures, and framings have on the goals that student adopts in the academic setting (Belenky & Nokes-Malach, 2013).

2.7 Limitations of the existing literature:

Most of the researches have focused on the multiple goals that students bring in the classroom. However, there is very little research on the relation of multiple goal contexts (with mastery and performance-approach goal structures) to student learning and it is not clear whether students with different personal goals respond to classroom goal contexts in the same way (Linnenbrink & Pintrich, 2001 as cited in Linnenbrink, 2005). It is still not clear whether the most beneficial multiple goals may depend on students' characteristics or on achievement-context's characteristics (Alkharusi, 2010).

There is not much research on the effect of feedback and fear of failure on students' achievement goals. As mentioned earlier the students might have a tendency to switch from performance-approach to performance-avoidance goals depending on the positive or negative feedback he or she gets from the teacher (Elliot & Church, 1997). Thus, it is not clear whether the stability of the goals depend on the fear of failure or the competence feedback (e.g., Ames, 1992; Fryer & Elliot, 2007) that the students get in the classroom from the teachers (Alkharusi, 2010; Ohtani et al., 2013).

There is a need to carefully consider the long-term effects of working in classrooms where there is a combined emphasis on mastery and performance-approach goals, especially in how it shapes students' own goal orientations and how that eventually relates to both socio-emotional and cognitive outcomes. As a consequence of the ongoing research on achievement goal of the students, there is a need that arises to create a classroom based on the principles of mastery, where teachers use varied and meaningful tasks, provide opportunities for students to make choices, guide their own learning and recognize students for learning and improving (Linnenbrink, 2005).

The teaching experiences of the teachers in the classroom and the environment they create highly affects the type of goals that students adopt in the classroom. Therefore, the class contextual features, teachers' teaching experiences and assessment practices interacts significantly with students' characteristics in influencing students' achievement goals (Alkharusi, 2008).

In this aspect, it may be presumed that the positive relationship between teachers' goal orientations and the students' goal orientation do exist and this is mediated by the instructional practices of the teachers. Nevertheless, more research need be done on this

area as there is not much evidence to support this study (Butler & Shibaz, 2008; Retelsdorf et al., 2010 etc.; as cited in Nitsche et al., 2013).

Also, it has been posited that approach and avoidance motivation represent the foundation of several of the basic dimensions of personality that are commonly adopted and that these approach and avoidance motivation serve as a unifying thread, linking different levels and units of personality. However, the approach-avoidance distinction seems to be so conceptually central that it may be used to organize and integrate ostensibly diverse approaches to personality (Emmons, 1995 & Little, 1999 as cited in Elliot & Thrash, 2002).

It is in this sense, necessary to investigate where the achievement motives fit in the hierarchical approach to personality. Like temperaments and goals, motive dispositions may be differentiated in terms of approach and avoidance (need for achievement and fear of failure in the achievement domain) and it may be possible that these motives mediate the links between temperaments and goals (Atkinson, 1958 as cited in Elliot & Thrash, 2002).

It can be argued that till date there has been no research in the achievement goal literature (Greene & Miller, 1996, and Stipek & Gralinski, 1996) that validates a focal study strategy variable as mediator of a direct relationship between achievement goals and academic performance (Elliot et al., 1999). They have not examined the mediators of the impact of theories of intelligence on changes in the achievement level of the students. Also, they failed to explore the motivational changes in the classroom (Blackwell et al., 2007). Little is known about how the mastery- performance goals interact with the teaching strategies to influence the intrinsic motivation of the students. Also, it is not clear how the interaction between the achievement goals and the actual

performance of the students determine the changes in their effort and increase their intrinsic motivation in a classroom (Tanaka, Okuno, & Yamauchi, 2013).

It may be presumed that goal orientations which are based on implicit theories of intelligence may be the root of adaptive or maladaptive patterns. However, there is not much evidence about why students who hold entity view adopt performance goals and those who hold incremental view adopt mastery goals. In addition, the pervious researchers did not examine the mediators of the impact of theories of intelligence on changes in the achievement level of the students. Also, they failed to explore the motivational changes in the classroom (Blackwell et al., 2007).

Previous research has highlighted largely on the maladaptive consequences of holding an entity theory of intelligence and the adaptive consequences of holding an incremental theory (see Dweck & Leggett, 1988, Elliot, 1999). Nevertheless, this research has largely ignored the role of achievement context and how it may conflict with the goals that naturally arise from implicit theories of intelligence (O'Keefe P.A., 2009). They have given less attention to how the individuals psychologically construct their worlds, and how this has an effect on actual behaviour and achievement of the individuals (Dweck & London, 2004; Thompson, 2000 etc. as cited in Blackwell et al., 2007).

Thus, the current research tries to explain the effects that the classroom goal has on the individual student and how the students with different personal goals respond to the classroom goal structure depending on the circumstances like students and teachers' interaction (Ohtani et al., 2013). It may be mentioned that the goal structure which the teachers adopt in the classroom can be presumed as an important factor towards the determination of students' achievement goals. Although personal achievement goal orientations and classroom goal structures are distinct constructs, the present research

suggests that the multiple goal perspective applied to personal goals will help in the extension of achievement level of the students.

2.8 Hypotheses:

From the review of literature and the problems that have been stated, the following hypotheses can be formulated.

Hypothesis 1: Classroom goal orientation will affect the students' intrinsic motivation through teachers' promoting interaction in the classroom.

H 2: the students' intrinsic motivations will be affected by the interactions that take place in the classroom between the teachers and students and among the students in the class.

H 3: Classroom goal orientation will determine the achievement goal of the students

Conceptual Framework:

The present research on classroom goal orientation can be explained through a given model.
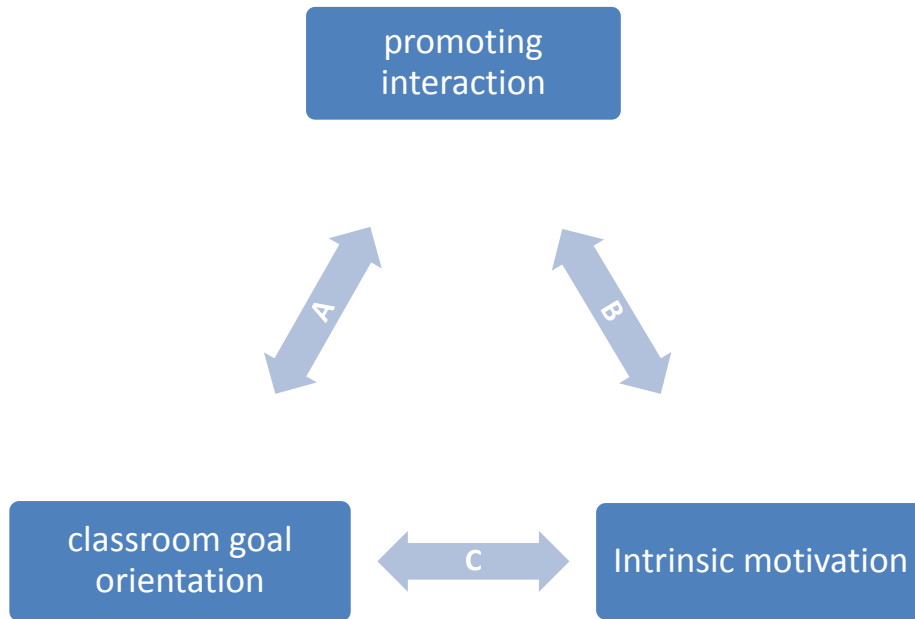
Figure 2 A conceptual framework: Investigating the inter-correlations of the three variables and its effect on one another

In this conceptual framework, classroom goal orientation is an independent variable, intrinsic motivation is dependent variable and the promotion of interaction in the classroom is a mediator. The present research will make an attempt to show how the interaction process plays an important role in the classroom situation where students coming with different goals are being affected by the classroom environment that has been structured by the teacher. This framework has been used in the study at the student level only. Based on a given model, the correlations among these three variables will be analyzed and mediational analysis will be conducted to examine how classroom goal orientation effects the intrinsic motivation of the students through the variable teacher promoting interaction.

Chapter 3

3.1 Study

3.1.1 Overview:

Achievement goal is a mental framework within an individual that determines his or her achievement behaviour in any academic setting. It describes what learners orient to in the process of learning, the instrumental role of what is being learned in particular (Winne & Nesbit, 2010). In order to understand how an individual behaves in the achievement situation, the goal theorists (e.g. Dweck, 1986; Nicholls, 1984) coined the term "Achievement goal theory". It is a framework introduced for understanding the different goals that the students adopt and how it relates to the achievement of an individual. Subsequently, two goals were identified, mastery goal (learning goal) and performance goal (task goal). It appears that the students are open to orient themselves to either of these goals according to the evaluation they make about their own performances in the academic context. It is paradoxical because some studies (see Anderman & Midgely, 1997, Roeser et al. 1996; Meece et al. 2006), suggested that it is the classroom environment that influences the type of achievement goal which the students adopt. One of such environment can be understood in terms of classroom goal orientation. It is defined as how the individual student gives meaning to classroom experiences and what type of motivational orientation they adopt. As argued by Ames & Archer (1988), classroom goal orientation is a function of how the individual students interpret and react to classroom experiences. It is, infact determined by what is actually happening in the classroom.

Many studies have been conducted and attempt has been made to link classroom goal orientation with different variables viz. achievement goals and motivational process,

goals and belongingness, classroom assessment, classroom condition or situation, intrinsic motivation etc. (Ames & Archer, 1988; Roeser et al., 1996; Linnenbrink, 2005; Elliot & Murayama, 2009; Alkharusi, 2010). The present study attempts to examine the relationship between classroom goal orientation and intrinsic motivation. However, it is not known how the classroom goal orientation influences intrinsic motivation of the students. It is hypothesized that the classroom goal orientation influences intrinsic motivation of the students by promoting interaction between students and students as well as between students and teachers.

In the present study, the inter-correlations of classroom goal orientation, students' intrinsic motivation and promoting interaction only in maths class were measured. Drawing upon findings of the previous study (Elliot & Murayama, 2009; Ryan & Patrick, 2001; Ohtani et al., 2013), this study focussed on the intrinsic motivation and the effect of interaction in the classroom among the students and between the students and teachers. I anticipated that classroom goal orientation will determine the achievement goals of the students and the students' intrinsic motivations will be affected by the interaction process in the classroom.

In this research, I focussed particularly on the effect of interaction process in the classroom and investigated the type of achievement goals which the students bring in the academic setting and their intrinsic motivation. As the classroom goal orientation and intrinsic motivation are student level variables, I expected that a positive correlation between the intrinsic motivation and classroom goal orientation would be confirmed. Also, it was anticipated that the interaction process will mediate the effect of classroom goal orientation on the students' intrinsic motivation. I have not partitioned the classroom-level variance, which is mastery and performance goal orientation though

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these are different classroom variables. Finally, I tested the correlation between these three variables and also tested the mediating role of the third variable, which is, promoting interaction.

3.2 METHOD

3.2.1 Location of the study

The current study was conducted on the secondary students of a private catholic school situated in Dimapur, Nagaland. The subjects were in the 8th standard in the age group of 12-14 years. There were 60 students each in every class. The campus of the school is well-maintained and well-organized that makes the environment friendlier and provides more room for interaction and co-operation among the students.

3.2.2 Participants

In this research, I have taken the sample size of 60 students of secondary school from the 8th grade. The students that I have taken for my study were of the age-group of 12-14 years.

3.2.3 Measures

Classroom goal orientation, teachers promoting interaction and intrinsic motivation of the students were assessed with questionnaires. For all these measures, a 5-point scale which ranges from 1 (not at all true) to 5 (very true) was used. Students were asked to think about the math class while answering the given questions as all items were specific to the domain of maths.

Classroom goal orientation: For assessing the classroom goal orientation, 14 items were created based on the Patterns of Adaptive Learning Survey (Midgely et al., 2000). Out of them 7 items assessed mastery goal orientation (sample item: I love mathematics because I learn a new method of solving a problem) or (For me, understanding the formula while doing mathematics is more important rather than memorizing) and 7 items assessed performance goal orientation (sample item: In mathematics class, scoring a high grade is very important for me) or (my teacher often gives more time in the class to those who get good marks in mathematics).

Promoting interaction: To assess teachers promoting classroom interaction eight items based on Ryan and Patrick's scale (2001) was adapted. It consisted of 8 items, such as "In math class, our teacher emphasizes the importance of team work" or "In math class, our teacher says that we learn better if discuss and help each other while solving the problem" etc.

Intrinsic motivation: For the assessment of students' intrinsic motivation for learning mathematics, Elliot and Church's scale (1997) intrinsic motivation scale have been used. For this purpose of study, 12 items were selected. For example; the scale includes item such as "I enjoy this class a lot" or "I think this class is very interesting".

3.2.4 Procedures

In the present study, the subjects were of 8th standard and they belonged to different tribes, cultures and they speak different dialects. It was a private catholic school having a separate building for higher secondary class, that is, 11 and 12. The medium of instruction was English. The school had proper infrastructures and the environment was welcoming which was conducive for an all-round development of the students. There were trees planted and greeneries around the campus which added more to the beauty of

the school. There were separate rooms for libraries, computer, lab, and a playground etc. Entering the schools, the classroom and interacting with the teachers and students was a good experience as it brought out in me the humility and respect for them. It was during the cold winter day and school had not reopened after the winter break. So, when the classes resumed I approached the principal again and he allowed me to conduct the study. The purpose of my study was discussed with the principal of the school and permission was given to carry out my study. To start off, the basic concepts were explained to the students so that they will not have any problem while filling up the form. They were allowed to ask questions in case of any difficulty or confusion. The participants were assured that their identities will not be revealed and that it will be completely confidential. All three variables were specific to mathematics. The students were provided with three different questionnaires and the analysis was done accordingly.

3.3 RESULTS

3.3.1 Mediation and inter-correlations

Based on the conceptual model that was developed at the end of the literature review, a study was conducted to see the mediation effect of promoting interaction in the classroom between the classroom goal orientation and students' intrinsic motivation. The correlation and the mediation were tested for all the three variables to study the inter-correlations. In this study, Pearson's correlation method was used to calculate the coefficient of correlations between these variables and linear regression method was used to test how promoting interaction mediates the effect of classroom goal orientation and students' intrinsic motivation. For testing the mediation, logic provided by Baron &

Kenny (1986) was used. To test the mediation, following three regression equations were used:

Promoting interaction = B1Classroom Goal Orientation

Intrinsic Motivation = B2Classroom Goal Orientation

Intrinsic Motivation = B3Classroom Goal Orientation + B4 Promoting Interaction

Baron & Kenny (1986) observe that in order to establish that the mediation process does exist following four conditions must be satisfied: (1) B1 must be significant, (2) B2 must be significant, (3) B4 must be significant, and (4) B3 must be smaller than B2. If B3 is reduced to a non-significant effect, full mediation is demonstrated. If B3 is reduced, but still significant, then partial mediation is demonstrated.

3.3.2 Preliminary Analysis

The analysis was done to see whether the variables were significantly correlated or not in the classroom situation. The correlation between classroom goal orientation and promoting interaction was examined. Correlation between mediating variable, that is, promoting interaction and the outcome variables, that is, students' intrinsic motivation was also measured. The result obtained showed a positive correlation between classroom goal orientation and promoting interaction which was almost significant (.25). Also, for intrinsic motivation and classroom goal orientation a positive correlation (.56) was found. However, correlation between promoting interaction and intrinsic motivation (.10) as such the reliability of promoting interaction was not fully confirmed. The given table presents results of the final explanatory model of the correlations of the three variables.

Table 1

Correlations among the three variables using Pearson correlation method

Variables	N	Clssrm Goal Orientatn	Promoting interaction	Intrinsic motivation
Clssrm Goal Orientatn	60		.25	.56
Promoting interaction	60			.102
Intrinsic motivation	60			

**p < 0.01

*p < 0.05

Table 1 displays the correlation coefficient for the three variables. Classroom goal orientation has a positive correlation with both the variables. The result from this analysis reported that the classroom goal orientation effects the students' intrinsic motivation. In addition, it is clearly observed from the obtained result that classroom goal orientation is positively significant to intrinsic motivation of the students with a significant correlation (r = .56, p < .01). Also, promoting interaction and classroom goal orientation was almost significant (r = .25, p < .054). However, the correlation between the intrinsic motivation and promoting interaction was not significant.

.3.3 Mediational Analysis:

Linear regression was run to study the mediation effect of promoting interaction between classroom goal orientation and students' intrinsic motivation as suggested by Baron & Kenny (1986). The table given below exhibits the values for classroom goal orientation and students' intrinsic motivation. Conversely, promoting interaction did not confirm the proposed hypothesis as the tested result revealed no significant correlation between promoting interaction and students' intrinsic motivation.

Table 2

Mean, SD of three variables and Unstandardized regression coefficients from three regression equations

Variables	N	Mean	SD	B	Sig.
Clssrm G. Orientatn	60	47.05	8.627	B1= .24 B2 = .59 B3 = .60	.054 .01 .01
Intrinsic motivation	60	44.48	9.118		
Promoting Interaction	60	24.65	8.285	B4= -.045	.722

**p < .01

Mediating effects of promoting interaction - The first step in testing the mediating effects of promoting interaction was to show the effect of classroom goal orientation on

promoting interaction. The significance values shown in table 2 provides initial support for this effect with a regression (r = .25; p < .054). From the first equation it has been observed that classroom goal orientation is almost significant (B1 = .24) to promoting interaction between teachers and students and between students and students.

Second, the regression coefficient of classroom goal orientation on students' intrinsic motivation was calculated. The relationships between these two variables got support from data as it was hypothesized. The results of a regression analysis predicting intrinsic motivation from classroom goal orientation score has been shown in the table 2. The zero-order significant correlation between classroom goal orientation and intrinsic motivation provides initial support for this effect. B2 = .59 (p< .01) shows that classroom goal orientation can predict intrinsic motivation.

Third, the effect of classroom goal orientation and promoting interaction on the intrinsic motivation of the students was addressed. The result obtained B3= .60 (p< .01) and B4 = -.045 (P < .722). This indicates that there is a direct effect of classroom goal orientation on students' intrinsic motivation as the regression analysis displayed a positive significance. On the other hand promoting interaction had a negative effect on students' intrinsic motivation. However, as the value of B3 is not less than that of B2, it can be said that there is no support for mediation effect of promoting interaction between classroom goal orientation and intrinsic motivation of the students (see table 2).

Chapter 4:

Discussion and Conclusion

4.1 Discussions

The purpose of this study was to examine the mediation effect of promoting interaction between classroom goal orientation and students' intrinsic motivation in the academic settings. The main aim was to extend the work of the previous researchers on classroom goal orientation and how it affects the intrinsic motivation of the learners when it is mediated by the interaction process in the classroom. The hypothesis for the mediation effect of promoting interaction between classroom goal orientation and students' intrinsic motivation was not confirmed. The findings from this study indicate that promoting interaction can influence the classroom goal orientation of the students. In addition, classroom goal orientation enhances intrinsic motivation of the students depending on how they perceive the classroom environment that is structured by the teacher. However, the effect of promoting interaction on students' intrinsic motivation was not confirmed. The result of the present study does not support the findings of the previous research as promoting interaction does not mediate the effect of classroom goal orientation on students' intrinsic motivation. (e.g. Ryan & Patrick, 2001; Elliot & Murayama, 2009; Ohtani et al., 2013).

In the present research, a model comprising three variables was proposed and tested in the context of senior secondary classroom. These three variables include the classroom goal orientation, intrinsic motivation and promoting interaction. The results that were obtained provided a strong evidence for one hypothesis, while for the other hypotheses no strong evidences were found. The findings from this study indicate that classroom goal orientation can influence the intrinsic motivation of the students as it is consistent

with the previous studies (Ryan & Patrick, 2001; Elliot & Murayama, 2009; Ohtani et al., 2013). However, little evidence was found that promoting interaction mediates the effect of classroom goal orientation on students' intrinsic motivation since no significance was found between promoting interaction and students' intrinsic motivation. The hypothesized mediation effect of promoting interaction between intrinsic motivation and classroom goal orientation was not confirmed as suggested by the previous researchers.

The results from the direct effect model indicated that classroom goal orientation was a direct positive predictor of promoting interaction, and a direct positive predictor of intrinsic motivation. Each of these results was observed independently of the influence of classroom goal orientation. As suggested by Baron & Kenny (1986), B1 value for classroom goal orientation and students' intrinsic motivation is significant. Also, B2 value for classroom goal orientation and promoting interaction is significant. This pattern of findings is supported by the several studies in the existing literature (see Elliot & Harackiewicz, 1996; Elliot & Murayama, 2009; Elliot et al., 2002; Urdan & Schoenfelder, 2006; James & Yates, 2007). Students' perception of classroom goal orientation in math class is perceived as supportive where there is emphasis on interaction and sharing of ideas in the classroom by the teacher. If teacher focuses more on mastery goal orientation and fosters sharing of opinions among the students and value them, it will assist them for adaptive patterns of motivation and engagement in the classroom (Ryan & Patrick, 2001).

No evidence for mediation was found for maths due to a non-significant promoting interaction effect for intrinsic motivation. The value of B4 for promoting interaction and students' intrinsic motivation is insignificant and the B3 value is slightly greater than B2 value. This indicates that promoting interaction in the classroom does not determine

the increase or decrease of intrinsic motivation of the students in the classroom while learning mathematics. It can be construed that in the classroom emphasizing interaction among the students, it may encourage the students to work together, help them in sharing and discussing their problems which might affect their level of achievement, however, it does not increase the level of intrinsic motivation of the students. The effects of the features of mastery and performance goal structures which are commonly experienced by students in the classroom are not always mediated by the teacher's instructional strategies such as promoting interaction.

The formulated hypothesis that the students' motivation is effected through promoting interaction in the classroom is not confirmed as no significance was found between the students' intrinsic motivation and promoting interaction in the classroom. From the models that have been analysed, it is apparent that only the first two conditions outlined by Baron & Kenny (1986) are met since the result for the first two regressions for classroom goal orientation on promoting interaction as well as intrinsic motivation had a positive significance. However, it did not yield any significance for promoting interaction on students' intrinsic motivation which clearly indicates that promoting interaction do not have a mediating effect between classroom goal orientation and students' intrinsic motivation in a classroom. Also, in the third equation the B3 value of the classroom goal orientation is not smaller than the B2 value of the classroom goal orientation from the second equation which indicates that there is no mediation effect of promoting interaction between classroom goal orientation and students' intrinsic motivation.

4.2 Integrating the results with the existing literature

The present research was designed to further an integrative development of classroom goal orientation effect on the students' intrinsic motivation, cognition and behaviour by incorporating the interaction process into the mastery and performance goals motivation. Hypotheses were generated for these three variables, and the results provided strong support for classroom goal orientation and students' intrinsic motivation, but it did not provide any support for promoting interaction and the intrinsic motivation of the students. Both in the preliminary analysis and mediational analysis, it demonstrated that the interaction process cannot be construed as a mediator of the relationship between classroom goal orientation and students' intrinsic motivation.

The finding from this study did not lend empirical support to the previous findings of Ryan & Patrick (2001), Ohtani et al. (2013). Their findings have revealed that teachers' promoting interaction associates with the intrinsic motivation of the students. Promoting interaction was found to be less sufficient to help students feel confident in engaging with peers and academic tasks. One reason could be that, in a classroom situation the teachers may be reluctant to allow the students to talk with each other during the academic work as it becomes difficult for them to manage the class (for e.g. this may encourage the students to be off-task and disruptive. It cannot be ignored that the factors outside the classrooms are more important in influencing the relationship with peers than the classroom interaction (Ryan & Patrick, 2001).

The present study does not support the recent findings and suggestions of Ohtani et al., (2013) that the effects of classroom goal orientation on the students' intrinsic motivation is mediated by promoting interaction in the classroom.

According to the findings from the previous researcher (Ryan & Patrick, 2001), the regular encouragement from the teachers in the classroom to share and discuss the problems relating to their academics among the students can help in motivating them in learning their subjects, especially mathematics. The constant encouragement from the teacher develops a sense of belongingness within the learners and this increases the level of intrinsic motivation and thus affects the achievement level of the learners. However, improper application of the same may perceive the classroom goal messages differently, and the effects of perceived classroom goal structures on motivational and achievement outcomes differs for different students (Urdan, 1999). Urdan (2004a) and Wolters (2004) suggested that there is a greater variety in students' perceptions of the classroom goal structure within the same classroom than there is between different classrooms. From this perspective, it is quite feasible that students' personal goal orientations can affect the goal messages which they perceive in the learning environment. (Urdan & Schoenfelder, 2006).

When students perceive the classroom as emphasizing learning and understanding they also perceived that the teachers are concerned about their wellbeing. It infact, develops the sense of belongingness among them and makes learning more friendly and easy. In this type of environment the students will adopt mastery goal orientations. Whereas, in the environment where students perceive that the teachers give recognition to the abled or talented students, they presume that the student-teacher relationship is not welcoming and based on less concerned. In this condition, students adopt performance goal orientations (Roeser et al., 1996). This implies that there is a need to do further research on the student-teacher relationships at school as this relates to the feeling of belongingness which ultimately affects the achievement goals of the students.

There is a possibility that the interaction process can affect the interest and motivation of the students according to the classroom context where the students have been situated. Besides, it cannot be denied that in the classroom environment where there is more interaction among the students, there is less room for comparison and more room for cooperation. This gives an encouragement to them and would help them in reducing fear of failure which might be harboring within them. Elliot and Church (1997), have suggested that reducing fear of failure would not only drop the prevalence of performance-avoidance goal adoption, but also purify performance-approach regulation (performance-approach goals would then be undergirded by achievement motivation alone, "uncontaminated" by fear of failure). In this sense, interaction process should be encouraged in the classroom.

It may be added that the classroom features and the instructional practices of the teachers should allow students to play effective role inorder that they contribute equally towards teaching and learning in the classroom (Ohtani et al., 2013). Nonetheless, the level of perception differs from student to student. As such, schools should provide children with interactive and encouraging environment where there are opportunities for shared ideas or knowledge as this may help in developing intellectual capacity and competence. At this time of schooling, the teachers and the parents as well emphasize more on relative ability and social comparison in learning situations (Roeser et al., 1996).

It is the teachers who structure their classrooms to maximise task involvement. Consequently, this may either enhance the intrinsic motivation or demotivate the students in the classroom depending on the type of environment provided by the teacher in the classroom. Therefore, focussing on both the classroom and personal goals

becomes mandatory as this influences the intrinsic motivation of the students (Elliot & Murayama, 2009).

4.3 Limitations and questions for future research

The limitations of this research have been underlined. To mention a few; first limitation of this research is that I have not separated the mastery and performance goals eventhough these are two different class variables. Given the small sample size of 60, regarding the classroom environment that children experience, only the reasons about why children exhibit different achievement behaviour in the same classroom situation can be speculated. However, future research can take this into consideration. Also, it is important to look into the link between the implicit views of the students about intelligence and their achievement motivation. As suggested by Leondari & Gialamas (2002), the students orient themselves with either mastery or performance goals according to the views they hold about intelligence. Dweck & Leggett (1988), have correctly defined *"A consistent predictor of children's goal orientation is their theory of intelligence"* (as cited in Leondari & Gialamas, 2002).As such, further study need to be conducted on this area.

Though many studies have been conducted on the achievement goals and the goal orientation of the students, yet there are inconsistencies in the results. Some researchers have found that mastery goals have positive impact while performance goals have negative impact (e.g. Dweck & Leggett, 1988; Dweck & Elliot, 2005 etc.). But there are other researchers who have proposed that performance goals are not always maladaptive towards the achievement goal of the students (e.g., Elliot et al., 1998; Grant & Dweck, 2003). However, it is not clear how the mastery- performance goals interact with the teaching strategies to influence the intrinsic motivation of the students (Elliot et al.,

1999). Therefore, it is important to examine the link between these variables and how these determine the academic performance of the students.

The second limitation is that I have taken classroom goal orientation as an independent variable in my study. Infact, most of these researchers have taken goal orientation as an independent variable in their study and tried to link them with other variables. However, the most important area to consider is to look at the classroom goal orientation as a mediating variable and see how it affects the relationship between the teaching strategies of the teachers, particularly the assessment practices of the teachers and the achievement goal of the students at the academic setting.

Dweck's model does not propose that the achievement behaviour of the individuals is directly determined by his/her implicit theory of intelligence but this relationship is mediated by their goal orientation. Nevertheless, these goal orientations are determined by the learning structure or school, the environment which may include the perception of the classroom context and the meanings students attach to it from their classroom experiences (Dupeyrat C. & Marine C., 2005). It can be posited that the level of cognitive engagement of the students in the academic setting is mediated by the goal orientation which ultimately affects the achievement goal of the students. Therefore, an important area of research will be to look into the goal orientation of the individuals as a mediating variable and how it affects the achievement goal of the students.

The third limitation of this research is that the mediating variable, that is; promoting interaction, did not show strong effect on the intrinsic motivation of the students. In the present research, the hypothesis that promoting interaction will have an impact on students' intrinsic motivation was not confirmed as suggested by the previous researchers. However, the correlation between classroom goal orientation and the

students' intrinsic motivation was confirmed. For this reason, it is necessary for the future research to identify the mediating variable and the role that it plays in determining a strong relationship between these two variables, that is, classroom goal orientation and intrinsic motivation. Also it is important to examine how the mediator affects the achievement goal of the students.

Emphasizing on the interaction process among the students in the classroom becomes mandatory. However, it is necessary that the teachers emphasize both performance goals and mastery goals upto some extent so that they would know precisely what balance of mastery and performance goals should exist in the classroom. Deemer (2004) argues that there is a need for the teachers to know which one to emphasize and when. It is important that we identify the behavioural feature of the students and try to relate them to some psychological processes such as personality and students' intrinsic motivation through the inclusion of mediating variable (Dweck & Leggett, 1988).

It is necessary to develop a proper link between the classroom goal orientation and the intrinsic motivation of the students and bridge a gap by including the mediating variables such as interaction process so that the children develop a feeling of belongingness. This will help the children towards the formation of optimistic attitude in the academic setting and enhance learning through the support and encouragement of the peers and teachers.

However, as discussed in the literature review, the achievement goals of the students are affected by positive or negative feedback and fear of failure. As failure is always accompanied by shame, the students get discouraged and their confidence level is affected; as a result, this increases the fear of facing difficult problems relating to academics when they get negative feedback from the teachers and parents (see Elliot &

Church, 1997; Elliot & Thrash, 2004; Deemer, 2004; Rendall et al., 2009). In other words, receiving negative feedback becomes like a threat to the students and therefore, it is critical to academic achievement of the children. This will trigger a negative attitude and may affect the achievement goals of the students. Major care has to be taken while giving feedback to the students in the classroom as it can have both positive and negative effect and they may orient towards performance-avoidance goals.

In this regard, the task teachers select, the feedback they provide to students and the evaluation systems which the teachers employ must highlight the engagement in learning and improving and not of performance per se that is in comparison to others (Tollefson, 2000). Infact, the type of environment that the teachers create or provide in the classroom contributes more in the academic setting of the child. It may be stated that the teacher has a greater responsibility in deciding what type of goal the children might orient to, such as mastery goals and performance goals in the classroom.

From the assumptions that have been made based on the review of literature, it is evident that the way students interpret the classroom environment is affected by the teacher's assessment practices at any levels of education. This may refer to the way students perceive the assessment practices that is being carried out by the teachers in the classroom. Accordingly, the students build their own connotation of the classroom teaching and evaluation process that is practiced by the teachers (Alkharusi, 2010). We can concur on this notion that the assessment practices of the teachers influence the students in the classroom to develop their perceptions of different goal orientation which can either be comparative goals called the performance goals or competence development goals called the mastery goals.

In this context, teachers have a greater role to play in classroom learning because their conduct in the class determines the students' achievement goals. The students may have the abilities but may not be motivated and in this type of situation the teachers should intervene. Not all students are positively motivated in the classroom, especially at the college level (Barron et al., 1997). As the teaching strategies of the teachers and its influence on the students' achievement goals have not been investigated in this research, future researchers need to focus on this aspect. The teaching strategies that include classroom observations, feedback, the assessment practices and lesson plan of the teachers etc. need to be examined further as all these contribute to the goal orientation of the students (Alkharusi, 2008).

As mentioned in the literature review that the teachers' goal orientations often determine the academic performance of the students. There are research evidences that the instructional practices of the teachers often act as a mediator between teachers' goal orientation and students' intrinsic motivation. However, it has not been much explored, and therefore more research needs to be done to inorder to give weightage to the study and suggestions of the previous researchers (Butler & Shibaz, 2008; Retelsdorf et al., 2010 etc.; as cited in Nitsche et al., 2013).

4.4 Contributions

The present research contributes to the current ongoing research in the area on the link between classroom goal orientation and intrinsic motivation of the students. It also contributes to the motivation and the effect of classroom environment by addressing the individual differences in different aspects, especially how the students perceive the classroom goal environment and how it influences them in developing personal goal orientations in the academic settings. Furthermore, it has posed challenges to the future

researchers to examine the link between the classroom goal orientation and intrinsic motivation of the students by identifying a mediating variable between these two variables.

This research has thrown light on the importance of linking the assessment practices of the teachers in the classroom with the achievement goal of the students with classroom goal orientation as a mediating variable. In fact, it has stressed on the importance of further investigation on the teaching strategies which include assessment practices of the teachers and identifying the mediating variable between the teachers' assessment practices and achievement goal of the students.

The type of social environment provided in the classroom influence the individuals and this determines the goal orientation of the students. When the social needs of the individuals are met such as, interpersonal attachments and sense of belongingness they tend to develop positive feeling of social and emotional stability. As such, they may orient learning or mastery goals (Wentzel, 2000). Taking this into account, the students' social and emotional needs should be considered so that the maladaptive motivational orientations towards learning can be intervened. Previous research on classroom goal structures has focused mostly on how students perceive their performances in the achievement settings, rather than on the achievement context itself (Elliot & Murayama, 2009). Therefore, this research has focussed on the aspect of classroom environment that determine the achievement goal of the students.

Though this study has some limitations, it has highlighted on the different aspects of classroom that affect the students' intrinsic motivation. One such aspect includes the assessment practice of the teacher in the classroom that affect the intrinsic motivation of the students. In order to further examine the causes of differences in students'

perceptions, we need to have knowledge about classroom goal structures, teacher practices and students' overt behaviour. However, both are needed to build a more comprehensive view on the interaction between a person and a context (Tapola & Niemivirta, 2008).

4.5 Conclusion:

To conclude, in a secondary school the teachers stress on both mastery and performance goals and accordingly the students orient to different types of goals which ultimately affect the intrinsic motivation of the students. The classroom environment has a high influence on the students in determining their achievement goals. As such, the teaching strategies of the teachers in the classroom, especially, their assessment practices need to be taken into consideration because it is one of the aspects of classroom environment that influences the students' achievement goal. Nevertheless, it cannot be denied that the classroom context alone does not contribute towards the achievement related behaviour and outcomes.

We should also focus on the motivation (both intrinsic and extrinsic) of the students considering the individual differences because it affects the achievement outcome of the students. The teacher in the classroom should be aware of both personal and contextual factors that might affect students' perceptions of the teaching practices as these perceptions may further influence motivation and learning of the students (Pulkka & Niemivirta, 2013). Besides, it is important to broaden our understanding about how the teachers can create more interactive classroom environment which will make learning more meaningful and effective (Ryan & Patrick, 2001). The students in the classroom may not orient themselves or even perceive to any type of achievement goals (Yperen, 2006). In this regard, teachers can promote learning or mastery goals as it is believed to

have more positive impact on the academic achievement of the students (Tollefson, 2000).

The instructional practices of the teacher and the motivational climate of the classrooms created by the teacher can determine the achievement goal of the students. This classroom context interacts with the students' perception and their personal goals which further affects their achievement outcomes (Pintrich, 2003). Having a goal is favourable but it needs to fit in with students' self-belief but it can be fostered through teachers' encouragement (Rendall et al., 2011). Therefore, the teachers in the classroom should be conscious of both personal and contextual factors that affect students' perceptions of the classroom environment created by them as these perceptions may have a high influence on students' motivation and learning. This will contribute more towards the enhancement of intrinsic motivation of the students and this will determine their achievement outcome in academic settings.

In conclusion, Achievement goal researchers and theorists have been largely dependent on the performance and mastery goals dichotomy trying to explain the achievement behaviour of the students in the academic settings. Infact, many years have been spent by goal theorists such as Dweck in an attempt to research various aspects of academic performances and experiences of the students in the classroom and how these determine their achievement in the academic settings. Her broad research on achievement goal shows that people who deem that their intelligence is a fixed entity will experience lower achievement than those who believe that their intelligence can be changed or improved with some efforts. However, educators can play an effective role by improving their teaching strategies and in this way help in increasing the students' achievement based on Dweck's research. Hence, the teachers in the classroom need to emphasise more on effort and in this way the students might be motivated to learn and

this may ultimately enhance their academic achievement (Shaughnessy & Moore, 2012).

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Appendix 1: Consent form

CONSENT FORM FOR RESEARCH

Thank you for considering participation in this study.

Purpose of the study: This study examines how the classroom environment influences the achievement behaviour of the students. It also focuses on how the intrinsic motivation of the students gets effected by the classroom environment depending on the circumstances like students and teachers interaction and also among the students.

Procedures of the study: A set of questions will be provided to you. The questions ask 1) your basic information which includes your name, school, age and educational qualification. 2) Your opinion about learning mathematics. 3) Your opinion about how you get motivated depending on your performances in the classroom and also through teachers promoting interaction.

Confidentiality: I assure you that any information provided by you will be used only for the purpose of this research and it will remain confidential. Your participation will be highly appreciated.

Participation is your choice: You may choose to take part in the survey or you may choose not to. Skipping a question effectively ends your participation in this study. You

may ask or discuss anything with me relating to the questions being asked. Give your

own honest answers and please do not ask or discuss with your friends.

Participant's conformity: If you consent to participate in this study, please specify

your name below and show your consent.

Name:

School:

Age:

Educational qualification:

Date:

Appendix 2: Classroom goal orientation questionnaire

Read each sentence below and put a circle on the number which you think is most suitable for you. There are no right or wrong answers.

Please circle the number that best describes what you think

Not at all true	NT	1
Slightly true	ST	2
Moderately true	MT	3
Almost true	AT	4
Very true	VT	5

1) One of my goals in class is to learn as much as I can.

    1   **2**   **3**   **4**   **5**

    NT   ST   MT   AT   VT

2) I'm certain I can master the skills taught in class this year.

    1   **2**   **3**   **4**   **5**

    NT   ST   MT   AT   VT

3) I love mathematics because I learn a new method of solving a problem.

1	2	3	4	5
NT	ST	MT	AT	VT

4) For me, understanding the formula while doing mathematics is more important rather than memorizing it

1	2	3	4	5
NT	ST	MT	AT	VT

5) I like doing maths because it really makes me think

1	2	3	4	5
NT	ST	MT	AT	VT

6) I would feel really good if I was the only one who could answer the teacher's questions in class.

1	2	3	4	5
NT	ST	MT	AT	VT

7) I would feel successful in class if I did better than most of the other students.

1	**2**	**3**	**4**	**5**
NT	ST	MT	AT	VT

8) I would prefer to do class work that is familiar to me, rather than work I would

have to learn how to do.

1	**2**	**3**	**4**	**5**
NT	ST	MT	AT	VT

9) One of my goals is to show others that I'm good at my class work.

1	**2**	**3**	**4**	**5**
NT	ST	MT	AT	VT

10) I prefer to do work as I have always done it, rather than trying something new.

1	**2**	**3**	**4**	**5**
NT	ST	MT	AT	VT

11) Some students prepare at night before a test/exam, and if they don't do well, they often say that is the reason. How true is this of you?

1	**2**	**3**	**4**	**5**
NT	ST	MT	AT	VT

12) My chances of succeeding later in life don't depend on getting good marks or grades in school.

1	**2**	**3**	**4**	**5**
NT	ST	MT	AT	VT

13) When I'm working out a problem, I keep on thinking and try until I really understand.

1	**2**	**3**	**4**	**5**
NT	ST	MT	AT	VT

14) I sometimes copy answers from other students during tests.

1	**2**	**3**	**4**	**5**
NT	ST	MT	AT	VT

Appendix 3: Intrinsic Motivation Questionnaire

Please fill in the questionnaires below by putting the circle against the appropriate ones

Not at all true	NT	1
Slightly true	ST	2
Moderately true	MT	3
Almost true	AT	4
Very true	VT	5

1. My goal in this class is to get a better grade than most of the students

   1   **2**   **3**   **4**   **5**

   NT   ST   MT   AT   VT

2. I am motivated by the thought of outperforming my peers in this class

   1   **2**   **3**   **4**   **5**

   NT   ST   MT   AT   VT

3. It is important to me to do well in the class as compared to others

   1   **2**   **3**   **4**   **5**

   NT   ST   MT   AT   VT

4. I worry about the possibility of getting a bad grade in the class

    1   **2**   **3**   **4**   **5**

    NT   ST   MT   AT   VT

5. I desire to completely master the material presented in the class

    1   **2**   **3**   **4**   **5**

    NT   ST   MT   AT   VT

6. My fear of performing poorly in this class is often what motivates me.

    1   **2**   **3**   **4**   **5**

    NT   ST   MT   AT   VT

7. I just want to avoid doing poorly in this class

    1   **2**   **3**   **4**   **5**

    NT   ST   MT   AT   VT

8. I want to learn as much as possible from this class

    1   **2**   **3**   **4**   **5**

    NT   ST   MT   AT   VT

9. It is important for me to understand the content of this course as thoroughly as possible

1	2	3	4	5
NT	ST	MT	AT	VT

10. I often think to myself, "what if I do badly in this class?"

1	2	3	4	5
NT	ST	MT	AT	VT

11. I want to do well in the class to show my ability to my families, friends, teachers and others.

1	2	3	4	5
NT	ST	MT	AT	VT

12. I hope to have gained a broader and deeper knowledge and understanding of the subjects when I am done with this class.

1	2	3	4	5
NT	ST	MT	AT	VT

Appendix 4: Promoting Interaction Questionnaire

Kindly fill in the questionnaires by putting a circle against the number which you think

is most appropriate

Not at all true	NT	1
Slightly true	ST	2
Moderately true	MT	3
Almost true	AT	4
Very true	VT	5

1. My math teacher allows us to discuss our work with classmates.

   1　　　　**2**　　　　**3**　　　　**4**　　　　**5**

   NT　　　　ST　　　　MT　　　　AT　　　　VT

2. In math class our teacher lets us ask other students when we need help.

   1　　　　**2**　　　　**3**　　　　**4**　　　　**5**

   NT　　　　ST　　　　MT　　　　AT　　　　VT

3. Our teacher encourages us to share ideas with one another in the class.

   1　　　　**2**　　　　**3**　　　　**4**　　　　**5**

   NT　　　　ST　　　　MT　　　　AT　　　　VT

4. In the class our teacher encourages us to have proper interaction with one another.

1	**2**	**3**	**4**	**5**
NT	ST	MT	AT	VT

5. In math class, our teacher says that we learn better if we discuss and help each other while solving the problem.

1	**2**	**3**	**4**	**5**
NT	ST	MT	AT	VT

6. In the class our teacher emphasized that we need to help our friends when we know the answers.

1	**2**	**3**	**4**	**5**
NT	ST	MT	AT	VT

7. In math class, we often work out problems together.

1	**2**	**3**	**4**	**5**
NT	ST	MT	AT	VT

8. We are often told by our teacher that if we have a problem in math class we can just talk to someone about it or ask him.

1	2	3	4	5
NT	ST	MT	AT	VT