NAZMİYE GÜR

# AN OBSERVATIONAL STUDY: INVESTIGATING THE RELATIONSHIP AMONG ACHIEVEMENT GOAL STRUCTURES, STUDENTS' PERSONAL CHARACTERISTICS, MOTIVATION AND ENGAGEMENT

A MASTER'S THESIS

BY

NAZMİYE GÜR

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# An Observational Study: Investigating the Relationship among Achievement Goal Structures, Students' Personal Characteristics, Motivation and Engagement

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Nazmiye Gür

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I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Curriculum and Instruction.

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Asst. Prof. Dr. Aikaterini Michou (Supervisor)

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Curriculum and Instruction.

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Asst. Prof. Dr. Armağan Ateşkan (Examining Committee Member)

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Curriculum and Instruction.

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Asst. Prof. Dr. Sibel Telli (Examining Committee Member)

Çanakkale Onsekiz Mart University

Approval of the Graduate School of Education

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Prof. Dr. Alipaşa Ayas (Director)

ABSTRACT

AN OBSERVATIONAL STUDY: INVESTIGATING THE RELATIONSHIP AMONG ACHIEVEMENT GOAL STRUCTURES, STUDENTS' PERSONAL CHARACTERISTICS, MOTIVATION AND ENGAGEMENT

Nazmiye Gür

M.A., Program of Curriculum and Instruction

Supervisor: Asst. Prof. Dr. Aikaterini Michou

May 2017

The present study aimed to investigate the relationship among teacher promoted achievement goal structures (mastery and performance-approach goal structures), students' dispositional achievement motives (need for achievement and fear of failure), student motivation (achievement goals) and engagement in specific class sessions. While dispositional achievement motives and achievement goals were measured through only the students' self-reports, promoted achievement goal structures and student engagement were measured assessed by students, teachers and additionally by external observers. The study was conducted in a public Anatolian high school in Ankara, Turkey with the participation of 310 students and 10 teachers. Two trained observers carried out the observations of 10 different classes.

The results of the regression and Bootstrap analyses revealed that the student perceived mastery goal structures had a positive indirect effect on all aspects of engagement through mastery-approach goal endorsement (i.e., the goal to learn and improve). The results also showed that fear of failure had a negative relation to engagement through low mastery-approach goal endorsement. Performance goal structures, on the other hand, failed to predict any aspect of student engagement. However, the endorsed performance-approach goals weakly predicted engagement showing that the goal to outperform others could weakly support students' engagement. The results revealed the equal importance of contextual and personal factors in relation to student motivation and engagement.

Furthermore, the teachers overestimated their promotion of achievement goal structures and student engagement in comparison to students' and observers' evaluation. Although student evaluations regarding these variables were higher than that of the observers, a MANOVA showed that students in classes with high mastery goal structures according to the observers tended to engage with the lesson and endorse mastery-approach goals more compared to the students in classes with low and average mastery goal structures. Overall, instructional behaviors such as supporting learning and self-based evaluation was indicated to be promoting good quality of student motivation, which in turn predicts student engagement with the lesson.

Key words: need for achievement, fear of failure, mastery goal structures, performance goal structures, mastery-approach goals, performance-approach goals, student engagement.

# ÖZET

## GÖZLEMSEL BİR ÇALIŞMA: HEDEF YAPILARI, ÖĞRENCİLERİN KİŞİSEL ÖZELLİKLERİ, ÖĞRENCİ MOTİVASYONU VE KATILIMI ARASINDAKİ İLİŞKİNİN İNCELENMESİ

Nazmiye Gür

Yüksek Lisans, Eğitim Programları ve Öğretim

Yrd, Doç. Dr. Aikaterini Michou

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Bu çalışma belirli bir ders içerisinde öğretmenin desteklediği hedef yapıları (ustalık ve performans hedef yapıları), öğrencilerin başarı güdüsü (başarıya motive olmak ve başarısızlık korkusu), öğrenci motivasyonu (başarı hedefleri) ve katılımı arasındaki ilişkiyi araştırmayı hedeflemiştir. Bireysel başarı güdüleri ve başarı hedefleri sadece öğrenciler tarafından doldurulan anketlerle ölçülürken, desteklenen hedef yapıları ve öğrenci katılımı, öğrenciler, öğretmenler ve harici gözetmenler tarafından değerlendirilmiştir. Harici iki gözlemci, 10 farklı sınıfta söz konusu ders gözlemlerini yürütmüştür. Araştırma Ankara, Türkiye'deki bir devlet Anadolu lisesinden 310 öğrencinin katılımıyla gerçekleştirilmiştir.

Regresyon ve Bootstrap analizleri sonucunda öğrencilerin ustalık hedefleri (öğrenme ve gelişme hedefleri) aracılığı ile ustalık hedef yapılarının öğrenci katılımının bütün boyutlarına pozitif yordadığı bulunmuştur. Performans hedef yapısının ve başarısızlık korkusunun da negatif etkisi olduğu bulunmuştur. Öte yandan performans hedef yapıları hiçbir öğrenci katılımı boyutuyla ilişkilendirilememiştir. Ancak performans hedefleri zayıf şekilde genel öğrenci katılımı ve aracı katılım ile ilişkilendirilmiştir. Bu durum, diğerlerinden daha iyi performans gösterme hedeflerinin zayıf da olsa öğrenci katılımını destekleyebileceğini ortaya koymuştur. Sonuçlar bağlamsal ve bireysel faktörlerin öğrenci motivasyonu ve katılımı açısından eşit derecede önemli olduğunu göstermektedir.

Bunlara ek olarak, öğretmenler hedef yönelimi desteklerini ve öğrenci katılımını öğrenci ve gözlemcilerden daha yüksek değerlendirmişlerdir. Öğrencilerin bu konudaki değerlendirmeleri de gözlemcilerinkinden yüksek olmasına rağmen, MANOVA sonuçları gözlemcilerin değerlendirmesine göre yüksek ustalık hedef yapılı sınıflardaki öğrencilerin, düşük ve ortalama ustalık hedef yapılı sınıflardaki öğrencilere kıyasla derse daha fazla katılım gösterdiklerini ortaya koymuştur. Sonuç olarak, öğrenmeyi destekleyici, bireysel değerlendirmeyi vurgulayan eğitsel davranışların, öğrencinin derse katılımına yardımcı olan öğrenci motivasyonunu desteklediği belirtilmiştir.

Anahtar Kelimeler: başarıya motive olmak, başarısızlık korkusu, ustalık hedef yapısı, performans hedef yapısı, ustalık hedefleri, performans hedefleri, öğrenci katılımı

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# CHAPTER 1: INTRODUCTION

## Introduction

Student motivation is built out of different dispositional and situational factors. In a classroom setting, teacher's focus on different aspects of learning influences students' motivation along with other dispositional and personal considerations. Some teachers may focus on mastery of the subject and skills and try to motivate students intrinsically, while others focus on extrinsic rewards such as better grades and their performance in comparison to other students. This difference may lead students to employ different types of motivation.

As mentioned above students' personal characteristics also play an important role in their approach towards learning and motivation. Students might bring in some dispositional characteristics into the learning environment that influence their emotional and behavioral responses. Additionally, they might have different personal goals in a learning environment depending on the contextual factors. Moreover, students' motivation is related to the quality and degree of their engagement in class activities. Given the different aspects that make up the overall motivation, this study investigated, in the first stage, how students perceived the teacher's focus on learning and what the relationship of this perception is to their motivation taking also their dispositional characteristics into consideration. Furthermore, this study investigated, in the second stage, the relationship of students' motivation to their engagement in class activities.

## Background

### Achievement goal endorsement

When people are face to face with situations in which they have to perform an action or a certain behavior, they show different motivational tendencies and approaches to these situation which have personal and contextual antecedents. Achievement goal theory suggests that the goal orientation of a person which defines his/her motivation and influences his/her behavior is determined by these personal and contextual reasons lying behind his/her actions (Wolters, 2004). Mastery and performance goal orientation are the two main goal types that people endorse and which result in different behavior and cognitive and emotional outcomes (Ames, 1992). People who endorse mastery goals focus on mastery of the task, the subject or the skills, while those who endorse performance goals focus on performing better relative to others (Elliot & McGregor, 2001; Midgley et al., 2001).

Building upon the earlier work which only focuses on mastery and performance goal orientations, achievement goal framework is first expanded with the inclusion of approach and avoidance tendencies under the umbrella of performance goal. Elliot and McGregor (2001) further expanded the framework by including the two tendencies to differentiate the mastery goal according to the personal characteristics the goal endorsers have. The 2x2 achievement goal framework proposed and tested by Elliot and McGregor (2001) includes mastery-approach, mastery-avoidance, performance-approach, and performance-avoidance goal constructs. Researchers have expanded the framework more by making a distinction between task referenced or self-referenced mastery goals and proposing a 3x2 framework (Elliot, Murayama, & Pekrun, 2011).

Students endorse a certain type of achievement goal in the classroom setting, which in turn affects their take on competence in their education. According to Wolters (2004) students who endorse mastery-approach goal try to master the lesson content to learn and achieve more. On the other hand, mastery avoidance goal is endorsed by students who avoid failure in mastering the lesson content. Students who endorse performance-approach goals try to do and perform better than their peers, while students who endorse performance avoidance goals try to avoid doing worse than their peers. The achievement goal endorsement has relations to the student outcomes such as students' learning strategies and student engagement during the lesson (Elliot, 2006; Hıdıroğlu & Sungur, 2015; Miller et al., 1996) and consequently plays a key role in educational setting.

**The promoted achievement goal structures**

As the achievement goals endorsement is influential in student outcomes, contextual antecedents of achievement goals should be well considered by the teachers. Goal structure is the main variable that interacts with the personal antecedents to influence and orient students' goal endorsement (Ames, 1992; Meece, Anderman, & Anderman, 2006) Goal structure is the type of goal orientation which is supported and emphasized in an educational environment such as a classroom (Wolters, 2004). It is established thorough the instructor's emphasis on mastery or competition and the nature of the learning activities in general. There are two goal structures that are influential in goal endorsement of students and student outcomes: mastery goal structures and performance goal structures (Midgley et al., 2001).

The two goal structures are differentiated according to the teacher's focus on different aspects of learning and related with different educational outcomes. Mastery goal structure emphasizes learning as an important thing for itself and the learning process, and values each student equally (Murayama & Elliot,2009; Wolters, 2004). Teachers, who promote mastery goal structures in their classes, put an intrinsic value upon learning and try to motivate students towards that end. On the other hand, with performance goal structure teachers establish a learning environment that fosters competition among peers and put emphasis on extrinsic rewards such as grades (Linnenbrink, 2005). According to the study conducted by Wolters (2004), students in mastery structured classrooms report higher use of learning strategies, persistence and more effort put on classwork and tasks in comparison to the students in whose classes the performance goal structure is promoted. As an important predictor of positive learning outcomes, mastery goal structure that is promoted by the teacher may be influential in students' goal endorsement even if the students do not dispose the personal characteristics related to mastery goal orientation.

**Dispositional achievement motives**

Besides the teacher's specific focus on learning and the goal structures he or she promotes in the classroom, students also have some personal characteristics that influence their achievement goal endorsement. These characteristics are the dispositional achievement motives which serve as the motivational background of the endorsed achievement goals. As already stated, these goals are shaped through the different tendencies of students to achieve more or to avoid failure which shows itself in differentiating mastery and performance goals into approach and avoidance

goals (Elliot & McGregor, 2001). These two tendencies stem respectively from the need for achievement and the fear of failure (Elliot & Church, 1997; Elliot & Harackiewicz, 1996).

Need for achievement has been defined as a dispositional desire for achieving success, while fear of failure has been associated with a desire to avoid failure (McClelland, Atkinson, Clark, & Lowell, 1953) Although they predict students' tendency to endorse approach or avoidance type of achievement goals, dispositional motives are also related with the approach towards learning which may depend on intrinsic or extrinsic values. High need for achievement may lead students to become more willingly engaged with the task itself, while high fear of failure may lead them to be engaged with the task only for extrinsic rewards (Michou, Matsagouras, & Lens, 2014). Thus, one can say that the need for achievement is related with the mastery-approach goals which put more intrinsic value on learning and educational activities. Furthermore, fear of failure might be related with both performance avoidance and performance-approach goals due to their extrinsic take on educational activities and learning (Elliot & McGregor, 2001). Hence the need for achievement and the fear of failure are important predictors in relation with students' achievement goal endorsement.

**Student engagement**

Student engagement is the involvement of students in a specific learning activity (Christenson, Reschly, & Wylie, 2012). It is a multidimensional construct that has four aspects to it, which are cognitive, behavioral, emotional and agentic

engagement. Overall, student engagement is found to be predicted and facilitated by student motivation (Reeve & Lee, 2014; Jang, Kim & Reeve, 2012).

Although all four aspects of student engagement play a similar role in positive outcomes and student motivation, each contribute in different ways: Agentic engagement is students' active participation and involvement with the lesson in a constructive and proactive way rather than passively moving with the lesson (Reeve, 2012). Agentic engagement is a newly described dimension of the students engagement construct (Reeve & Tseng, 2011). Behavioral engagement is the students' behavior related with concentration, persistence, effort and attention (Reeve, 2012). Emotional engagement is students' involvement with the lesson activity accompanied by facilitating emotions such as interest, being free from anxiety and distress (Reeve, 2012). Cognitive engagement is the students' adoption of cognitive learning strategies and use of self-regulatory strategies such as planning and organization (Reeve, 2012).

## Problem

Although the importance of the contextual and personal antecedents of achievement goals and their endorsement by the students is stated in different studies, few studies (Bjørnebekk, Diseth, & Ulriksen, 2013; Diseth & Kobbeltvedt, 2010; Michou, Mouratidis, Lens, & Vansteenkiste, 2013) have explored the links between both the contextual and personal considerations and the students' achievement goal endorsement. This may have hindered researchers from finding any direct or indirect relations between the antecedents of achievement goals and educational outcomes that we assume to follow the endorsed achievement goals.

Moreover, even though there are studies in which both promoted achievement goal structures and dispositional achievement motives of students are considered in relation to student motivation and outcomes, these studies (Bjørnebekk, Diseth, & Ulriksen, 2013; Diseth & Kobbeltvedt, 2010; Michou, Mouratidis, Lens, & Vansteenkiste, 2013) may lack the ecological validity since they were not based on a specific class session. To understand the inner dynamics of a learning environment, real and specific class sessions should be considered when the students report their achievement goals and engagement so as to obtain ecologically valid results.

In most of the research, achievement goal structures are only measured through questionnaires that are filled by students according to their perspectives of the classroom's focus to either mastery or performance goal structures. Yet students' perspective may not be reflecting the teachers' perception of their own achievement goal structures or more importantly may not be reflecting the reality as can be described by an independent observer. Thus, different perspectives should be taken into account in studies in which aspects of the classroom climate are assessed. Achievement goal structures may also need to be assessed by external observers to have more objective and concrete view of it. Although there are a number of studies that assessed achievement goal structures through observations, they did not triangulate this assessment with the assessment of other informants such as the students and the teacher.

## Purpose

The purpose of this study was to explore the relationship that both teacher's promotion of achievement goal structures and students' dispositional achievement motives

(i.e., need for achievement and fear of failure) have with students' endorsed achievement goals and student engagement in Turkish high school classrooms while a specific class session is considered. Moreover, in order to have more reliable results and make the research strong in terms of validity observational data was included in the study for data triangulation and to draw conclusions from differences and similarities among teachers', students' and observers' diverse perspectives.

## Research questions

This study aimed to answer the following research questions in Turkish high school context:

1. Do students' personal characteristics and contextual situation in a classroom setting predict student engagement through the mediation of their endorsed achievement goals during a specific class session?
    a. Do students' dispositional achievement motives and the promoted goal structures predict their endorsed achievement goals?
    b. Do students' endorsed achievement goals predict student engagement?
    c. Do students' dispositional achievement motives and the promoted goal structures predict student engagement?
2. To what extent does the students' engagement and perception of promoted goal structures differ from observers' and teachers' perception?
3. Do students endorsed achievement goals and engagement differ according to the level of mastery goal structures as perceived by the observers in a specific class session?

## Significance

The current study was conducted to see the bigger picture with respect to promotion of achievement goals through instructional behavior and their possible relation to student outcomes and goal orientations in Turkish high school context. To date, few observational studies (Anderman, Andrzejewski, & Allen, 2011; Turner et al., 2002) had been conducted that focus on the promotion of goals by the teachers. In Turkish educational context, this study is a pioneer as an observational study since it included data collected through observation of promoted goal structures and teachers' instructional behaviors in classroom. Observations were made to illuminate the relationship between specific instructional behaviors and the achievement goals that were emphasized in the classroom by the teachers. Along with the data collected through observations, student questionnaires and teacher reports related to their promotion of achievement goals were the main data sources for the study. This data triangulation made the study more reliable and objective as it took different perceptions of goal structures into consideration.

Owing to the observation process the study requires, the data tools that were used addressed the specific class sessions and real lessons. This means that students and teachers reported on the same specific classes and realistic situations while filling out the questionnaires, instead of thinking of imaginary situations and answering hypothetical questions. Thus, the findings of this study were derived from real situations and presented us the reality of the lessons in Turkish high school context. Since the data about the achievement goal endorsement of the students and student engagement were collected as well, the study's findings provided a fuller and better

understanding of the achievement goal structures and how they were related with other students' functioning in the classroom.

Observational side of the study, its roots in realistic classroom situation and data triangulation provided a complete and concrete depiction of Turkish high school context in terms of teachers' promotion of achievement goals, their endorsement by the students and situational engagement of the students. Thus, it was possible to give specific and reliable suggestions and guidelines to teachers about instructional behaviors to help them enhance their students' motivation and engagement in the classroom.

## Definition of key terms

*Mastery-approach goal:* an achievement goal that emphasizes the development of one's skills or knowledge, and maximum personal improvement from performing a task (Elliot & McGregor, 2001).

*Mastery goal structures:* is teachers' promotion of a learning environment in which the focus is on learning, mastery and self-improvement (Wolters, 2004).

*Performance-approach goal:* an achievement goal that emphasizes being more competent relative to others (Elliot & McGregor, 2001).

*Performance goal structures:* is teachers' promotion of a learning environment in which the focus is on competition and normative success (Wolters, 2004).

*Student engagement:* is a construct with four aspects, cognitive, behavioral, emotional and agentic, which is related with the involvement of students in a learning activity (Reeve, 2012).

# CHAPTER 2: REVIEW OF THE LITERATURE

## Introduction

This study aimed to investigate the relations of contextual and personal variables to student's motivation and engagement in class activities. Specifically, the relation of teacher's goal structures (contextual variable) and students' achievement dispositions (personal variable) to student's endorsed achievement goals (motivation) and active engagement were investigated. In this chapter, prior research that focuses on the relationship among these variables will be examined to give the reader the required background information about the study.

Achievement goal theory will be the focus of the first section of the chapter with a close look at the relationship between students' endorsed achievement goals and teachers' promotion of goal structures. Secondly, dispositional achievement motives, which are need for achievement and fear of failure, will be investigated in relation with students' endorsed achievement goals. After exploring the contextual and personal variables lying behind achievement goal endorsement, the relationship between endorsed achievement goals and students engagement as a motivational outcome will be focused on. The chapter will be finalized with a review of related observational studies conducted in the field.

## Teacher promoted goal structures and personal achievement goals

Along with personal characteristics, contextual variables such as teachers' achievement goal structures have a role in shaping students' achievement goals (Greene et al., 2004; Meece, Anderman, & Anderman, 2006; Young, 2007). The promoted goal structures by the teachers through different instructional behaviors provide students with messages that may influence their goal endorsement and behavior in class (Ames, 1992; Anderman & Anderman, 1999). The messages can be oriented towards students' endorsement on mastery or performance goals. Hence, achievement goal structures are respectively named mastery and performance goal structure. This section will explore the effectiveness of these goal structures in predicting students self-endorsed achievement goals.

When a teacher uses instructional practices that convey the message that learning is in itself valuable, individual interest and improvement is important, it can be said that teacher creates an achievement goal structure that emphasizes mastery goals ( Wolters, 2004). A study (Turner et al., 2002), conducted with a sample constituted from middle school students, uses both quantitative data about students' perception of teacher's promotion of goal structures and qualitative data about specific instructional behaviors that are observed by the researchers, which gives us more insight about the instructional behaviors. Preparing activities that are appealing to students' interest, providing choice, supporting persistence, framing mistakes as learning opportunities and focus on effort and learning can be listed as examples of instructional behavior that promote mastery goals (Ames, 1992; Turner et al., 2002).

Wolters (2004), in a study he conducted with American junior high school students, found that when students perceive instructional behavior and messages that promote mastery goals rather than performance goals in classroom, they tend to report stronger orientation towards mastery goals. A study (Kahraman & Sungur, 2012) conducted in Turkey with high school students similarly found that the students' higher perception of mastery goal promotion predicted their endorsement of mastery-approach goals. As the results of Wolters' (2004) study suggests, in classrooms where teachers provide mastery goal structures, performance goal oriented students reported higher use of cognitive skills compared to other performance goal oriented students. Wolters' (2004) findings are in line with the claim that teacher promoted mastery goal structures shifts students' focus from performance goals to mastery goals (Ames, 1992; Anderman & Midgley, 1997; Young, 2007).

Unlike mastery goal structures, a performance goal structures provide students with an environment that puts the focus on achieving and being successful in a normative sense, demonstration of skills and ability to others, and expectation of extrinsic rewards or punishment (Murayama & Elliot, 2009; Wolters, 2004). When it comes to predicting students' goal endorsement, performance goal structures' effect is a debated issue due to different findings from research that investigate the relationship between goal structures and achievement goal endorsement.

In a study conducted by Murayama and Elliot (2009) with a sample that consists of junior and senior Japanese high school students, the relationship among personal goal orientations of the students, the achievement goal structures and student outcomes are investigated. Findings of the study reveal that although students'

endorsement of mastery goals can be positively predicted by mastery goal structures, performance goal structures fail to predict any type of achievement goal endorsement. Yet there are other research that found important relations between the endorsement of performance goals at a personal level and performance goal structures at classroom level ( Anderman & Midgley, 1997; Anderman & Anderman, 1999; Urdan, 2004; Young,1997). Murayama and Elliot (2009) touch upon this difference and suggest that there may be varying results due to methodological differences. Also cultural and age differences between samples may be affecting the results, which leads to different claims about the relation between performance goals and performance goal structures.

As a part of a longitudinal study (Anderman & Anderman, 1999) conducted with grade 5 and 6 students who were in a transition period from elementary to middle school, predictors of changes in students' achievement goal endorsement were investigated. More students change their achievement goal orientation towards performance goals. Findings suggest that this change is related with teachers' focus on students' demonstration of ability relative to others. According to these results, it can be affirmed that students' perception of performance goal structures in classroom is positively related with an increase in students' endorsement of performance goals. A similar study (Anderman & Midgley, 1997) investigates both achievement goal structures and their relation to middle school students' endorsed achievement goals. Students who perceive performance goal structures report a higher tendency to endorse performance goals, while mastery goal endorsing students continue reporting mastery goals after their transition to middle school if they perceive mastery goal structures in their classes.

In line with these contradictory claims, there are also other considerations related with possible differences between students' perception of teachers' instructional behaviors and promoted achievement goal structures. Young (1997) states that students' personal goal orientation might be affecting the way students perceive teachers' instructional behaviors. Yet in the study she conducted, she found that achievement goal structures that the teachers provided were strongly correlated with students' goal endorsement. Acknowledging Young's (1997) statement, Tapola and Niemivirta (2008) suggest that by accepting the role of goal structures as a predictor of student's goal endorsement, the effect of students personal characteristics are overlooked in their influence; and teachers may adopt different approaches while interacting with individual students. As a result of their study, they found out that goal messages given by teachers during the lessons correspond to the students' perception of the goal structure. However, considering some of the contradictory claims, it is worth taking the critiques into account while investigating the relationship between teachers' promotion of goal structures and students' endorsed goal orientation.

### Dispositional achievement motives and personal achievement goals

Achievement motives interact with the contextual variables to shape the students' goal orientation as being personal reasons underlying the endorsement of different achievement goals (Bipp & Dam, 2014; Michou, Mouratidis, Lens, & Vansteenkiste, 2013). Need for achievement and fear of failure are the two achievement motives indicated by earlier achievement theorists (McClelland, Atkinson, Clark & Lowell, 1953) as decisive of individual's orientation in a situation. Hence, need for achievement and fear of failure have been incorporated into the achievement goal

framework (Elliot & McGregor, 2001; Elliot, Murayama, & Pekrun, 2011) due to their relation with the valance, approach or avoidance, of mastery and performance goals. Studies that examine this relationship between achievement motives and achievement goal orientation, and achievement motives' effectiveness in predicting the goal endorsement will be investigated for the rest of this section.

Need for achievement is an individual's desire to achieve success (McClelland et al., 1953). Fear of failure on the other hand requires avoidance from situations in which failure may occur (McClelland et al., 1953) Accordingly, it can be assumed that while the need for achievement was predictive for an approach tendency in the endorsement of achievement goals, fear of failure was a predictor of avoidance tendency for both mastery and performance goals (Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Elliot & McGregor, 2001). Research was conducted with samples consisting of college students (Elliot & Church, 1997; Elliot & Harackiewicz, 1996) that focus on the difference between achievement motives' effectiveness as predictors of the performance-approach and performance-avoidance goals. In these studies only three achievement goal orientations were analyzed in terms of their relationship to achievement motives due to the intended focus. Mastery goals were kept as a single variable while performance-approach and performance-avoidance were handled separately. Results of these studies suggest that fear of failure is positively associated with performance-avoidance goal; however, despite the previous assumption, it is also positively associated with performance-approach goal orientation (Elliot & Church, 1997; Elliot & Harackiewicz, 1996).

The predictive value of fear of failure on performance-approach goals is explored in

different educational context than university as well. Tanaka and Yamauchi (2001) conducted their research with a sample that consisted of eleventh grade Japanese girls' high school students. A similar study is conducted with fifth and sixth grade students from Greek public schools that investigated the dispositional and contextual reasons behind students' achievement goal endorsement (Michou et al., 2013). In both studies , the analyses of the relationship between three achievement goal orientations, mastery, performance-approach and performance-avoidance goals, and dispositional achievement motives give similar results to the previous studies (Elliot & Church, 1997; Elliot & Harackiewicz, 1996) despite the cultural and age differences. That is the fear of failure is positively associated with both performance goal orientations.

As most of the studies agree with each other that fear of failure is a positive predictor of performance-approach goal orientation along with need for achievement motive, more recent research points out to the other factors that influence endorsement of achievement goals in relation with the achievement motives (Elliot & Pekrun, 2007). Elliot and Pekrun (2007) claim that to achieve optimal gain from achievement motives that students hold, contextual factors such as goal structures should be considered as well. In line with this claim, some studies that investigate the patterns of relationship among contextual variables, dispositional achievement motives and students' goal endorsement were carried out (Bjørnebekk, Diseth, & Ulriksen, 2013; Diseth & Kobbeltvedt, 2010) in Norway with samples consisting of undergraduate students. Contradicting with other research (Elliot & Church, 1997; Elliot & Pekrun, 2007; Tanaka & Yamauchi, 2001), both study fail to find any relationship between fear of failure motive and performance-approach goal. This rings a bell to the

necessity of more research in this field. Yet they have different findings considering achievement motives' effectiveness in predicting students' goal endorsement compared to the effectiveness of the contextual variables: While Diseth and Kobbeltvedt (2010) found that situational and contextual variables such as goal structures are more influential in predicting students' goal endorsement, Bjornebekk et al. (2013) found more consistent relationship between achievement motives and students outcomes such as motivation and achievement.

### Students' personal achievement goals and engagement

As a student outcome, engagement is linked with other outcomes such as achievement (Elliot, McGregor, & Gable, 1999; Sedaghat, Abedin, & Hejazi, 2011), which makes it an important variable to be considered for effective learning and teaching. Motivation gives rise to the observable student engagement (Bandura, 1997; Schraw & Lehman, 2001). Yet engagement has an influence on learner's motivation as well (Reeve & Lee, 2014). In this study, student motivation is the endorsed achievement goals. To get a better understanding of the student engagement in relation with student motivation, literature which investigates the patterns of relationship between students' goal endorsement and different aspects of student engagement, respectively agentic, behavioral, emotional and cognitive, will be reviewed in this section.

As being the latest developed dimension of the students engagement construct (Reeve & Tseng, 2011), agentic engagement helps explain the interaction between motivation and student engagement by giving students agency over their own learning and engagement in the lesson activities. Though there is not much research

on its relationship with students' achievement goal orientations. However, a study in Turkey did found that agentic engagement is strongly predicted by endorsement of mastery-approach goal (Hıdıroğlu & Sungur, 2015).

Regarding behavioral engagement, there are many research that found relation between mastery goals and behaviors such as effort and persistence, the core behaviors of engagement (Elliot & Church, 1997; Elliot et al. , 1999; Miller et al., 1996). Elliot and Church (1997) found that students who endorse mastery goals prefer challenge, show great persistence and put greater effort in comparison to those who endorse performance goals. In the research conducted by Hıdıroğlu and Sungur (2015), only mastery-approach goal, among the four different goal orientations, is found to be linked with persistence, concentration and effort.

Although endorsement of performance goals is not found to be linked to behavioral engagement in some research (Miller et al., 1996; Hıdıroğlu & Sungur, 2015), there are some finding that supports the relation between performance-approach goal endorsement and behavioral engagement (Elliot et al., 1999). Yet contextual factors may be behind the observed effort and persistence of the students who endorse performance-approach goals (Pintrich, 1999; Wolters, 2004). Wolters (2004) argue that while performance-approach goals alone are not related with effort and persistence, with the influence of achievement goal structures students may show a tendency to get behaviorally engaged with the lesson. In a similar fashion, Pintrich (1999) claims that students who have a concern about normative comparison may get more involved with the learning activity despite they endorsed performance-approach goal which is not related to such behavior. Wolters (2004) approaches to

the situation from a different perspective by suggesting that the students may be exaggerating their behavior related with engagement during the self-report to look better compared to their peers.

Emotional engagement is a concept that is linked closely with intrinsic motivation which shows itself in students' enjoyment and inherent interest with the learning activity at hand (Reeve, 2012). There are not many studies investigating the relationship between emotional engagement and students' goal endorsement. It has been claimed that approach goal orientations are linked with interest and positive affect (Elliot, 2006). On the other hand, avoidance goals are found to be associated with negative affect, anxiety and distress (Elliot, 2006). In line with this claim, Hıdıroğlu and Sungur (2015) found strong correlation between mastery-approach goals and emotional engagement: The endorsement of performance-approach goals was weakly, yet, significantly related with emotional engagement. Yet, since emotional engagement has an side that requires enjoyment with the learning activity itself, nature of its relationship with performance-approach goals should be further investigated.

Regarding students' cognitive engagement, the endorsement of mastery goals by students is found to be associated with cognitive engagement outcomes (Michou et al., 2013; Pintrich, 1999; Wolters et al., 1996). Students who endorse mastery goals tend to demonstrate deeper cognitive engagement, and use self-regulation strategies. Some of the research distinguishes between mastery-approach and avoidance goal orientations. Their results suggest that students who endorse mastery-approach goals show more cognitive engagement than those who endorse mastery-avoidance goal.

When it comes to the relationship between performance-approach goals and cognitive engagement, we encounter contradictory claims. While some research concludes that performance-approach goals are not predictors of cognitive engagement and meaningful strategy use (Greene et al., 2004; Hıdıroğlu & Sungur, 2015), there are some findings that support the association between the two variables (Elliot & Harackiewicz, 1996; Elliot et al., 1999; Wolters, 2004). Hence the relationship between mastery-approach, performance-approach goals and cognitive engagement should be investigated more thoroughly to find results that will be beneficial for practical use in classroom context.

## Contextual and personal factors and student engagement

In the prior sections, studies that focused on contextual and personal antecedents of endorsed achievement goals are reviewed. These contextual factors, teachers' instructional behaviors, and the personal factors, dispositional achievement motives of students also play an important role in relation to student engagement (Skinner et al., 2008; Urdan, 1997). In this section, studies investigating the specific relations between promoted achievement goal structures and student engagement; and relations between dispositional achievement motives and student engagement will be explored.

Considering teachers' instructional behaviors as a contextual factor, it was found that when teachers provide choices, allow criticism about the lesson and the learning activities and emphasize individual progress, students were more engaged with lesson and did not show any disruptive behavior during the lesson ( Assor, Kaplan & Roth, 2002). Drawing a contrary picture, De Meyer and his colleagues (2014) found

that instructional behaviors comparing and pressuring students during the lesson resulted in low levels of student engagement. Hence we can conclude that instructional behaviors such as providing choice, focusing on learning that promote mastery goals are expected to be positively related to student engagement in general, whereas instructional behaviors that are associated with performance goals with an emphasis on normative comparison and pressuring students are not expected to be correlated with engagement.

When specific studies that target teacher promoted achievement goals and students engagement were investigated, the results were similar to the studies mentioned above (Meece, Anderman & Anderman, 2006). In an earlier study conducted by Ames and Archer (1998), it was found that while performance goal structures were not related to any aspect of student engagement, mastery goal structures were found to be positively correlated with student engagement, especially with emotional and cognitive engagement. In parallel with this study, it was found that perceived mastery goal structures were positively related with meaningful strategy use, self-efficacy, and satisfaction related to lesson content (Greene, 2004; Nolen, 2003). Complementary of these findings, in other studies students who perceived more emphasis on performance goal structures during lessons also reported more disruptive behaviors such as teasing, talking out of task; academic dishonesty such as cheating (Anderman & Midgley, 2002; Roeser & Eccles, 1998); boredom and procrastination, a form of self-handicapping (Wolters, 2004).

Along with the achievement goal structures, two dispositional achievement motives described in literature, the need for achievement and the fear of failure, play a role in relation to student engagement in learning. Need for achievement which is the desire

to attain success is associated with positive student outcomes (Urdan, 1997). In line with this, studies found positive relations between need for achievement and student outcomes such as positive emotions regarding learning, adaptive learning strategies, behavioral and agentic engagement (Cock & Halvari, 1999; Reeve, Deci & Ryan, 2004). Michou, Matsagouras and Lens (2014) investigated indirect effects of dispositional achievement motives on student outcomes through student motivation, and similarly found that the need for achievement was positively correlated to emotional and cognitive engagement of students.

On the other hand, fear of failure which is the desire to avoid failure was found to be negatively associated with student engagement (Cock & Halvari, 1999). Other studies provided similar results. While fear of failure was negatively related to cognitive and behavioral engagement, it also predicted behavioral problems, negative emotions and anxiety in classroom settings (Caraway, Tucker, Reinke & Hall, 2003; Reeve, Deci & Ryan, 2004). Furthermore, in the study conducted by Michou, Matsagouras and Lens (2014) fear of failure was found to be indirectly and negatively related to adaptive learning strategies through the mediation of student motivation. Hence, the results of the studies about the dispositional achievement motives suggest positive relations between student engagement and need for achievement; and negative relations between student engagement and fear of failure.

### Observational studies in classroom context

Although there are only a few observational studies related to the Achievement Goal Theory, the importance of observing real classroom settings is highlighted in the literature (Turner & Meyer, 2000; Haerens et al., 2013). Turner and Meyer (2000),

focusing on the role of contextual factors in our understanding of the ways in which students learn, state that study of the authentic class sessions through observations and complementary qualitative methods provides us with clearer view in research. Investigating a real *slice of life* rather than dealing with data collected through isolated and hypothetical classroom situations is a clear advantage in understanding the classroom context and factors affecting student learning.

Another advantage observations provide is that the data collected through a third person perspective in classroom may help with the data triangulation and show that it is important to take different perspectives of all participants of a study into consideration (Turner & Meyer, 2000). In parallel with this view, Haerens and her colleagues (2013) promote observational studies claiming that such studies give us detailed and specific information about the teaching practices related to motivation, and enhance the validity of certain distinctions between different practices and teaching behaviors. The different perceptions provided by trained observers and investigation of real classroom environment give us ground to make research more reliable and refined.

There are different approaches in conducting an observational study. While some of the class sessions may be videotaped and observed later on in a structured manner, it is also possible to observe the lesson on spot. Observers may collect both quantitative and qualitative data by using rating scales, narrative records and taking verbatim notes related to teachers' discourse and teacher-student interaction in a learning environment. A study carried out by Raphael, Pressley and Mohan (2008) even went beyond specific class sessions and observed the interactions between

students and teachers in different parts of the school such as library and hallways to collect data about engaging teaching behaviors. Also the researchers measured student engagement through their own observations instead of referring to students' self-evaluation of their engagement. Hence, it is possible to follow different processes and develop different approaches to provide a better picture of learning environments.

Just like Raphael, Presley and Mohan's (2008) aim to detect certain teaching behaviors that are engaging for the students, most of the observational studies have aimed to specify teaching behaviors related with student motivation and engagement to draw a richer picture of the contextual factors in classroom. A study documented any teacher behaviors and teachers' interaction with students that were observed to find out different need supportive behaviors (Anderman, Andrzejewski & Allen, 2011). They made use of data about students' perception of need supportive teaching collected through a survey to categorize and specify the related teaching behaviors. Another study (Berghe et al., 2013) similarly tried to specify teachers' instructional behaviors through structured observation of videotaped lessons to check to what extent teachers' own motivational orientations were relates to their teaching styles. Both studies were conducted in high school context and focused on different contextual factors than achievement goal structures. While Anderman and her colleagues investigated teaching behaviors through both observers' and students' perspectives, Berghe and her colleagues (2013) took only observers' perspective to specify the studied teaching styles.

Although there are similar studies specifically about achievement goal structures (Patrick, Anderman, Ryan, Edelin & Midgley, 2001; Anderman, Patrick, Hruda &Linnenbrink, 2002) that aimed to specify teaching behaviors by using both observational data and students' perceptions of achievement goal structures, they fail in providing a bigger picture as they did not focus much on student related variables. Both studies by Patrick et al. (2001) and Anderman et al. (2002) were conducted in middle school context and emphasized the difference between observers' and students' perceptions of promoted achievement goal structures. Some of the teacher behaviors may be so common that students might not link them with promotion of a specific goal structure unlike the observers. Anderman and her colleagues (2002) also reported significant difference between students' engagement depending on their observations of student behavior in classes of high or low mastery goals communicating teachers. Another study, in middle school context, more expansively dealt with this issue by triangulating qualitative data about teachers' promotion of goal structures from their observations and student reported perception of promoted achievement goal structures with students' avoidance strategies (Turner et al., 2002). The comparison analysis revealed that students and observers had similar perceptions regarding the levels of teachers' achievement goal promotion. According to the results, students who were taught by teachers putting significantly lower emphasis on mastery goals reported higher use of avoidance strategies in comparison to students who were taught by teachers who highly promote mastery goals.

## The present study

Considering the previous empirical research and issues, the present study aims to investigate the relationship among achievement goal structures, students'

dispositional characteristics and endorsed achievement goals; and their predictive values in relation to student engagement during a specific lesson. Additionally, the role of students' goal endorsement as a mediator between the personal and contextual antecedents; and engagement as an outcome will be investigated. Two approach oriented achievement goals, mastery and performance-approach goals, will be the main achievement goal orientations investigated in this study as most of the contradicting results revolve around them. Regarding the above literature review and the research questions of the present study, the following hypotheses were formed:

Hypothesis 1: It was expected that while the promotion of mastery goal structures would predict mastery-approach goal endorsement (Wolters, 2004; Ames, 1992; Young, 2007), teacher promoted performance goal structures would predict the endorsement of performance-approach goals (Anderman& Anderman, 1999; Urdan, 2004; Young, 1997).

Hypothesis 2: Regarding the relationship between students' dispositional motives and endorsed achievement goals, students' need for achievement was expected to predict mastery-approach goals and performance-approach goals (Elliot&Church, 1997; Elliot& Harackiewicz, 1996; Elliot& McGregor, 2001). On the other hand, students' fear of failure was expected to predict the endorsement of performance-approach goals (Tanaka & Yamauchi, 2001; Michou et al., 2013).

Hypothesis 3: It was expected that the student endorsed mastery-approach goals would predict all aspects of student engagement (Elliot & Church, 1997; Hıdıroğlu & Sungur, 2015). Regarding performance-approach goals, it was expected for them to predict behavioral engagement depending on a study reviewed in the literature (Elliot et al., 1999) despite the other studies (Miller et al., 1996; Hıdıroğlu & Sungur, 2015) that did not find any relationship between performance-approach goals and students'

behavioral engagement.

Hypothesis 4: It was expected for the students' need for achievement to predict student engagement in general (Cock & Halvari, 1999; Reeve, Deci & Ryan, 2004), whereas their fear of failure was expected to negatively predict their engagement with the lesson (Caraway, Tucker, Reinke & Hall, 2003; Urdan, 1997).

Hypothesis 5: Regarding the promoted achievement goal structures, while teacher promoted mastery goal structures were expected to predict student engagement in general (Greene et al., 2004; Nolen, 2003), performance goal structures were not expected to predict any aspect of student engagement (Ames & Archer, 1998; Wolters, 2004).

Hypothesis 6: It was expected that students' need for achievement (Michou et al., 2014) and promoted mastery goal structures would indirectly and positively predict students' engagement through the mediation of endorsed mastery-approach goals depending on the previous assumptions.

Hypothesis 7: Since it was expected for performance-approach goals to only predict behavioral engagement in a previous assumption, it was not expected for the students endorsed performance-approach goals to play a role as a mediator.

Hypothesis 8: Each type of informant was expected to perceive things differently in a classroom environment (Patrick et al., 2001; Anderman et al., 2002).

Hypothesis 9: Observers' perception regarding the level of promoted mastery goal structures was assumed to predict differences among students' achievement goal orientations and engagement (Anderman et al., 2002; Turner et al., 2002).

# CHAPTER 3: METHOD

## Introduction

The study aimed to explore the relationship of teachers' goal structures and students' dispositional achievement motives to students' endorsed achievement goals and engagement during specific class sessions. For the realization of this aim and improving the depth of understanding not only the student-reported data about these variable, but also data from teachers and observers were included in the study. In this chapter, information related to the methodology behind the data collection and analysis will be provided in detail.

## Research design

Correlational method helps investigating the relations and exploring to what extent the investigated variables are correlated, using quantitative data (Creswell, 2008). Since the present study aimed to explore the relations among the goal structures promoted by the teachers, students' dispositional achievement motives, endorsed achievement goals and engagement in a specific lesson in detail, the correlational method was selected as the most appropriate for the study.

Cross sectional data collection design is used to take a snapshot of a situation at one specific point in a time (Baltes, 1968). The measured variables are obtained from the sample or the population at once. Hence a cross-sectional data collection was seen as appropriate to address specific lessons and classroom environments for each class

that was observed. Data collection method involved observations and the collection of self-reports from students and teachers through surveys.

## Context

The study is conducted in a high school located in an urban city, Ankara. The school is a state school with Anatolian High School status where the Ministry of National Education (MONE) curriculum is offered to students. Middle school students are assigned to high schools according to their preferences and cumulative scores gathered from their central exam results and grades. The central exam score to be accepted to the school is above the average, if not among the highest ones. Secondary school lasts for 4 years in Turkey. The socio-economic status of the families varies in a broad scale since the students are located to state schools depending on their academic achievement.

## Sample

The target population of the study is high school students in Ankara. The school where the study was conducted was chosen conveniently (Lavrakas, 2008) from a list of schools under MoNE permission. Ten courses, 5 English, 3 Turkish and 2 Science, were spotted to be observed in ten different class groups which consisted of four 9th graders classes; four 10th graders classes and two 11th graders classes. Teachers and the student groups were approached for permission and informational purposes before the observations started.

In total a sample of 310 students, who are 9th (*N*=139; 44. 8 %), 10th (*N*=118; 38.1 %) and 11th (*N*=53; 17.1%) graders, and ten class teachers from an Anatolian High

School in Ankara participated in the study. While 150 (48. 4 %) of the students were male, 159 (51. 3 %) of them were female. One (0. 3 %) student did not report his/her gender. Students' average age was *Mage*= 14. 76. As it is the case for students' sample, teachers' sample was also balanced in terms of gender: the sample (*N*=10) was comprised of 6 (60%) male and 4 (40%) female teachers. Teachers' average age was *Mage*= 51. 5.

## Instrumentation

Three sets of instruments were used to collect data about the student related and teacher related variables. Students were administered questionnaires about their dispositional achievement motives (Lang & Fries, 2006), perceived teacher achievement goal structures (Turner et al., 2002), situational engagement (Reeve & Tseng, 2011) and their situational achievement goal endorsement (Elliot & Murayama, 2008). Teachers were administered questionnaires about the achievement goal structures they promoted (Turner et al., 2002) and situational student engagement (Reeve & Tseng, 2011) regarding the specific observed class session. Additionally, observers used rating sheets, which were in accordance with the questionnaires administered to students and teachers, to assess promoted achievement goal structures by the teachers, and student engagement.

Most of the questionnaires had been used in Turkish context prior to this study. Since the observers were fluent in English, rating sheets were used in English. Some of the instruments were translated into Turkish beforehand as they were used in previous studies. The translation of the other instruments was finalized through a process that involved back-translation. Two native Turkish translators with advanced level of

English were involved in the process. One of them translated the questionnaire from English to Turkish, while the other one translated the questionnaire back to English. They made sure that the meaning of the items remained the same. In cases of discrepancies from the original English items, the two translators discussed them until to reach an agreement on the best interpretation.

**Student questionnaires**

*Dispositional achievement motives*

Students' dispositional motives were measured by Lang and Fries (2006) questionnaire (see Appendix A, p. 94), in a 5-point Likert-type scale format ranging from *Strongly Disagree* (1) to *Strongly Agree* (5). The questionnaire consisted of two subscales. One of the subscales measured students' *fear of failure* with 5 items (e.g., I am afraid of failing in somewhat difficult situations, when a lot depends on me.). Cronbach alpha for the fear of failure subscale was $\alpha = .78$, which shows a good internal consistency of this subscale. The other subscale measured students' *need for achievement* and consisted of 5 items (e.g., I am appealed by situations allowing me to test my abilities.) similarly. The internal consistency of the subscale measuring the need for achievement was represented by Cronbach alpha which was $\alpha = .74$.

*Perceived teacher's achievement goal structures*

The instrument of Turner et al. (2002) was used for measuring this variable which consisted of 10 items in total and two subscales (see Appendix A, p.95). Students responded to a 5-point Likert-scale with points varying from *Strongly Disagree* (1) to *Strongly Agree* (5). Subscale for the perceived *mastery-approach goal structures* consisted of 5 items (e.g., During this class my teacher viewed errors as a chance for

better learning.). Cronbach alpha was $\alpha$ = .71 for this subscale. Subscale for the perceived *performance-approach goal structures* also had 5 items originally. Yet the internal consistency of this subscale was not as strong as expected since Cronbach alpha was $\alpha$ = .40. As a result, we performed an exploratory factor analysis for the items of the scale using all 10 items of the perceived achievement goal structures to check to what extent these 10 items load to two factors representing the two subscales. We managed to obtain two separate factors for the two subscales when 3 items of the performance-approach goal structures subscale were excluded. While the five items of the perceived mastery-approach goal structures loaded in the first factor (Lambda was 2.32 with the explained variance of 33.23 %), the two remaining items of performance-approach goal structures loaded in the second factor (Lambda was 1.4 with the explained variance of 20.1%). Consequently only 2 items (During this class, my teacher compared students' performance; my teacher emphasized competition.) were kept under this subscale with a marginally acceptable internal validity represented by Cronbach alpha $\alpha$ = .51.

*Situational achievement goal endorsement*

Four items from the revised Achievement Goal Questionnaire (Elliot & Murayama, 2008) was used for measuring this variable (see Appendix A, p. 96). Students responded to a 5-point Likert-scale with points varying from *Strongly Disagree* (1) to *Strongly Agree* (5) about their endorsed achievement goals during a specific class session. The subscale for the *mastery-approach goals* consisted of two items (During the very last class hour, my aim was to completely master the material presented; my goal was to learn as much as possible.) and its internal consistency represented by Cronbach alpha was $\alpha$ = .78. The subscale for the *performance-approach goals*

consisted of two items (During the very last class hour, my goal was to perform better than the other students; I was striving to do well compare to other students.) and its internal consistency represented by Cronbach alpha was $\alpha$ = .76.

*Situational student engagement*

Students' self-report of their situational engagement was measured by a questionnaire (see Appendix A, p.96) designed by Reeve and Tseng (2011) in a 5-point Likert-type scale ranging from *Strongly Disagree* (1) to *Strongly Agree* (5). The questionnaire aimed to measure different aspects of engagement and, as a result, had 7 items and four different subscales. The first subscale measured *behavioral engagement* with 2 items (During this class, I worked very hard; paid attention.) and its internal consistency represented by Cronbach alpha was $\alpha$ = .78. The second subscale measured *emotional engagement* with 2 items (I enjoyed today's class; felt interested in todays' class.) and its internal consistency represented by Cronbach alpha was $\alpha$ = 87. The third subscale measured *agentic engagement* with 2 items (During this class, I expressed my preferences, opinions or questions; asked questions.) and its internal consistency represented by Cronbach alpha was $\alpha$ = .78. The last subscale measured the *cognitive engagement* of the students and consisted of only one item (During this class, I tried to learn as much as I could.). Hence it is not applicable to analyze this subscale for internal consistency purposes. Overall, the scale had a high internal consistency represented by Cronbach alpha, $\alpha$ = .87.

*Situational achievement goal endorsement*

The instrument of Elliot and Murayama (2008) was used for measuring this variable which consisted of 4 items in total and two subscales (see Appendix A, p. 96).

Students responded to a 5-point Likert-scale with points varying from *Strongly Disagree* (1) to *Strongly Agree* (5) about their endorsed achievement goals during specific class sessions. Subscale for the mastery-approach goal endorsement consisted of two items (During the very last class hour, my aim was to completely master the material presented; my goal was to learn as much as possible.) and its internal consistency was represented by Cronbach alpha, which was $\alpha = .78$. The second subscale for the performance-approach goal endorsement consisted of two items (During the very last class hour, my goal was to perform better than the other students; I was striving to do well compare to other students.) and its internal consistency was represented by Cronbach alpha, which was $\alpha = .76$.

**Teacher questionnaires**

*Teacher's achievement goal structures*

Teachers' self-report of the achievement goals that they promoted during a specific class session was measured by a questionnaire (see Appendix C, p.100) designed by Turner et al. (2002), which was also used for measuring students' perception of teacher achievement goal structures. The questionnaire was in a 5-point Likert-type scale ranging from *Strongly Disagree* (1) to *Strongly Agree* (5). It consisted of 10 items grouped under two subscales. The subscale for the *promotion of mastery-approach goal structures* consisted of 5 items (e.g., During this class I emphasized students' individual progress.). Cronbach alpha was $\alpha = .57$ for this subscale, which shows a marginally acceptable internal consistency. Yet it should be noted that the study sample for teachers is much smaller than the student sample (i.e., 10 teachers). Subscale for the *promotion of performance-approach goal structures* originally consisted of 5 items. The internal consistency of this subscale could be marginally

acceptable similar to the first subscale since Cronbach alpha was $\alpha$ = .53. However, since a factor analysis was conducted for *the perceived achievement goal structures* due to low internal consistency, an exploratory factor analysis for the 10 items of the teachers' achievement goal structure scale was performed to check to what extent these 10 items load to two factors representing the two subscales. It was possible to obtain two separate factors for the two subscales when 3 items of *the promotion of performance-approach goal structures* subscale were excluded. While the five items of *the promotion of mastery-approach goal structures* loaded in the first factor (Lambda was 2.52 with the explained variance of 36.04 %), the two remaining items of *the promotion of performance-approach goal structures* loaded in the second factor (Lambda was 2.39 with the explained variance of 34.18%). Consequently only 2 items (During this class, I compared students' performance; I emphasized competition.) were kept under this subscale with a high internal validity represented by Cronbach alpha $\alpha$ = .83.

*Situational student engagement*

Teachers' perception of students' situational engagement was measured again by Reeve and Tseng (2011), which is in a 5-point Likert-type scale format ranging from *Strongly Disagree* (1) to *Strongly Agree* (5). The questionnaire (see Appendix C, p.100) in total had 7 items and four different subscales. The first subscale measured *behavioral engagement* of the students with 2 items (During this class, the students worked very hard; paid attention.) and its internal consistency represented by Cronbach alpha was $\alpha$ = .78. The second subscale measured *emotional engagement* with 2 items (During this class, the students enjoyed today's class; felt interested in todays' class.) and its internal consistency represented by Cronbach alpha was $\alpha$ =

87. The third subscale measured *agentic engagement* with 2 items (During this class, the students expressed their preferences, opinions or questions; asked questions.) and its internal consistency represented by Cronbach alpha was $\alpha$ = .93. The last subscale measured the *cognitive engagement* of the students and consisted of only one item (During this class, the students tried to learn as much as they could.). Hence it is not applicable to analyze this subscale for internal consistency purposes. Overall, the scale had a high internal consistency represented by Cronbach alpha, $\alpha$ = .92.

**Observer rating sheets**

*Teacher achievement goal structures*

Teacher's promotion of goal structures as perceived by the trained observers was measured by a rating sheet (see Appendix E, p.102) adapted from the questionnaire designed by Turner et al. (2002). The rating sheet was in a 5-point Likert-type scale format ranging from *Never, Not at All* (1) to *Frequently, Always* (5) and consisted of 8 items grouped under two subscales. The subscale for the *mastery-approach goal structures* consisted of 4 items (e.g., The teacher emphasizes self-based evaluation and improvement*; range* of $\rho$s = .70 to .94). Cronbach alpha was $\alpha$ = .94 for this subscale. The subscale for the *performance-approach goal structure* originally consisted of 4 items. Since 3 items were excluded from subscales for this goal structure in the previous instruments for students and teachers as a result of exploratory factor analyses, 3 items from the *performance-approach goal structure* were excluded to ensure that the three subscales measuring performance-approach goal structures were similar. Hence only one item related to competition among students was kept under this subscale (The teacher emphasized competition and other-based evaluation*;* $\rho$ = .74). The internal consistency of this subscale was

represented by Cronbach alpha, $\alpha$ = .81. Given the high correlation between the two ratings, an average score for each subscale was computed from the separate scores of each rater.

*Situational student engagement*

Observers' perception of students' situational engagement was measured by adapting from Reeve and Tseng (2011) questionnaire (see Appendix E, p.102) , which was in a 5-point Likert-type scale format ranging from *Never, Not at All* (1) to *Frequently, Always* (5). The questionnaire in total had 4 items and two different subscales. The first subscale measured *behavioral engagement* of the students with 2 items (During this class, the students worked very hard; paid attention; *range* of $\rho$s = .71 to .83) and its internal consistency represented by Cronbach alpha was $\alpha$ = .82. The other subscale measured *agentic engagement* with 2 items (During this class, the students expressed their preferences, opinions or questions; asked questions*; range* of $\rho$s = .88 to .93) and its internal consistency represented by Cronbach alpha was $\alpha$ = .89. Overall two subscales have a good internal consistency among each other represented by Cronbach alpha, $\alpha$ = .86.

## Data collection

First of all, the permission was taken from MoNE prior to the study as part of a larger research. From the list of schools which MoNE approved, a few schools were contacted at first. One of the schools' principal gave positive response for carrying out the study in his/her school. In cooperation with the school administration, student groups and teachers were informed about the study and according to their willingness to participate they were chosen as a sample.

Therefore, the students and the teachers voluntarily participated in the study. The participants were informed before the data collection that their answers to the questionnaires will be kept confidential and will not affect their school life. The participants were free to quit the study any time. The data collection started in September and was completed in October, 2016.

Dispositional achievement motives questionnaires were administered to students before the observations since they were used to collect data about students' motives in general. Observations, through which quantitative data about student engagement and instructional behaviors related with achievement goal structures were collected, lasted for a month in total. During this time period, each class was observed two or three times to prevent Hawthorne effects (Holden, 2001) (i.., the teacher could change his/her behavior if s/he knew in which session was observed), and only the las session was reported. Right after these specific sessions, students and the class teachers were given another questionnaire to collect data about achievement goal structures, students' achievement goals, and student engagement in that specific session. In contrast with the dispositional achievement motives, these data were aimed to be specific to the sessions observed.

The two observers who participated in the study were trained as part of the study. First they were informed about the concepts and did extensive reading of the literature. Then they were trained by a specialist for their familiarization with the rating sheet and practiced with them. After this training process, observers attended real class sessions and did trial observations until to reach a high inter-rater agreement in the observed items.

## Data analysis

The data collected was analyzed by using SPSS software package. Descriptive statistics, mean and standard deviation, for each of the variables were provided. To investigate differences between gender and classes, MANOVA were applied. To explore the relationship among all the variables bivariate correlation analysis was made use of. Regression analyses were used to check if student motivation and engagement could be predicted by dispositions and /or teachers' promotion of goal structures. Also Bootstrap (Hayes, 2013) analyses were conducted to check the endorsed achievement goals' role as mediators between student engagement and personal or contextual factors. Descriptive statistics were made use of to control the differences and similarities among the different perspectives of observers, teachers and students.

# CHAPTER 4: RESULTS

## Introduction

The aim of the present study was to explore the relations among students' dispositional achievement motives, situational achievement goal structures, students' achievement goals, and engagement during a specific lesson. More specifically, it was aimed to investigate if students' achievement goals mediated the relationship between independent factors such as dispositional achievement motives (a personal characteristic) and achievement goal structures provided by teachers (a contextual characteristic), and the dependent variable of students' situational engagement.

To achieve this aim, teacher's achievement goal structures and students' engagement during a specific lesson were assessed by the classroom teacher, independent observers, and students. Similarities and differences in the assessment of the three different informants were also examined as well as to what extent teacher's goal structures assessed by observers predicted differences in students' achievement goals and engagement.

Firstly, the descriptive statistics of the studied variables and the bivariate correlations among them were explored as preliminary analysis. After the exploration of these a MANOVA was conducted to study the differences between the two genders.

Main analysis included hierarchal regression models checking (a) the predictive value of dispositional achievement motives and achievement goal structures

regarding students' endorsed achievement goals; (b) the predictive value of achievement goals regarding students' situational engagement and (c) the predictive value of dispositional achievement motives and achievement goal structures regarding students' situational engagement. Following the regression models, indirect effects of dispositional achievement motives and perceived goal structures on student engagement through the mediation of endorsed achievement goals were investigated by Bootstrap (Hayes, 2013) analyses. Finally, similarities and differences among student, observer and teacher perceptions were controlled through descriptive statistics. A MANOVA explored differences in students' achievement goals and engagement among classes which have different levels of mastery goal structures according to observer ratings.

## Preliminary Analysis

Information about the descriptive statistics of the variables of the study, such as the mean, standard deviation and the number of participants who responded, can be found in Table 1.

Table 1
Descriptive statistics of the measured variables

| | *N* | *M* | *SD* |
|---|---|---|---|
| **Dispositional Motives** | | | |
| 1.Need for Achievement | 294 | 4.12 | 0.64 |
| 2.Fear of Failure | 294 | 3.03 | 0.91 |
| **Perceived Goal Structures** | | | |
| 1. MAp Goal Structure | 279 | 3.46 | 0.75 |
| 2. PAp Goal Structure | 279 | 2.41 | 0.93 |
| **Endorsed Achievement Goals** | | | |
| 1. MAp Goal | 266 | 4,04 | 0.96 |
| 2. PAp Goal | 267 | 3.56 | 1.12 |
| **Student Engagement** | | | |
| 1.Overall | 279 | 3.46 | 0.96 |
| 2.Agentic | 279 | 3.11 | 1.24 |
| 3.Behavioral | 279 | 3.57 | 1.05 |
| 4.Emotional | 279 | 3.43 | 1.29 |
| 5.Cognitive | 279 | 4.02 | 1.02 |

*Note.* $N$ = Number of participants for corresponding variable; $M$ = Mean; $SD$ = Standard Deviation. MAp= Mastery-Approach. PAp=Performance-Approach.

The bivariate correlations among the measured variables are presented in Table 2. Regarding the dispositional achievement motives of the students, the table shows that the fear of failure is strongly and positively associated with gender ($r = .17$, $p < .01$; gender was dummy-coded: 1 = female, 0 = male). On the other hand, need for achievement was found to be positively associated with overall engagement of the students in specific class sessions ($r = .12$, $p < .05$). Specifically, it was positively correlated with cognitive engagement ($r = .14$, $p < .05$) and strongly and positively correlated with agentic engagement ($r = .16$, $p < .01$).

The two variables related to the students' perception of the teacher achievement goal structures, perceived mastery-approach goal structures and perceived performance-approach goal structures, were found to be positively inter-correlated ($r = .25$, $p <$

.01). The perceived mastery-approach goal structures were associated with the endorsement of both achievement goals. To specify, they were positively correlated with the mastery-approach goals ($r = .37$, $p < .01$) and the performance-approach goals($r = .18$, $p < .01$). The perceived mastery-approach goal structures were also positively associated with all the variables related with students' situational engagement: overall student engagement($r = .52$, $p < .01$), agentic engagement($r = .38$, $p < .01$), behavioral engagement ($r = .41$, $p < .01$), emotional engagement($r = .54$, $p < .01$) and cognitive engagement ($r = .34$, $p < .01$). On the other hand, the perceived performance-approach goal structures were positively associated only with performance-approach goals($r = .18$, $p < .01$) regarding the students' endorsed achievement goals. Although the perceived performance-approach goal structures were found to be positively correlated with the students' overall situational engagement ($r = .13$, $p < .05$), when different types of engagement are taken into consideration, it was only positively correlated with the agentic engagement ($r = .16$, $p < .01$).

Regarding the endorsed achievement goals, the table shows that the two variables, mastery-approach goals and performance-approach goals were positively inter-correlated ($r = .44$, $p < .01$). The mastery-approach goals were strongly and positively associated with all the variables related to the students' situational engagement: overall student engagement($r = .70$, $p < .01$), agentic engagement($r = .49$, $p < .01$), behavioral engagement ($r = .68$, $p < .01$), emotional engagement($r = .55$, $p < .01$) and cognitive engagement ($r = .63$, $p < .01$). Similarly, the performance-approach goals were positively correlated with the variables related to the student's situational engagement: overall student engagement($r = .38$, $p < .01$), agentic

engagement($r$ = .33, $p$ < .01), behavioral engagement ($r$ = .33, $p$ < .01), emotional engagement($r$ = .527, $p$ < .01) and cognitive engagement ($r$ = .32, $p$ < .01).

As expected, the variables related to the students' situational engagement were all inter-correlated among each other ($r$ =.46, $p$ < .01 to $r$ = .86, $p$ < .01) . Especially stronger inter-correlations between the overall engagement variable and different types of engagement can be reported. That is the overall student engagement is strongly and positively inter-correlated with the agentic, behavioral, emotional and cognitive engagement ($r$ = .78, $p$ < .01 to $r$ = .86, $p$ < .01).

Table 2
Bivariate correlations of the measured variables for the study

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Background Variable** | | | | | | | | | | | | |
| 1.Gender | - | | | | | | | | | | | |
| **Dispositional Achievement Motives** | | | | | | | | | | | | |
| 2.Need for Achievement | .11 | - | | | | | | | | | | |
| 3.Fear of Failure | .17** | .02 | - | | | | | | | | | |
| **Perceived Achievement Goal Structures** | | | | | | | | | | | | |
| 4.MAp Goal Structure | .09 | -.00 | -.06 | - | | | | | | | | |
| 5.PAp Goal Structure | -.01 | -.07 | -.01 | .25** | - | | | | | | | |
| **Endorsed Achievement Goals** | | | | | | | | | | | | |
| 6.MAp Goal | .18** | .07 | -.12 | .37** | .24 | - | | | | | | |
| 7.PAp Goal | .06 | .00 | .04 | .18** | .18** | .44** | - | | | | | |
| **Student Engagement** | | | | | | | | | | | | |
| 8.Overall | .07 | .12* | -.10 | .52** | .13* | .70** | .38** | - | | | | |
| 9.Agentic | .03 | .16** | -.07 | .38** | .16** | .49** | .33** | .79** | - | | | |
| 10.Behavioral | .10 | .10 | -.09 | .41** | .07 | .68** | .33** | .86** | .56** | - | | |
| 11.Emotional | .02 | .03 | -.11 | .54** | .11 | .55** | .27** | .83** | .46** | .61** | - | |
| 12.Cognitive | .12* | .14* | -.03 | .34** | .05 | .63** | .32** | .78** | .51** | .69** | .58** | - |

*Note*. *$p$< .05. **$p$< .01. Gender was dummy-coded (1 = females; 0 = males). MAp= Mastery-Approach. PAp=Performance-Approach.

Following the analysis of the bivariate correlations, a multivariate analysis of variance (MANOVA) conducted to explore the differences between genders in the sample. As a result, significant gender differences were found (Wilk's $\Lambda = .901$, $F$ [10, 237] = 2.561, $p < .01$, multivariate $\eta^2 = .09$) regarding the dependent variables: dispositional achievement motives, perceived achievement goal structures and situational student engagement. A follow-up analysis of variance (ANOVA) with Bonferroni correction showed that females scored higher than males in fear of failure $F$ (1, 246) = 9.112, $p < .01$, $\eta^2 = .04$ ($M_{female}$ = 3.20, $SD$ = 0.85 vs. $M_{male}$ = 2.86, $SD$ = 0.85), mastery-approach goals $F$ (1,246) =9.494, $p < .01$, $\eta^2 = .04$($M_{female}$ = 4.21, $SD$ = 0.81 vs. $M_{male}$ = 3.84, $SD$ = 1.07), behavioral engagement $F$ (1,246) = 4.164, $p < .05$, $\eta^2 = .01$ ($M_{female}$ = 3.73, $SD$ = 1.02 vs. $M_{male}$ = 3.46, $SD$ = 1.05), and cognitive engagement $F$ (1,246) = 5.023, $p < .05$, $\eta^2 = .05$ ($M_{female}$ = 4.18, $SD$ = 0.85 vs. $M_{male}$ = 3.89, $SD$ = 1.2).

## Main analysis

The study aimed to explore whether the students' achievement goals mediate between independent variables, such as depositional achievement motives (a personal characteristic) and achievement goal structures (a contextual characteristic) and the dependent variable of students' engagement during a specific lesson. Regarding the relations between independent and dependent variable variables (i.e., mediators and outcomes), hierarchal regression analyses were conducted to make sure that there were statistically significant relations among these variables before studying the mediation of the endorsed achievement goals. To this end, through regressions, the following was checked: (a) the predictive value of dispositional achievement motives and achievement goal structures regarding students' endorsed

achievement goals; (b) the predictive value of achievement goals regarding students' situational engagement and (c) the predictive value of dispositional achievement motives and achievement goal structures regarding students' situational engagement.

**The predictive value of dispositional achievement motives and achievement goal structures regarding students' endorsed achievement goals**

Firstly, two three-step hierarchal regression models were tested for students' mastery-approach and performance-approach goals as dependent variables. While the endorsed achievement goals were taken as dependent variables, dispositional achievement motives (Step 1), perceived teachers' achievement goal structures (Step 2) and the interaction between the two achievement goal structures (Step 3) were represented as predictors in the regression models. In each set of three-step regression models for each endorsed achievement goal, the endorsement of the other goal was controlled, since the two achievement goals were found to be strongly and positively inter-correlated ($r = .44$, $p < .01$) in the bivariate correlations of the measured variables (Table 2).

The hierarchal regression models for mastery-approach goals were found to be statistically significant in all three steps: Step 1($F$ [4,243] = 22.32, $p < .01$, adjusted $R^2 = .26$), Step 2 ($F$ [6,241] = 21.32, $p < .01$, adjusted $R^2 = .33$), Step 3($F$ [7,240] = 18.31, $p < .01$, adjusted $R^2 = .33$). As presented in Table 3, in the first step the hierarchal regression model for mastery-approach goals showed that the students' gender and endorsement of performance-approach goals positively predicted the endorsement of mastery-approach goals. Although need for achievement did not predict mastery-approach goals, fear of failure negatively predicted the endorsement

of mastery-approach goals. The predictive values of the three independent variables, gender, performance-approach goals and the fear of failure, remained almost the same through the other 2 steps. Regarding the teacher promoted goal structures, while the endorsement of mastery-approach goals was positively predicted by mastery goal structures, it was negatively predicted by performance goal structures.

Table 3
The hierarchal regression model for mastery-approach goals

| Predictors | Mastery-approach Goals | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Step 1 | | | Step 2 | | | Step 3 | | |
| | *B* | *SE* | β | *B* | *SE* | β | *B* | *SE* | β |
| Gender | 0.35 | (0.1) | .18** | 0.30 | (0.1) | .16** | 0.3 | (0.1) | .16** |
| Need for Achievement | 0.07 | (0.08) | .05 | 0.05 | (0.08) | .34 | 0.04 | (0.08) | .3 |
| Fear of Failure | -0.16 | (0.06) | -.15** | -0.13 | (0.05) | -.12* | -0.13 | (0.06) | -.12* |
| PAp Goals | 0.39 | (0.05) | .46** | 0.37 | (0.05) | .42** | 0.36 | (0.05) | .41** |
| MAp Goal Structure | - | - | - | 0.37 | (0.07) | .28** | 0.37 | (0.07) | .28** |
| PAp Goal Structure | - | - | - | -0.14 | (0.05) | -.14** | -0.13 | (0.06) | -.13* |
| MAp X PAp Goal Structures | - | - | - | - | - | - | -0.05 | (0.07) | -.04 |
| *F* change (2,241) | | | | | 14.39** | | | | |
| *F* change (1,240) | | | | | | | | 0.52 | |

*Note*. * $p < .05$. ** $p < .01$. Gender was dummy-coded (1 = females; 0 = males). MAp= Mastery-Approach. PAp=Performance-Approach.

The set of three-step hierarchal regression models for performance-approach goals was found to be statistically significant in all three steps: Step 1 ($F$ [4,243] =18.01, $p < .01$, adjusted $R^2$ =.21) , Step 2 ($F$ [6,241] =14,11, $p <$ .01, adjusted $R^2$ = .24), Step 3 ($F$ [7,240] =13.22, $p < .01$, adjusted $R^2$ = .26). As can be noticed in Table 4, in the first step only the students' mastery-approach goals positively predicted the endorsement of performance-approach goals. The predictive value of this independent variable remained the same through the other steps. Regarding the perceived promoted goal structures which were added in the second step, the endorsement of performance-approach goals was positively predicted by performance goal structures. When the variable related with the interaction between goal structures was added in the third step, fear of failure became statistically significant in predicting students' performance-approach goals. The interaction between goal structures was also found to negatively predict the endorsement of performance-approach goals.

Regarding the statistically significant interaction between perceived mastery-approach goal structures and performance-approach goal structures, the test of simple slopes (see Figure 1) showed that the relation between perceived performance-approach goal structures and performance-approach goals was significant only for students who perceived low (-1 *SD* below the mean) or average mastery-approach goal structures ($B$ = .41, $SE$ = .10, $p <$ .01, and $B$ = .24, $SE$ = .07, $p < .01$), while it was insignificant for participants who perceived high mastery-approach goal structures (+1 *SD* above the mean) ($B$ = .08, $SE$ = .09, $p > .05$, *ns*).

Table 4
The hierarchal regression model for performance-approach goals

| Predictors | Performance-approach Goals | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Step 1 | | | Step 2 | | | Step 3 | | |
| | B | SE | β | B | SE | β | B | SE | β |
| Gender | -0.08 | (0.13) | -.04 | -0.07 | (0,13) | -.03 | -0.07 | (0,13) | -.03 |
| Need for Achievement | -0.03 | (0.1) | -.02 | -0,01 | (0.09) | -.00 | -0.03 | (0,09) | -.02 |
| Fear of Failure | 0.13 | (0.07) | .10 | 0,13 | (0,07) | 0,11 | 0.14 | (0.07) | .12* |
| MAp Goals | 0.56 | (0.07) | .48** | 0,56 | (0,07) | .48** | 0.54 | (0.07) | .46** |
| MAp Goal Structure | - | - | - | -0.00 | (0.09) | -.00 | -0.03 | (0.09) | -02 |
| PAp Goal Structure | - | - | - | 0.21 | (0.07) | .17** | 0.24 | (0.07) | .20** |
| MAp X PAp Goal Structures | - | - | - | - | - | - | -0.22 | (0.09) | -.14* |
| F change (2,241) | | | | 5.09** | | | | | |
| F change (1,240) | | | | | | | | 6.13* | |

Note. * p < .05. ** p < .01. Gender was dummy-coded (1 = females; 0 = males). MAp= Mastery-Approach. PAp=Performance-Approach.

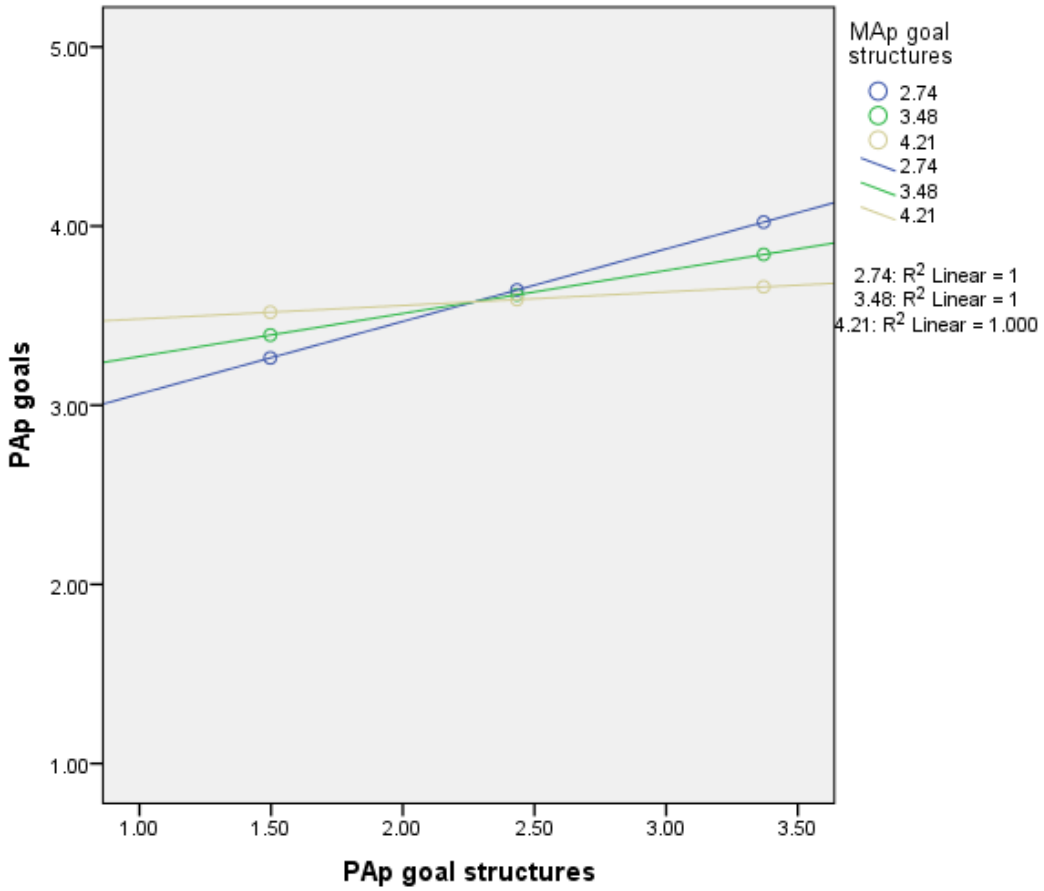


Figure 1. Mastery-approach goal structures' moderation of the relationship between performance-approach goals and performance-approach goal structures

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*Note*. MAp= Mastery-Approach. PAp=Performance-Approach.

**The predictive value of achievement goals regarding students' situational engagement**

Following the two sets of hierarchal regression models for students' mastery-approach and performance-approach goals, the predictive values of the two goals regarding students' situational engagement were tested. While the variables related to student engagement were taken as dependent variables, students' mastery-approach goals, performance-approach goals and the interaction between the two goal types were represented as predictors in the hierarchal regression models.

The set of two-step hierarchal regression models for overall student engagement was found to be statistically significant in both steps: Step 1 ($F$ [3,258] =84.19, $p < .01$, adjusted $R^2$ =.49), Step 2 ($F$ [4,257] =62.9, $p < .01$, adjusted $R^2$ =.49). As presented in Table 5, in the first step students' mastery-approach goals strongly and positively predicted their overall situational engagement. Endorsed performance-approach goals also positively predicted students' overall engagement to some extent. In the second step, when the interaction between the two achievement goals was added to the model, performance-approach goals was still marginally predicting overall engagement (p = .054) alongside with mastery-approach goals which remained as predictive as they were in the first step. However, the interaction between the two achievement goals was not found to be statistically significant.

Table 5
The hierarchal regression model for overall engagement

| Predictors | Overall Engagement | | | | | |
|---|---|---|---|---|---|---|
| | Step 1 | | | Step 2 | | |
| | *B* | *SE* | β | *B* | *SE* | β |
| Gender | -0.08 | (0.09) | -.04 | -0.08 | (0.09) | -.04 |
| MAp Goals | 0.66 | (0.05) | .66** | 0.66 | (0.06) | .66** |
| PAp Goals | 0.08 | (0.04) | .1* | 0.08 | (0.04) | .1 |
| MAp X PAp Goals | - | - | - | 6.43 | (0.04) | 0 |
| *F* change (1,257) | | | | | 0 | |

*Note*. *$p$< .05. **$p$< .01. Gender was dummy-coded (1 = females; 0 = males). MAp= Mastery-Approach. PAp=Performance-Approach.

The set of two-step hierarchal regression models for students' agentic engagement was found to be statistically significant in both steps: Step 1($F$ [3,258] =30.41, $p <$

.01, adjusted $R^2$ =.25), Step 2 $F$ [4,257] =22.76, $p$ < .01, adjusted $R^2$ =.25). As can be seen in Table 6, in the first step endorsement of both achievement goals predicted the students' agentic engagement: the predictive value of the mastery-approach goals was higher than that of the performance-approach goals. In the second step they still predicted the agentic engagement of the students while the interaction between them did not.

Table 6
The hierarchal regression model for agentic engagement

| Predictors | Agentic Engagement | | | | | |
|---|---|---|---|---|---|---|
| | Step 1 | | | Step 2 | | |
| | *B* | *SE* | β | *B* | *SE* | β |
| Gender | -0.14 | (0.13) | -.06 | -0.14 | (0.13) | -.06 |
| Mastery-approach Goals | 0.56 | (0.08) | .44** | 0.55 | (0.09) | .43** |
| Performance-approach Goals | 0.16 | (0.07) | .15* | 0.17 | (0.07) | .15* |
| MAp X PAp Goals | - | - | - | -0.02 | (0.07) | -.02 |
| *F* change (1,257) | | | | | 0.11 | |

*Note*. *$p$< .05. **$p$< .01. Gender was dummy-coded (1 = females; 0 = males). MAp= Mastery-Approach. PAp=Performance-Approach.

The set of two-step hierarchal regression models for students' behavioral engagement was found to be statistically significant in both steps: Step 1 ($F$ [3,258] =71.61, $p$ < .01, adjusted $R^2$ =.45), Step 2 ($F$ [4,257] =53.69, $p$ < .01, adjusted $R^2$ =.447). As presented in table 7, in both steps of the model only the endorsement of mastery-approach goals was found to be statistically significant in positively predicting behavioral engagement of the students.

Table 7
The hierarchal regression model for behavioral engagement

| Predictors | Behavioral Engagement | | | | | |
|---|---|---|---|---|---|---|
| | Step 1 | | | Step 2 | | |
| | *B* | *SE* | β | *B* | *SE* | β |
| Gender | -0.01 | (0.1) | 0 | -0.01 | (0.1) | 0 |
| Mastery-approach Goals | 0.71 | (0.06) | .65** | 0.73 | (0.06) | .68** |
| Performance-approach Goals | 0.05 | (0.05) | .05 | 0.04 | (0.05) | .04 |
| MAp X PAp Goals | - | - | - | 0.03 | (0.05) | .03 |
| *F* change (1,257) | | | | | 0.43 | |

*Note*. *$p$< .05. **$p$< .01. Gender was dummy-coded (1 = females; 0 = males). MAp= Mastery-Approach. PAp=Performance-Approach.

The set of two-step hierarchal regression models for students' emotional engagement was found to be statistically significant in both steps: Step 1($F$ [3,258] =38.36, $p$ < .01, adjusted $R^2$ =.3), Step 2 ($F$ [4,257] =28.68, $p$ < .01, adjusted $R^2$ =.31). As shown in table 7, in both steps of the model only the endorsement of master-approach goals was found to be statistically significant in positively predicting emotional engagement of the students.

Table 8
The hierarchal regression model for emotional engagement

| Predictors | Emotional Engagement | | | | | |
|---|---|---|---|---|---|---|
| | Step 1 | | | Step 2 | | |
| | *B* | *SE* | β | *B* | *SE* | β |
| Gender | -0.16 | (0.14) | -.06 | -0.16 | (0.14) | -.06 |
| Mastery-approach Goals | 0.73 | (0.08) | .54** | 0.74 | (0.09) | .55** |
| Performance-approach Goals | 0.06 | (0.07) | .05 | 0.06 | (0.07) | .05 |
| MAp X PAp Goals | - | - | - | 0.02 | (0.07) | .02 |
| *F* change (1,257) | | | | | 0.08 | |

*Note*. *$p$< .05. **$p$< .01. Gender was dummy-coded (1 = females; 0 = males). MAp= Mastery-Approach. PAp=Performance-Approach.

The set of two-step hierarchal regression models for students' cognitive engagement was found to be statistically significant in both steps: Step 1($F$ [3,258] =56.54, $p <$ .01, adjusted $R^2$ =.39), Step 2 ($F$ [4,257] =42.68, $p <$ .01, adjusted $R^2$ =.4). As can be seen in table 7, in both steps of the model only the endorsement of master-approach goals was found to be statistically significant in positively predicting cognitive engagement of the students.

Table 9
The hierarchal regression model for cognitive engagement

| Predictors | Cognitive Engagement | | | | | |
|---|---|---|---|---|---|---|
| | Step 1 | | | Step 2 | | |
| | *B* | *SE* | β | *B* | *SE* | β |
| Gender | 0.02 | (0.1) | .01 | 0.02 | (0.1) | .01 |
| Mastery-approach Goals | 0.63 | (0.06) | .6** | 0.6 | (0.07) | .57** |
| Performance-approach Goals | 0.06 | (0.05) | .06 | 0.07 | (0.05) | .08 |
| MAp X PAp Goals | - | - | - | -0.05 | (0.05) | -.06 |
| *F* change (1,257) | | | | | 1.07 | |

*Note*. *$p$< .05. **$p$< .01. Gender was dummy-coded (1 = females; 0 = males). MAp= Mastery-Approach. PAp=Performance-Approach.

**The predictive value of dispositional achievement motives and achievement goal structures regarding students' situational engagement**

After having checked the predictive values of the two goals regarding students' situational engagement, the predictive values of dispositional achievement motives and students' perception of the promoted achievement goal structures were tested with hierarchal regression models for all the variables related with students' situational engagement. While the variables related to student engagement were taken as dependent variables, students' dispositional achievement motives and their

perception of achievement goal structures were represented as predictors in the hierarchal regression models.

The hierarchal regression models for overall student engagement were found to be statistically significant in both steps: Step 1 ($F$ [3,258] =3.27, $p < .05$, adjusted $R^2$ =.04), Step 2 ($F$ [5,256] =24.96, $p < .01$, adjusted $R^2$ =.32). As the table 10 shows, in the first step only the need for achievement positively predicted the students' overall engagement. In the second step, when the two teacher goal structures were added, as the predictive value of need for achievement remained the same, students' perception of mastery goal structures strongly and positively predicted their overall engagement.

Table 10
The hierarchal regression model for overall engagement

| Predictors | Overall Engagement | | | | | |
|---|---|---|---|---|---|---|
| | Step 1 | | | Step 2 | | |
| | *B* | *SE* | β | *B* | *SE* | β |
| Gender | 0.17 | (0.12) | .09 | 0.07 | (0.1) | .04 |
| Need for Achievement | 0.19 | (0.09) | .13* | 0.2 | (0.08) | .13** |
| Fear of Failure | -0.13 | (0.07) | -.12 | -0.08 | (0.06) | -.07 |
| MAp Goal Structure | - | - | - | 0.69 | (0.07) | .54** |
| PAp Goal Structure | - | - | - | 0.00 | (0.06) | .00 |
| *F* change (2,256) | | | | | 54.47** | |

*Note*. *$p$< .05. **$p$< .01. Gender was dummy-coded (1 = females; 0 = males). MAp= Mastery-Approach. PAp=Performance-Approach.

The set of two-step hierarchal regression models for students' agentic engagement was found to be statistically significant in both steps: step 1 ($F$ [3,258] =3.18, $p <$ .05, adjusted $R^2$ =.02), step 2 ($F$ [5,256] =12.73, $p < .01$, adjusted $R^2$ =.18). As presented in table 11, in the first step only the need for achievement positively predicted the students' agentic engagement. When the two goal structures were added to the model, mastery goal structures were found to be positively and strongly

predicting students' agentic engagement. The predictive value of the need for achievement remained almost the same in this step.

Table 11
The hierarchal regression model for agentic engagement

| Predictors | Agentic Engagement | | | | | |
|---|---|---|---|---|---|---|
| | Step 1 | | | Step 2 | | |
| | *B* | *SE* | β | *B* | *SE* | β |
| Gender | 0.11 | (0.16) | .04 | 0.03 | (0.14) | .01 |
| Need for Achievement | 0.32 | (0.12) | .16** | 0.34 | (0.11) | .18** |
| Fear of Failure | -0.12 | (0.09) | -.08 | -0.07 | (0.08) | -.05 |
| MAp Goal Structure | - | - | - | 0.62 | (0.1) | .37** |
| PAp Goal Structure | - | - | - | 0.12 | (0.08) | .09 |
| *F* change (2,256) | | | | | 26.13** | |

*Note*. *$p$< .05. **$p$< .01. Gender was dummy-coded (1 = females; 0 = males). MAp= Mastery-Approach. PAp=Performance-Approach.

The hierarchal regression model for students' behavioral engagement was found to be statistically significant in both steps: step 1 ($F$ [3,258] =2.9, $p$ < .05, adjusted $R^2$ =.02), step 2 ($F$ [5,256] =12.93, $p$ < .01, adjusted $R^2$ =.19). As presented in table 12, no variable was found to be statistically significant in predicting students' behavioral engagement in the first step. In the second step however, when the two variables related to the achievement goal structures were added to the regression, need for achievement became statistically significant in positively predicting behavioral engagement. Regarding the achievement goal structures, only mastery goal structures strongly and positively predicted the behavioral engagement of the students.

Table 12
The hierarchal regression model for behavioral engagement

| Predictors | Behavioral Engagement | | | | | |
|---|---|---|---|---|---|---|
| | Step 1 | | | Step 2 | | |
| | *B* | *SE* | β | *B* | *SE* | β |
| Gender | 0.23 | (0.13) | .11 | 0.14 | (0.12) | .07 |
| Need for Achievement | 0.17 | (0.1) | .11 | 0.18 | (0.09) | .11* |
| Fear of Failure | -0.13 | (0.07) | -.11 | -0.08 | (0.07) | -.07 |
| MAp Goal Structure | - | - | - | 0.58 | (0.08) | .42** |
| PAp Goal Structure | - | - | - | -0.03 | (0.07) | -.03 |
| *F* change (2,256) | | | | | 27.1** | |

*Note*. *$p$< .05. **$p$< .01. Gender was dummy-coded (1 = females; 0 = males). MAp= Mastery-Approach. PAp=Performance-Approach.

The hierarchal regression model for emotional engagement was found to be statistically significant only in the second step ($F$ [5,256] =24.06, $p$ < .01, adjusted $R^2$ =.32). As can be seen in table 13, in the first step the fear of failure negatively predicted the students' emotional engagement in a specific session. In the second step, when the two variables related to the achievement goal structures were added to the regression, perceived mastery goal structures strongly and positively predicted the emotional engagement of the students, while the fear of failure was no longer statistically significant in predicting it.

Table 13
The hierarchal regression model for emotional engagement

| Predictors | Emotional Engagement | | | | | |
|---|---|---|---|---|---|---|
| | Step 1 | | | Step 2 | | |
| | *B* | *SE* | β | *B* | *SE* | β |
| Gender | 0.13 | (0.17) | .05 | -0.01 | .14 | 0 |
| Need for Achievement | 0.07 | (0.13) | .04 | 0.08 | 0.11 | .04 |
| Fear of Failure | -0.18 | (0.09) | -.13* | -0.11 | 0.08 | -.08 |
| MAp Goal Structure | - | - | - | 0.98 | 0.09 | .56** |
| PAp Goal Structure | - | - | - | -0.06 | 0.08 | -.04 |
| *F* change (2,256) | | | | | 56.83** | |

*Note*. *$p$< .05. **$p$< .01. Gender was dummy-coded (1 = females; 0 = males). MAp= Mastery-Approach. PAp=Performance-Approach.

The hierarchal regression model for students' cognitive engagement was found to be statistically significant in both steps: step 1 ($F$ [3,258] =3.26, $p$ < .05, adjusted $R^2$ =.02), step 2 ($F$ [5,256] =9.61, $p$ < .01, adjusted $R^2$ =.14). As presented in table 14, in the first step gender and students' need for achievement positively predicted the cognitive engagement of the students. In the second step of the model, when the two variables related to the achievement goal structures were added, gender lost its statistical significance in predicting cognitive engagement, while the predictive value of the need for achievement remained almost the same. Regarding the two achievement goal structures, the perceived mastery goal structures strongly and positively predicted the cognitive engagement of the students.

Table 14
The hierarchal regression model for cognitive engagement

| Predictors | Cognitive Engagement | | | | | |
|---|---|---|---|---|---|---|
| | Step 1 | | | Step 2 | | |
| | *B* | *SE* | β | *B* | *SE* | β |
| Gender | 0.25 | (0.13) | .12* | 0.18 | (0.12) | .09 |
| Need for Achievement | 0.21 | (0.1) | .13* | 0.22 | (0.09) | .14* |
| Fear of Failure | -0.06 | (0.07) | -.06 | -0.03 | (0.07) | -.02 |
| MAp Goal Structure | - | - | - | 0.49 | (0.08) | .36** |
| PAp Goal Structure | - | - | - | -0.04 | (0.07) | -.04 |
| *F* change (2,256) | | | | | 18.47** | |

*Note*. *$p$< .05. **$p$< .01. Gender was dummy-coded (1 = females; 0 = males). MAp= Mastery-Approach. PAp=Performance-Approach.

**Indirect effects through the mediation of endorsed achievement goals**

Having granted that students' mastery-approach goals predicted all variables related to the situational engagement of students and were predicted by fear of failure and the two variables related to students' perception of achievement goal structures at the same time through the regression analyses, the relationships among these variables were further explored. To find out whether the fear of failure and perceived teacher goal structures had an indirect effect on students' situational engagement through the endorsed mastery-approach goals, a number of Bootstrap analyses (Hayes, 2013), which included1000 replications, were conducted.

Endorsed mastery-approach goals were found to be mediating between the fear of failure and students' overall engagement. The indirect effect of the fear of failure on the overall engagement was negative B = 0.07, SE = 0.03, 95% CI: -0.14 – -0.01 as the lower limit was lower than zero. Students' mastery-approach goals also mediated between the fear of failure and all of the engagement types under overall

engagement. The fear of failure had a negative indirect effect on agentic engagement B = 0.06, SE = 0.03, 95% CI: -0.13 – -0.01; behavioral engagement B = 0.08, SE = 0.04, 95% CI: -0.16 – -0.02; emotional engagement B = 0.07, SE = 0.03, 95% CI: -0.15 – -0.01 and cognitive engagement B = 0.08, SE = 0.04, 95% CI: -0.16 – -0.01.

Students' mastery-approach goals were also found to be mediating between the perceived mastery-approach goal structures and students' overall engagement. The indirect effect of the perceived mastery-approach goal structures on the overall engagement was positive B = 0.21, SE = 0.05, 95% CI: 0.12 – 0.30 since the lower limit was higher than zero. Endorsed mastery-approach goals mediated between the perceived mastery-approach goal structures and all of the different engagement types. To specify, the perceived mastery-approach goal structures had positive indirect effect on agentic engagement B = 0.17, SE = 0.04, 95% CI: 0.10 – 0.27; behavioral engagement B = 0.23, SE = 0.05, 95% CI: 0.15 – 0.35; emotional engagement B = 0.20, SE = 0.05, 95% CI: 0.12 – 0.31 and cognitive engagement B = 0.23, SE = 0.05, 95% CI: 0.14 – 0.34.

Finally, the mediation of the endorsed mastery-approach goals between the perceived performance-approach goal structures and the students' situational engagement was examined. Through this mediation it was found that, the perceived performance-approach goal structures had a negative indirect effect on overall student engagement B = 0.08, SE = 0.04, 95% CI: -0.15 – -0.02 since the lower limit was lower than zero. Students endorsed mastery-approach goals were found to be mediating between the perceived performance-approach goal structures and all of the different engagement types. To specify, the perceived performance-approach goal structures had a negative

indirect effect on agentic engagement B = 0.07, SE = 0.03, 95% CI: -0.15 – -0.02; behavioral engagement B = 0.09, SE = 0.04, 95% CI: -0.18 – -0.02; emotional engagement B = 0.08, SE = 0.04, 95% CI: -0.16 – -0.01 and cognitive engagement B = 0.09, SE = 0.04, 95% CI: -0.18 – -0.03.

After controlling the master-approach goals' role as a mediator between students' situational engagement and other independent variables predicting the endorsement of mastery-approach goals, the role of the performance-approach goals as a mediator was examined. Given that performance-approach goals predicted agentic engagement of students and in turn was predicted by fear of failure and perceived performance-approach goal structures, two Bootstrap analyses (Hayes, 2013), which included1000 replications, were conducted to examine the performance-approach goals' role as a mediator. According to the results, student endorsed performance-approach goals was not found to be mediating between any of the related variables mentioned above.

**Similarities and differences between students' and observers' perceptions**

The study also aimed to investigate the different perceptions of students and observers regarding the promoted achievement goal structures and overall student engagement in specific class sessions. To this end, new variables were constructed by subtracting observers' rating means for the two perceived achievement goal structures and overall student engagement from that of the students'. To see the differences, frequencies of these new variables were investigated. The students whose perceptional difference was in the band between -0.5 and 0.5 values were decided to have measured the variables in a similar fashion with the observers. For the values above 0.5, students were regarded as having higher perception of the two

achievement goal structures or having reported to be engaged with the specific session more than the observers' perception. For the values below -0.5, the case was just the opposite.

As explained above, frequencies were investigated for detecting differences between students' and observers' ratings for mastery-approach, performance-approach goal structures and overall student engagement in a specific class sessions. While 14.3% of the students perceived mastery-approach goal structures similar to the observers, 4.3% reported lower and 81.4% reported higher perception of mastery-approach goal structures. Although more students', 28.4%, perception of performance-approach goal structure was close to that of the observers' compared with the perceived mastery-approach goal structures' case , still most of the students reported higher than the observers for the perceived performance-approach goal structures: While 10% of the students reported lower evaluation, 61.6% reported higher than the observers' evaluation of the performance-approach goal structures. The results were similar for the difference between observers' evaluation of overall student engagement and students' self-reports for their own overall engagement. Only 19% of the students gave a similar report to the observers' evaluation regarding students' overall engagement. On the other hand, 69.9 % of the students reported higher and 11.1 % reported lower engagement than the observers' evaluation.

Following the investigation of the differences between observer and student perceptions, it was controlled whether the trained observers' perception of higher mastery-approach goal structures were linked with higher student engagement and higher mastery-approach goal endorsement as the previous analyses suggested.

Hence, top 3 and lowest 3 classes were grouped respectively into higher and lower group in terms of observers' perception of mastery-approach goal structures in specific sessions. The other group was titled as the average group. Following the grouping, a MANOVA was conducted to investigate the differences among the three groups in terms of their perception of achievement goal structures, endorsed achievement goals and situational overall engagement depending on their self-report. As a result, significant differences were found among the three groups (Wilk's $\Lambda$ = .08, $F$ [18, 504] = 2.78, $p < .01$, multivariate $\eta^2 = .09$) regarding the dependent variables: students' perception of achievement goal structures, endorsed achievement goals and overall engagement. A follow-up analysis of variance (ANOVA) presented in Table 15 and Tukey post hoc analysis revealed that the students, from classes in which the teachers promoted mastery goal structures more as perceived by the observers, reported significantly higher perception of mastery goal structures, mastery-approach goal endorsement and overall engagement during a specific class session compared to the average and lower groups. When the four different aspects of engagement were considered, it was seen that there was no significant difference among groups only in students' agentic engagement.

Table 15
The statistically significant effects of the groups on perceived achievement goal structures, achievement goal endorsement and overall engagement indicated by ANOVA

| | *F* | *df* | *P* | *multivariate* $\eta^2$ | $Mean_{Higher\ Group}$ | *SD* | $Mean_{Average\ Group}$ | *SD* | $Mean_{lower\ group}$ | *SD* |
|---|---|---|---|---|---|---|---|---|---|---|
| MAp Goal Structures | 7.777 | 2,260 | .00 | .06 | 3.75 | 0.68 | 3.45 | 0.73 | 3.31 | 0.72 |
| PAp Goal Structures | 0.119 | 2,260 | .88 | .00 | 2.46 | 0.98 | 2.41 | 0.93 | 2.47 | 0.95 |
| MAp Goals | 10.834 | 2,260 | .00 | .08 | 4.47 | 0.71 | 3.80 | 1.05 | 4.00 | 0.96 |
| PAp Goals | 2.775 | 2,260 | .06 | .02 | 3.74 | 1.11 | 3.38 | 1.15 | 3.68 | 1.06 |
| Overall Engagement | 6.987 | 2,260 | .00 | .05 | 3.83 | 0.85 | 3.36 | 1.05 | 3.34 | 0.88 |
| Agentic | 1.184 | 2,260 | .31 | .01 | 3.29 | 1.27 | 3.15 | 1.24 | 2.99 | 1.22 |
| Behavioral | 10.788 | 2,260 | .00 | .08 | 4.07 | 0.84 | 3.37 | 1.10 | 3.47 | 1.03 |
| Emotional | 5.329 | 2,260 | .00 | .04 | 3.86 | 1.26 | 3.33 | 1.31 | 3.23 | 1.24 |
| Cognitive | 6.931 | 2,260 | .00 | .05 | 4.41 | 0.89 | 3.83 | 1.10 | 4.00 | 0.95 |

*Note*. MAp= Mastery-Approach. PAp=Performance-Approach.

**Similarities and differences between students' and teachers' perceptions**

To investigate the different perceptions of students and teachers regarding the promoted achievement goal structures and overall student engagement in specific class sessions, similar to the previous comparison between student and observer perceptions, new variables were constructed by subtracting teachers' rating means for the two achievement goal structures and overall student engagement from that of the students'. To see the differences, frequencies of these new variables were investigated by considering the values between -0.5 and 0.5 as similar to the teachers' perception.

According to the results, while 26.9% of the students perceived mastery-approach goal structures similar to the teachers' reports, 71.3% reported lower and 1.8% reported higher perception of mastery-approach goal structures. Although more students' perception of performance-approach goal structure and self-reported engagement was closer to that of the teachers' ratings compared with the perceived mastery-approach goal structures' case, still most of the students reported lower than the teachers for the perceived performance-approach goal structures and student engagement. While 25.1% of the students evaluated performance-approach goal structure similar to the teachers' self-reports, 52.3 reported lower and 22.2% reported higher perception of performance-approach goal structure. The results were similar for the student engagement. 32.6% of the students evaluated their engagement similar to the teachers' perception. While 50.9% reported lower levels of engagement, only 16.5% of the students reported higher levels of engagement in comparison to teachers' perceptions.

Upon coming up with such different accounts for the comparisons between students' and observer's perceptions; and students' and teachers' perceptions, a follow-up investigation of the difference between observer and teacher ratings was made. Similar to the approach for the previous comparisons, different variables were created by subtracting observer means from teacher means for the two achievement goal structures and overall student engagement. Then, the frequencies of these new variables were investigated by considering the values between -0.5 and 0.5 as similar to the observers' perception. All ten teachers reported higher mastery-approach goal structures and student engagement for their sessions than the observers' perception. Regarding the performance-approach goal structures, reports of the four teachers out of ten was missing. While one of the teachers reported similarly to the observers' perception, one reported lower and remaining four teachers reported higher performance-approach goal structures than the observers' perception.

# CHAPTER 5: DISCUSSION

## Introduction

The purpose of the current study was to explore the relationships among the antecedents of student motivation, teachers' goal structures (contextual) and students' dispositional achievement motives(personal), students' endorsed achievement goals and engagement during specific class sessions. It also investigated the similarities and differences among students', teachers' and trained observers' perceptions of class session which are under study. This chapter focused on an overview of the whole research project and specifically on the major findings of the study. Following the important findings, information related to implications for practice and further research was provided. Finally, the limitations regarding the project were shared with the reader.

## Overview

To achieve the aims of the present study, following research questions were investigated:

1. Do students' personal characteristics and contextual situation in a classroom setting predict student engagement through the mediation of their endorsed achievement goals during a specific class session?

    a. Do students' dispositional achievement motives and the promoted goal structures predict their endorsed achievement goals?

    b. Do students' endorsed achievement goals predict student engagement?

c. Do students' dispositional achievement motives and the promoted goal structures predict student engagement?

2. To what extent does the students' engagement and perception of promoted goal structures differ from observers' and teachers' perception?

3. Do students endorsed achievement goals and engagement differ according to the level of mastery goal structures as perceived by the observers in a specific class session?

In the study a cross sectional design and correlational method were preferred to investigate the relationships among variables and to detect differences and similarities between different perceptions of the participants regarding specific class sessions. To capture the reality of the classrooms variables were also measured by trained observers who observed the lessons at least two times during the process of data collection. The study was conducted in a public high school located in an urban city, Ankara, with the voluntary participation of 310 students from $9^{th}$, $10^{th}$ and $11^{th}$ grades and 10 teachers. Specific class sessions under investigation consisted of 5 English, 3 Turkish and 2 Science lessons.

During the data collection process, three sets of instruments were used for measuring student related and teacher related variables depending on specific class sessions: Firstly, students filled in questionnaires about their dispositional achievement motives (Lang & Fries, 2006), perceived teacher achievement goal structures (Turner et al., 2002), situational engagement (Reeve & Tseng, 2011) and their situational achievement goal endorsement (Elliot & Murayama, 2008). Secondly, teachers rated their promotion of achievement goal structures (Turner et al., 2002) and situational

student engagement (Reeve & Tseng, 2011). Thirdly, observers used rating sheets to assess teacher achievement goal structures, and student engagement regarding the same specific class sessions as students and teachers. Following the preliminary analysis, hierarchal regression models, Bootstrap analysis and MANOVA were used to answer the research questions under investigation.

## Major findings

Building on the results of the analyses and the hypotheses grounded on the literature review, major findings related to each research question will be explained and discussed below:

*1. Do students' personal characteristics and contextual situation in a classroom setting predict student engagement through the mediation of their endorsed achievement goals during a specific class session?*

To answer this research question following sub-questions were investigated to make sure that the conditions for this mediation were granted:

*a. Do students' dispositional achievement motives and the promoted goal structures predict their endorsed achievement goals?*

According to the study findings, perceived mastery goal structures positively predicted mastery-approach goal endorsement of the students in a specific lesson; whereas the perceived performance goal structures positively predicted the endorsed performance-approach goals especially for students who perceived also low mastery-approach goal structures. These findings support Hypothesis 1. Beyond Hypothesis 1, a negative relation between performance goal structures and mastery-approach

goals was also found, indicating that teacher's focus on competition could have negative effects on students' goal to learn and improve themselves. On the other hand teacher's focus on mastery-approach goals can be a protective factor for students' motivation when both goal structures are emphasized by the teacher. These findings are in accord with the previous studies that have shown a positive relation between the achievement goals structures promoted by the teacher and the achievement goals endorsed by the students (Ames, 1992; Anderman& Anderman, 1999; Urdan, 2004; Wolters, 2004; Young, 1997).

Despite the previous results regarding the need for achievement's predictive value of mastery-approach goals and performance-approach goals (Elliot&Church, 1997; Elliot& Harackiewicz, 1996; Elliot& McGregor, 2001) and Hypothesis 2, results of the current study did not find such relationships. Fear of failure, on the other hand, did predict the endorsement of performance-approach goals positively as expected based on the previous studies conducted by Tanaka and Yamauchi (2001) as well as Michou et al. (2013), supporting Hypothesis 2 partially.

Although mastery-approach goals were not predicted by need for achievement, it was predicted by other personal factors. It was positively predicted by gender, which suggested that there was a significant relationship between being a female student and focusing on mastery and intrinsic enjoyment with the lesson. Mastery-approach goal endorsement was also negatively predicted by the fear of failure, suggesting that being disposed to avoid failure negatively predicted the endorsement of this goal.

*b. Do students' endorsed achievement goals predict student engagement?*

The results of the hierarchal regression models for the overall student engagement showed that the endorsed mastery-approach goals positively predicted overall student engagement as assumed in Hypothesis 3 (Elliot & Church, 1997; Hıdıroğlu & Sungur, 2015). On the other hand, endorsed performance-approach goals marginally predicted overall engagement in a positive way contrary to the predictions. Yet in contrast to our expectations, performance-approach goals were not found to predict behavioral engagement. This result supported research that linked behavioral engagement only to the endorsement of mastery goals (Miller et al., 1996; Hıdıroğlu & Sungur, 2015). Wolters' (2004) suggestions regarding the students who might be exaggerating their engagement level as they report it to look better compared to other students can be taken into account in interpreting different results.

When the four aspects of student engagement were inspected separately, mastery-approach goal endorsement was found to predict all of the aspects positively and strongly as it was predicted in Hypothesis 3. Yet in contrast to our expectations, performance-approach goals were not found to predict behavioral engagement but the agentic one. This result supported research that linked behavioral engagement only to the endorsement of mastery goals (Miller et al., 1996; Hıdıroğlu & Sungur, 2015) and shed more light into the newly introduced agentic engagement which could be the result of both mastery-approach and performance-approach goal endorsement. Since agentic engagement is related to being active in lessons visibly, asking questions and commenting on learning activities, students who try to look better than their peers might get agentically engaged to some extent. This different result suggests that agentic engagement as the latest developed aspect of engagement

should be further studied together with other aspects of student engagement to provide more information about their relationship to students' motivation.

*c. Do students' dispositional achievement motives and the promoted goal structures predict student engagement?*

The results showed that the need for achievement positively predicted student engagement in general as assumed in Hypothesis 4 (Cock & Halvari, 1999; Reeve, Deci & Ryan, 2004). When different aspects of engagement were considered, it can be seen that the need for achievement predicted all types of engagement except of emotional engagement which is an aspect related to intrinsic interest in learning activities in lessons.

Regarding the assumption related to the fear of failure in Hypothesis 4, it can be said that it was not confirmed as fear of failure did not predict engagement at all. However, the findings indicated an indirect negative relationship between fear of failure and engagement through low mastery-approach goals. It seems that students' low quality of motivation is the psychological mechanism that links fear of failure to engagement. The students with the tendency to avoid failure are less likely to endorse the goal to learn and improve themselves and this makes them less engaged in the class.

Along with dispositional achievement motives, achievement goal structures' relation to student engagement was tested as well. Confirming Hypothesis 5, teacher promoted mastery goal structures predicted overall student engagement (Greene, 2004; Nolen, 2003) and all four aspects of it, whereas performance goal structures

did not predict any aspect of student engagement (Ames & Archer, 1998; Wolters, 2004) or the overall engagement. This shows that students of teachers who support learning and self-improvement are more persistent, have positive feelings and actively get involved with the lesson. On the other hand, instructional behaviors that promote competition and evaluate students in a norm-based fashion are not related to student engagement.

Taking the findings regarding the prediction of engagement by both personal and contextual factors together, it was found that both mastery goal structures and need for achievement predicted almost all types of engagement, except that need for achievement did fail to predict emotional engagement. Overall, it was an interesting finding showing the importance of taking both contextual and personal factors, specifically need for achievement and mastery goal structures, into consideration in order to understand and support students functioning in classroom.

Consequently, indirect effects of the variables which predicted both students' endorsed achievement goals and student engagement were investigated to see if mastery-approach and performance-approach goals mediated between these variables and students engagement as a student outcome and answer the first research question of the study.

Regarding the mastery-approach goals' role as a mediator, Hypothesis 6 assumed that students' need for achievement (Michou et al., 2014) and promoted mastery goal structures would indirectly and positively predict students' engagement. The assumption was partially supported: Since need for achievement was not found to

predict mastery-approach goals' endorsement, it was not possible to consider its indirect effect through such mediation. On the other hand, student perceived mastery goal structures had a positive indirect effect on all aspects of engagement through mastery-approach goal endorsement as it was assumed.

Moreover, as perceived performance goal structures negatively predicted the endorsement of mastery-approach goals by students, and their indirect effects on student engagement were also tested. Performance goal structures negatively predicted all aspects of engagement through the mediation of low mastery-approach goals.

As it was assumed (Hypothesis 7) performance-approach goals did not mediate the relationship between personal and contextual factors to engagement showing that normative goals cannot link dispositions and environmental perceptions to students' participation.

Overall, it can be concluded that both personal and contextual factors played an equally important role in directly predicting student engagement, and also indirectly predicting engagement through the endorsement of mastery-approach goals. Moreover, teachers' promotion of mastery goal structures directly predicted endorsement of mastery-approach goals. Teachers can support this good quality of student motivation and in turn students' engagement with the lesson by prioritizing learning and self-based improvement instead of competition and norm-based evaluation. Performance-approach goal endorsement, on the other hand, had a weak relationship with overall student engagement, to specify with agentic engagement

only and did not mediate between contextual and personal factors and student engagement. Even this weak relationship is questionable as suggested by Wolters (2004), it could be an exaggeration by students or students might have tried to show themselves as engaged as possible with the lesson through questions and behaving proactively to prove their normative success.

*2. To what extent does the students' engagement and perception of promoted goal structures differ from observers' and teachers' perception?*

The comparison between students' and observers' ratings regarding achievement goal structures and student engagement shows that students overestimated both achievement goal structures, performance and mastery goal structures, and reported higher engagement in comparison to the observers' perception. While the biggest difference was in their ratings of engagement, the smallest difference was between their perceptions of performance goal structures. Since most of the students reported higher than observers, still it was not possible to claim that they had similar perceptions with regard to performance goal structures. Although trained observers are knowledgeable in detecting instructional behaviors promoting different goals, it seems that students have much more different perception of the context that they are an integrated part of.

Regarding the comparison between students' and teachers' perceptions of achievement goal structures and student engagement, the results interestingly show that this time teachers overestimated their promotion of both goal structures and perceived higher student engagement compared to students' ratings. This suggests that the teachers did not have an accurate perception of student engagement, which is

problematic since they were not aware of students needs to take action, support and motivate students to get more involved with the lesson. On the other hand the overestimation of students' engagement from teachers could be the result of a defensive attitude regarding their responsibility in teaching and engaging effectively students which could led them to give socially desirable answers to the administrated survey.

Comparison between observers' and teachers' ratings regarding the two achievement goal structures and students engagement revealed that all ten teachers reported mastery goal structures and student engagement higher than the observers. Only six teachers reported for performance-approach goal structures while other four refrained from answering related questions in the survey. Out of these six teachers, only one reported lower and one reported similar to the observers' ratings, while the remaining overestimated their promotion of performance goal structures. These results ring a bell as to teachers' perception of the quality of instructional behaviors promoting performance-approach goals and their understanding of it. Teachers might have misconceptions that promoting competition and norm-based evaluation are functional ways to improve student engagement or vague ideas related to these instructional behaviors, which led them to refrain from reporting.

In conclusion, the results all suggested important differences among teachers', students' and observers' perceptions of achievement goal structures and students engagement which was in line with the past research (Patrick et al., 2001; Anderman et al., 2002) and confirmative of the Hypothesis 8. The difference between teachers' perception of student engagement and students' own report was particularly a notable

finding, since it suggests that the interaction between student and teacher might not be interpreted similarly from the two parts and therefore teachers, as they overestimated students' engagement, might not be able enough to improve the quality of the student motivation and their engagement with the learning activities.

*3. Do students endorsed achievement goals and engagement differ according to the level of mastery goal structures as perceived by the observers in a specific class session?*

As expected based on prior research (Anderman et al., 2002; Turner et al., 2002), the results revealed that the observers' perception of high, average or low mastery goal structures in specific class sessions predicted significant differences among students with regard to their perception of promoted achievement goal structures, achievement goal endorsement and engagement supporting Hypothesis 9.

To specify, students from classes with high promotion of mastery goal structures according to observers, reported significantly higher perception of mastery goal structures, higher mastery goal endorsement and overall engagement in comparison to average or lower groups. Out of the four aspects of student engagement, the results showed no significant difference among groups only regarding agentic engagement. Although big differences were found between observers' and students' perceptions regarding achievement goal structures and engagement, these results revealed that the observers were able to catch the reality of the class sessions; and their perceptions were successful as significant differences were found among students from high, average and low mastery goal structured classes. Moreover, the results show that, despite students overestimated their teachers promotion of mastery goal

structures regarding the observers, their estimation was to the right direction as perceived mastery goal structures in the high mastery structured classes (according to the observers assessment) was significantly higher than in the average or low mastery structured classes. Regarding student motivation and engagement, the differences among the high, average and low mastery structured classes showed that when teachers focus on learning and self-improvement, students endorse learning goals and they are highly engaged in class activities.

## Implications for practice

The findings of the study revealed that student motivation in a specific class session was predicted by both contextual and personal factors. In classes that higher teacher promoted mastery goal structures were perceived, students endorsed mastery-approach goals and were more engaged compared to other students. Mastery-approach goal endorsement also depended on need low fear of failure as a personal factor. These findings suggest that good quality of student motivation, and hence the students' engagement in the lesson, can be supported by teachers' instructional behaviors that promote mastery-approach goal endorsement. On the other hand, it is important for the teachers to take students' dispositions into consideration and differentiate their instructions accordingly. When fear of failure is low, they can cultivate learning goals more easily. While fear of failure is high, they probably need stronger emphasis on self-referenced evaluation and learning.

Yet the findings also underline the teachers' vague understanding of student engagement and their own promotion of achievement goal structures. Considering the equal importance of the contextual factors in relation to student motivation,

teachers should be trained to have a better understanding of the students' perspective; to be in touch with them during the teaching and learning process; and to be capable of understanding student needs accurately. Also trainings regarding instructional behaviors that promote the endorsement of mastery-approach goals should be provided along with clear and detailed information about the roles of achievement goal structures and achievement goals in teaching and learning.

Moreover, policy makers and curriculum designers should take these findings into account and shift the focus of the curricula on self-referenced evaluation that promote individual improvement and learning by enjoying the content instead of expecting demonstration, competition and normative assessment through emphasis on tests. Especially in a country where education is handled traditionally and exam-focused like Turkey, a shift in authorities' approach coming accompanied by effective teacher trainings would facilitate teachers' use of effective instructional behaviors and help in improving teaching and learning.

All the above implications should be taken into account in initial teacher trainings as well. Apart from dwelling on the instructional behaviors that promote good quality of student motivation, observational trainings could be introduced to the teachers in their initial training. Since the results suggest that teachers might overestimate students engagement and their promotion of mastery goal structures, a third eye in the classroom can provide a more objective view and be able to give constructive feedback to teachers. By being trained observers, teachers might play the role of a critical friend and become more effective in giving feedback than an external observer or an inspector. Hence, authorities and school administrators should

consider implementing observational trainings to teachers and developing a school culture in which teachers can collaborate in developing effective teaching strategies and learning through constructive observations.

## Implications for further research

The present study was conducted in a public high school in the city center of Ankara. To get a bigger and more generalizable picture of education in Turkey, similar studies can be conducted in different types of schools, in different cities and in rural areas as well. Moreover, the sample of the present study consisted of 310 students and 10 teachers in total. A more expansive research would make it possible to run multilevel analysis to explore to what extent contextual factors, promoted achievement goal structures, would predict student motivation and engagement at classroom levels, instead of student level. Such studies will contribute to the literature with providing more reliability and validity; and be the stepping stones in building towards change and improvement in education.

The study found different results separating agentic engagement from the other aspects of student engagement. Agentic engagement was both predicted by endorsed mastery-approach and performance-approach goals. Additionally, there was no significant difference in terms of agentic engagement among students groups which were formed according to observers' perception of high, average or low mastery goal structures. Hence, further studies are required to investigate the different nature of agentic engagement together with other aspects of student engagement to clarify their relationship to students' motivation.

Although the present study involved observational methods, a more qualitative approach can be taken to illuminate Turkish classroom context and to keep an inventory of specific instructional behaviors. Since it was found out that the teachers could have misconceptions regarding certain instructional behaviors related to achievement goal promotion, qualitative research in this field may help collecting data about good and bad practices and can contribute to the quality of teacher trainings and regulations of policy makers.

## Limitations

Although this study aimed to shed light unto the situation in Turkey in terms of the relationship among achievement goal structures, achievement goal endorsement and student engagement, it is limited in capturing the general picture of the Turkish educational reality for the following reasons: First of all, the sample selected for the study is only consisted of public high school students of a big urban city, Ankara. Hence, results of the study should be confined to Turkish high school context, and the sample's failure to represent the rural areas of Turkey should be admitted as well. Moreover, due to the time consuming nature of the observations, it was not possible to observe many classes and reach up to a larger portion of the population. Additionally it was not possible to conduct the study in different schools for the same reason. Thus, these reasons may have diminished the generalizability of the study's results.

Although observational method for data collection had its advantages for data triangulation and shedding more light into the classroom environment, it was also a limitation in terms of its possible effects on the teachers instructional behaviors in

lessons. Knowing that they were under observation for the study, they could interact differently with the students than in the normal circumstances or change their instructional style. This could also play a role in changes or exaggerations in student behavior during the observed sessions.

Another important point to consider was that the study adopted a correlational research method. Even if a relationship between promoted achievement goal structures and student engagement was found, it was not possible to say whether goal structures influenced engagement or vice versa. Hence, as only the relationships among the variables were investigated; it did not give the ground for inferring causal relationships.

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# APPENDICES

## APPENDIX A: Student Questionnaires (English)

**ID: _____ Gender M / F Age _____ Date: _____**

**Please, indicate to what extent you agree or disagree with each statement by using the following statements**.

| **Generally speaking, in my life …** | Strongly disagree | Disagree | Neither agree, nor disagree | Agree | Strongly agree |
|---|---|---|---|---|---|
| 1. I like situations, in which I can find out how capable I am. | 1 | 2 | 3 | 4 | 5 |
| 2. When I am confronted with a problem, which I can possibly solve, I am enticed to start working on it immediately. | 1 | 2 | 3 | 4 | 5 |
| 3. I enjoy situations, in which I can make use of my abilities | 1 | 2 | 3 | 4 | 5 |
| 4. I am appealed by situations allowing me to test my abilities | 1 | 2 | 3 | 4 | 5 |
| 5. I am attracted by tasks, in which I can test my abilities. | 1 | 2 | 3 | 4 | 5 |
| 6. I am afraid of failing in somewhat difficult situations, when a lot depends on me. | 1 | 2 | 3 | 4 | 5 |
| 7. I feel uneasy to do something if I am not sure of succeeding. | 1 | 2 | 3 | 4 | 5 |
| 8. Even if nobody would notice my failure, I' m afraid of tasks, which I' m not able to solve. | 1 | 2 | 3 | 4 | 5 |
| 9. Even if nobody is watching, I feel quite anxious in new situations | 1 | 2 | 3 | 4 | 5 |
| 10. If I do not understand a problem immediately, I start feeling anxious. | 1 | 2 | 3 | 4 | 5 |

School: _____ Class:____ Gender: M/F Birthdate: _____ Date: _____

Dear student,

This questionnaire is prepared as a part of a study investigating students' motivation during a specific class hour. Your answers will **NOT** be used to **gra**de or **criticize** you. There are **NO** correct answers for the expressions below. This is why, we kindly ask you to read all the questions carefully and choose the best option that suits your perspective.

Please use the scale below to answer the questions:
1: I strongly disagree
2: I disagree
3: Neutral
4: I agree
5: I strongly agree

| ***During this class my teacher…*** | | | | | |
|---|---|---|---|---|---|
| 1. … emphasized students persistence | 1 | 2 | 3 | 4 | 5 |
| 2. …emphasized students individual progress | 1 | 2 | 3 | 4 | 5 |
| 3. … appreciated students' effort | 1 | 2 | 3 | 4 | 5 |
| 4. … emphasized competition. | 1 | 2 | 3 | 4 | 5 |
| 5. … compared students' performance. | 1 | 2 | 3 | 4 | 5 |
| 6. … praised student outcomes | 1 | 2 | 3 | 4 | 5 |

| | Strongly disagree | Disagree | Neither agree, nor disagree | Agree | Strongly agree |
|---|---|---|---|---|---|
| ***During this class …*** | | | | | |
| 1. I paid attention | 1 | 2 | 3 | 4 | 5 |
| 2. I worked very hard | 1 | 2 | 3 | 4 | 5 |
| 3. I enjoyed today's class | 1 | 2 | 3 | 4 | 5 |
| 4. I tried to learn as much as I could | 1 | 2 | 3 | 4 | 5 |
| 5. I express my preferences, opinions or questions | 1 | 2 | 3 | 4 | 5 |
| 6. I felt interested in todays' class | 1 | 2 | 3 | 4 | 5 |
| 7. I asked questions during class | 1 | 2 | 3 | 4 | 5 |

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|
| During the very last class hour, my aim was to completely master the material presented | 1 | 2 | 3 | 4 | 5 |
| During the very last class hour, my goal was to perform better than the other students. | 1 | 2 | 3 | 4 | 5 |
| During the very last class hour, I was striving to do well compared to other students. | 1 | 2 | 3 | 4 | 5 |
| During the very last class hour, my goal was to learn as much as possible | 1 | 2 | 3 | 4 | 5 |

## APPENDIX B : Student Questionnaires (Turkish)

**Öğrenci No: _____ Cinsiyet K/E Yaş _____ Tarih: _____**

**Aşağıdaki ölçeği kullanarak her bir maddeye ne derecede katılıp katılmadığınızı lütfen belirtiniz.**

| **Genel olarak, hayatımda…** | Kesinlikle Katılmıyorum | Katılmıyorum | Kararsızım | Katılıyorum | Kesinlikle Katılıyorum |
|---|---|---|---|---|---|
| 1. Ne kadar yeteneğim olduğunu anlayabildiğim faaliyetleri severim. | 1 | 2 | 3 | 4 | 5 |
| 2. Çözebileceğimi düşündüğüm bir problemle karşılaştığımda, üzerinde çalışmaya hemen başlamak için heyecanlanırım. | 1 | 2 | 3 | 4 | 5 |
| 3. Yeteneklerimi kullanabildiğim faaliyetlerden keyif alırım. | 1 | 2 | 3 | 4 | 5 |
| 4. Yeteneklerimi test etmeme imkan veren faaliyetler beni cezbeder. | 1 | 2 | 3 | 4 | 5 |
| 5. Yeteneklerimi test edebildiğim aktivitelere ilgi duyarım. | 1 | 2 | 3 | 4 | 5 |
| 6. Bana bağlı olan nispeten zor durumlarda başarısız olmaktan korkarım. | 1 | 2 | 3 | 4 | 5 |
| 7. Başarılı olabileceğimden emin olmadığım bir şeyi yapmaktan çekinirim. | 1 | 2 | 3 | 4 | 5 |
| 8. Başarısızlığımı kimse farketmeyecek olsa bile, başaramayacağım işlerden korkarım. | 1 | 2 | 3 | 4 | 5 |
| 9. Kimse bakmıyor olsa bile, yeni durumlarda kendimi oldukça tedirgin hissederim. | 1 | 2 | 3 | 4 | 5 |
| 10. Bir problemi hemen anlamazsam, kaygılanırım | 1 | 2 | 3 | 4 | 5 |

| Okul: _____ Sınıf:____ Cinsiyet: K/E Doğum Tarihi: _____ Tarih: _____ |
|---|

Değerli öğrenci,

Bu ölçek ders sırasındaki motivasyonunuzu belirlemek için yapılan bilimsel bir araştırmanın yürütülmesi amacıyla hazırlanmıştır. Ölçekte yer alan sorulara verdiğiniz yanıtlar, kesinlikle **size not vermek** ya da sizi **eleştirmek** amacıyla **kullanılmayacaktır.** Bu soruların herkes için geçerli **doğru yanıtları bulunmamaktadır**. Bu nedenle lütfen aşağıda verilen tüm soruları dikkatle okuyarak cevabınızı, ifadenin karşısındaki seçeneklerden sizin için en uygun olanı işaretleyerek belirtiniz.

Soruları yanıtlamak için aşağıdaki ölçütleri kullanınız. Soruda geçen ifadeye **tamamen katılıyorsanız (5)**'i; ifadeye **kesinlikle katılmıyorsanz (1)**'i işaretleyin. Eğer ifadenin size göre doğruluğu bunlardan farklı ise sizin için en uygun düzeyi gösteren (1)'le (5) arasındaki rakamı işaretleyin.

| ***Bu ders sırasında, öğretmenim…*** | | | | | |
|---|---|---|---|---|---|
| 1. … öğrencilerin kararlılığını vurguladı | 1 | 2 | 3 | 4 | 5 |
| 2. ... hatalarımızı daha iyi bir öğrenme için bir şans olarak gördü. | 1 | 2 | 3 | 4 | 5 |
| 3. … bireysel gelişimimizi destekledi. | 1 | 2 | 3 | 4 | 5 |
| 4. … yaptıklarımızı övdü. | 1 | 2 | 3 | 4 | 5 |
| 5. … çabamızı takdir etti. | 1 | 2 | 3 | 4 | 5 |
| 6. … performanslarımızı karşılaştırdı. | 1 | 2 | 3 | 4 | 5 |
| 7. … rekabeti vurguladı | 1 | 2 | 3 | 4 | 5 |

| | Kesinlikle katılmıyorum | Katılmıyorum | Kararsızım | Katılıyorum | Kesinlikle katılıyorum |
|---|---|---|---|---|---|
| ***Bu ders sırasında …*** | | | | | |
| 1. Derse dikkatimi verdim | 1 | 2 | 3 | 4 | 5 |
| 2. Çok çabaladım. | 1 | 2 | 3 | 4 | 5 |
| 3. Dersten zevk aldım. | 1 | 2 | 3 | 4 | 5 |
| 4. Öğrenebildiğim kadar çok şey öğrenmeye çalıştım | 1 | 2 | 3 | 4 | 5 |
| 5. Tercihlerimi, fikirlerimi veya sorularımı dile getirdim. | 1 | 2 | 3 | 4 | 5 |
| 6. Bugün ders ilgimi çekti. | 1 | 2 | 3 | 4 | 5 |
| 7. Soru sordum. | 1 | 2 | 3 | 4 | 5 |

| | Kesinlikle katılmıyorum | Katılmıyorum | Kararsızım | Katılıyorum | Kesinlikle katılıyorum |
|---|---|---|---|---|---|
| Bu derste, hedefim sunulan konuyu tamamen anlamaktı. | 1 | 2 | 3 | 4 | 5 |
| Bu derste, hedefim diğer öğrencilerden daha iyi olmaktı. | 1 | 2 | 3 | 4 | 5 |
| Bu derste diğer öğrencilerden daha iyi olabilmek için çabalıyorum. | 1 | 2 | 3 | 4 | 5 |
| Bu dersteki hedefim, mümkün olduğunca çok şey öğrenmekti. | 1 | 2 | 3 | 4 | 5 |

## APPENDIX C: Teacher Questionnaires (English)

| ***During this class I…*** | | | | | |
|---|---|---|---|---|---|
| 1. … emphasized students persistence | 1 | 2 | 3 | 4 | 5 |
| 2. …emphasized students individual progress | 1 | 2 | 3 | 4 | 5 |
| 3. …viewed errors as a chance for better learning | 1 | 2 | 3 | 4 | 5 |
| 4. …appreciated students' effort | 1 | 2 | 3 | 4 | 5 |
| 5…checked if students' understood the tasks and topic | 1 | 2 | 3 | 4 | 5 |
| 6. …emphasized competition. | 1 | 2 | 3 | 4 | 5 |
| 7. …compared students' performance. | 1 | 2 | 3 | 4 | 5 |

| ***During this class the students …*** | | | | | |
|---|---|---|---|---|---|
| 1. …paid attention | 1 | 2 | 3 | 4 | 5 |
| 2. …worked very hard | 1 | 2 | 3 | 4 | 5 |
| 3. …enjoyed today's class | 1 | 2 | 3 | 4 | 5 |
| 4. …tried to learn as much as I could | 1 | 2 | 3 | 4 | 5 |
| 5. ...express my preferences, opinions or questions | 1 | 2 | 3 | 4 | 5 |
| 6. …felt interested in todays' class | 1 | 2 | 3 | 4 | 5 |
| 7. …asked questions during class | 1 | 2 | 3 | 4 | 5 |

## APPENDIX D: Teacher Questionnaires (Turkish)

| Okul: _____ Sınıf:____ Cinsiyet: K/E Yaş:____ Tarih: _____ |
|---|

Saygıdeğer öğretmen,

Bu ölçek ders sırasındaki öğrenci motivasyonunu belirlemek için yapılan bilimsel bir araştırmanın yürütülmesi amacıyla hazırlanmıştır. Soruları yanıtlamak için aşağıdaki ölçütleri kullanınız. Soruda geçen ifadeye **tamamen katılıyorsanız (5)**'i; ifadeye **kesinlikle katılmıyorsanz (1)**'i işaretleyin. Eğer ifadenin size göre doğruluğu bunlardan farklı ise sizin için en uygun düzeyi gösteren (1)'le (5) arasındaki rakamı işaretleyin.

| | Kesinlikle katılmıyorum | Katılmıyorum | Kararsızım | Katılıyorum | Kesinlikle Katılıyorum |
|---|---|---|---|---|---|
| ***Bu ders sırasında ben…*** | | | | | |
| 1. …öğrencilerin kararlılığını vurguladım. | 1 | 2 | 3 | 4 | 5 |
| 2. …. görevlerin tamamlanıp tamamlanmadığını kontrol ettim | 1 | 2 | 3 | 4 | 5 |
| 3. … öğrencilerin bireysel gelişimini destekledim. | 1 | 2 | 3 | 4 | 5 |
| 4. … öğrenci performanslarını karşılaştırdım. | 1 | 2 | 3 | 4 | 5 |
| 5. … rekabeti vurguladım | 1 | 2 | 3 | 4 | 5 |
| 6. … öğrencilerin yaptıklarını övdüm. | 1 | 2 | 3 | 4 | 5 |
| 7. … öğrencilerin çabasını takdir ettim. | 1 | 2 | 3 | 4 | 5 |

| | Kesinlikle katılmıyorum | Katılmıyorum | Kararsızım | Katılıyorum | Kesinlikler katılıyorum |
|---|---|---|---|---|---|
| ***Bu ders sırasında, öğrenciler …*** | | | | | |
| 1. …dikkat kesildiler. | 1 | 2 | 3 | 4 | 5 |
| 2. …çok çabaladılar. | 1 | 2 | 3 | 4 | 5 |
| 3. …zevk aldılar | 1 | 2 | 3 | 4 | 5 |
| 4. …öğrenebildikleri kadar çok şey öğrenmeye çalıştılar | 1 | 2 | 3 | 4 | 5 |
| 5. ...tercihlerini, fikirlerini ve ya sorularını dile getirdiler | 1 | 2 | 3 | 4 | 5 |
| 6. …ilgi gösterdiler | 1 | 2 | 3 | 4 | 5 |
| 7. …soru sordular | 1 | 2 | 3 | 4 | 5 |

## APPENDIX E: Observation Rating Sheets

| **The teacher …** | | | | | |
|---|---|---|---|---|---|
| Mastery-approach goals | | | | | |
| 1. …emphasizes the process of learning by viewing errors as constructive or supporting persistence | 1 | 2 | 3 | 4 | 5 |
| 2. …emphasizes self-based evaluation and improvement | 1 | 2 | 3 | 4 | 5 |
| 3. …praises students' effort | 1 | 2 | 3 | 4 | 5 |
| 4. …checks for students understanding | 1 | 2 | 3 | 4 | 5 |
| Performance-approach goals | | | | | |
| 1. …emphasizes competition and other-based evaluation. | 1 | 2 | 3 | 4 | 5 |

| **The students …** | | | | | |
|---|---|---|---|---|---|
| 1. … paid attention (behavioral) | 1 | 2 | 3 | 4 | 5 |
| 2. … tried very hard (behavioral) | 1 | 2 | 3 | 4 | 5 |
| 3. ... expressed their preferences, opinions or questions (agentic) | 1 | 2 | 3 | 4 | 5 |
| 4. … asked questions during class (agentic) | 1 | 2 | 3 | 4 | 5 |

## APPENDIX F: Permission from Ministry of National Education

178/ 010592

T.C.
ANKARA VALİLİĞİ
Milli Eğitim Müdürlüğü

Sayı : 14588481-605.99-E.6660991 29.06.2015
Konu: Araştırma İzni

BİLKENT ÜNİVERSİTESİNE
(Eğitim Bilimleri Enstitüsü)

İlgi: a) MEB Yenilik ve Eğitim Teknolojileri Genel Müdürlüğünün 2012/13 nolu Genelgesi.
b) 29/05/2015 tarihli ve 8549 sayılı yazınız.

Üniversiteniz Eğitim Bilimleri Enstitüsü öğretim görevlisi Aikaterini Michou' nun **"Lise Sınıflarında Öğretmenin Öğretim Şekli: Öğretim Şeklinin Öğrenci Motivasyonu ve Öğrenmeyle İlişkisinin Sistematik bir Yaklaşımla Değerlendirilmesi"** başlıklı araştırma kapsamında görüşme yapma talebi Müdürlüğümüzce uygun görülmüş ve uygulamanın yapılacağı İlçe Milli Eğitim Müdürlüğüne bilgi verilmiştir.

Araştırma formunun (22 sayfa) araştırmacı tarafından uygulama yapılacak sayıda çoğaltılması ve çalışmanın bitiminde bir örneğinin (cd ortamında) Müdürlüğümüz Strateji Geliştirme (1) Şubesine gönderilmesini arz ederim.

Bilgilerinize arz ederim.

Ali GÜNGÖR
Müdür a.
Şube Müdürü

Güvenli Elektronik
Aslı ile Aynıdır.
29/6/2015

Başak Şubesi

Konya yolu Başkent Öğretmen Evi arkası Beşevler ANKARA
e-posta: istatistik06@meb.gov.tr

Ayrıntılı bilgi için
Tel: (0 312) 221 02 17/135

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