ASSESSMENT OF AFFECTIVE CHARACTERISTICS OF STUDENTS AND THEIR RELATIONS TO ACHIEVEMENT IN ENGLISH: A CASE STUDY

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ABSTRACT

ASSESSMENT OF AFFECTIVE CHARACTERISTICS OF STUDENTS AND THEIR RELATIONS TO ACHIEVEMENT IN ENGLISH: A CASE STUDY

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The purpose of this study is to investigate attitude towards English across grade level and gender and the relations of affective characteristics of students such as attitude towards English, instructional activities, learning styles on their achievement in English. The relationship between the attitude towards English and learning styles of students were also analyzed to see if there is any effect coming from leaning styles of the student attitudes.

The subjects of the study consisted of 318 students of METU Foundation High School at grade levels 9, 10, and 11.

A questionnaire having three parts was used in the study.

Data were analyzed by Multivariate Analysis of Variance (MANOVA) and Multiple Linear Regression, and Correlation Analyses (MRC).

The results of this study indicated that as of attitude towards the English course, anxiety is a dominant subcomponent affecting student achievement in all grade levels. The effect of learning styles on the achievement of students differ regardless of grade level but gender is a factor determining the preponderance of certain learning styles as far as achievement is concerned. The use of several different instructional activities is observed to be at minimum level in the 11th grade.

Key Words: Achievement, Attitude Towards English, Learning Styles, Instructional Activities, Gender.

ÖZ

ÖĞRENCİLERİN DUYUŞSAL ÖZELLİKLERİNİN VE BUNLARIN İNGİLİZCE DERSİNDEKİ BAŞARILARINA OLAN ETKİLERİNİN BELİRLENMESİ:
VAKA İNCELEMESİ

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Bu çalışmanın amacı öğrencilerin İngilizce dersine yönelik tutumlarının ve öğretim teknikleri, öğrenme stilleri gibi duyuşsal özelliklerinin cinsiyet ve sınıf düzeylerine göre belirlenmesidir. Ayrıca öğrencilerin İngilizce dersine yönelik tutumlarıyla öğrenme stilleri arasındaki ilişkisi ve bunda öğrenme stillerinin ne ölçüde etkisi olduğu incelenmiştir.

Bu çalışma ODTÜ Geliştirme Vakfı Özel Lisesi'ndeki 9., 10. ve 11. sınıf öğrencileriyle yapılmıştır.

Üç bölümden oluşan bir anket uygulanmıştır.

Bu çalışmada, temel betimsel istatistikler ve çoklu karşılaştırmaların yanı sıraçok değişkenli varyans analizi, çoklu regrasyon analizi kullanılmıştır.

Bu çalışmanın sonucunda, öğrencilerin İngilizce dersine yönelik tutumarına bakıldığında endişe alt boyutunun bütün sınıf düzeylerinde

önemli bir etken olduğu saptanmıştır. Lise son sınıfa doğru, öğrencilerin derse yönelik ilgilerinde azalma tespit edilmiştir. Öğrenme şekillerinin öğrenci başarısına etkisi bakımından sınıf düzeylerine göre önemli bir fark gözlenmemiş ancak cinsiyetin bazı öğrenme şekilleri üzerinde farklı etkisi olduğu saptanmıştır. Bazı sınıfiçi etkinliklerin kullanımının 11. sınıf düzeyinde en aza indiği gözlenmiştir.

Anahtar Kelimeler: Erişi, İngilizceye Yönelik Tutumlar, Öğrenme Stilleri, Öğretim Etkinlikleri, Cinsiyet

To my beloved daughter Deniz Berberoğlu

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CHAPTER I

INTRODUCTION

This study mainly investigates the attitudes of high school students toward English across different grade levels and gender groups. It is also aimed to evaluate the contributions of affective variables such as attitudes, learning styles, instructional activities on the achievement of the students in English. Instructional activities across grade levels, and learning style characteristics in line with the attitudes toward English were also investigated. After the statement of the problem, related literature, methodology, results of the study and final conclusions with the implications for research and practice are presented.

In this chapter, first the background of the study is given, then the purpose and significance of the study are presented.

1.1. Background to the Study

One of the prerequisite demands of contemporary life is foreign language learning. People wish to learn a foreign language for a number of reasons. One reason is that, they may find themselves living either temporarily or permanently in the target language community. Another reason is they may have a specific reason for wanting to learn a foreign language. Either academic or occupational purposes make them learn the foreign language to fulfill their requirements in the related areas. On the other hand, school curriculum which is imposed by the authority stands as an involuntary reason beyond the will of the learner. At this point, whether or not the goal is achieved depends on several factors. It has been said by people involved in

language teaching that a student who really wants to learn will succeed whatever the circumstances are under which he studies. It is certainly true that students do learn in unfavorable conditions, and it is also true that students often succeed using methods that experts have considered unsatisfactory. All teachers can think of situations in which certain 'motivated' students do significantly better than their peers, and it seems reasonable to suggest that the motivation of the student is perhaps the single most important thing he brings to the classroom (Harmer, 1983).

Harmer says that:

> Motivation is some kind of internal drive that encourages somebody to pursue a goal (that is something we wish to achieve) and if that goal is sufficiently attractive, we will be strongly motivated to do whatever is necessary to reach that goal (1983, p.3).

The need to achieve success is present in most students and is essential in setting and attaining goals. Motivation functions as a means to stimulate this need. Goal setting is defined as intending to attain some state of affairs at a specified future time. Varying in the amount of time, need and initiative taken by individuals goals are achieved accordingly. Motivation is one of the most important affective characteristics of an individual through which learning occurs as a result of interaction between the learner and the environment which is the instructional process in a planned teaching activity. Thus, any study related to learning might be thought as a complex process dealing with not only motivation of the students, the way they like or dislike the subject, and instructor and instruction in a broader sense, but the instructional processes in which diverse activities happen for the sake of individual progress as well.

The way students like or dislike a subject is a psychological construct in which student learning outcome might have an influence on their performances. According to Harmer (1983) language learners who are motivated perceive goals of various types. He makes a distinction between short-term goals and long-term goals. Long-term goals might have something to do with a student's wish to get a better job or become a member of the target language community. Short-term goals might include such things as the urge to pass an end-of-term of end-of-semester exam or complete a unit successfully. It seems possible to suggest that a teacher will find a strongly motivated student with a long-term goal easier to teach than a student who has to study the language because it is on the curriculum and who does not have such a goal. For the latter type of student short-term goals will often be the source of any motivation he has.

Researchers have agreed on the fact that motivation and attitude have an overlapping relation in learning a foreign language in which each should be regarded as the complementary component of the other.

Harmer (1983) implies that attitude, one of the subdimensions of motivation, affects learning as an essential ingredient determining the nature of the outcome at the end of the learning process. The way how learning is conducted is related with how it is perceived. In this respect outlining attitudes and their attributes is important.

Klausmeier says that attitudes and values are among the most vital outcomes learned in school, for they are important in determining how individuals react to situations and also what they seek in life (1971, p.382).

In the literature, there are various studies conducted to assess attitudes of students toward language learning, and basically in some instances they reported positive

relations of attitude with student performances in learning a second or foreign language (Fraser, 1980) but in some other cases this relationship was reported as weak (Zeider and Bensonsson, 1988). In fact, attitude always has been the main element of theories of learning as well. For instance, Bloom (1976) considered affective characteristics of an individual as one of the entry behaviors in a school learning. Most students become very similar with regard to learning ability, rate of learning, and motivation for further learning, when provided with favorable learning conditions.

Bloom (1976) argued about the impact of affective characteristics on student achievement, and low to moderate level correlations were reported in his book entitled as Human Characteristics and School Learning. He specifically emphasized that even the relations between the affect and achievement is a function of country variable, science, mathematics, English and French have the highest relation between affect and achievement, while literature and reading have much lower relations (1976, p. 81).

Along with the attitude toward a subject matter comes the learning style having a strong impact on the level of the intended outcome, since learning style of the students and teaching style of the teachers might be in congruence with each other for enhancing student achievement (Barbe and Milone, 1980). Wilson (1986) summarized the learning style theory in terms of four basic propositions: (a) learning is a cyclic process involving four kinds of styles (i.e., thinking, doing, watching and feeling); (b) all normal adults possess and use all of the four styles; (c) the level of these styles and preferences in relation with their use vary among individuals; and (d) an individual's learning style preferences can be assessed through the learning style inventory. Learners' attitude toward the subject with the close match between the learning styles of students and teaching styles conducted in a school setting might

have far more impact on students achievement in different subject matters. Considering this fact, one can claim that the relationships between the affect and achievement reported in Bloom's Theory of Mastery Learning might have been more than a moderate level when attitutes toward a subject matter and learning styles of students are taken together. If the way students are taught is appropriate to their learning style this will have a positive effect on their learning. As stated by various researchers as long as students were taught according to their learning styles, their achievement and attitude toward the subject would significantly improve (Dunn and Griggs, 1989; Kolb, 1976; Orsak, 1990; Sinatra, 1990). In line with this fact, high quality of instruction may overcome negative initial affective characteristics, so that the student can learn the particular learning task(s) at a more desired level. In the organization of teaching materials unless the needs of individual learners are taken into consideration it will not be wise to expect a desired outcome. For the sake of quality of instruction, teachers should have profound knowledge about their students. Students' background, their learning styles, and individual characteristics are all of equal importance in the learning-teaching process.

The quality of instruction might be considered as another important process determining the learning outcome in a teaching-learning process that a school system provides for the students. The quality of instruction requires, suitability of materials, organization of the content and objectives, availability of time and resources (Bloom, 1976). Teacher's ability to be adaptable and flexible is another essential component in realization of high quality of instruction. This refers to the ability of the teacher to choose and adapt his program and classroom activities on the basis of the different groups he finds himself in. Motivational differences should have a powerful influence on the teacher's use and choice of activities and materials. When flexibility is concerned, the behavior of the teacher in the class and his ability to be sensitive to the changing needs of the group as the lesson progresses, becomes crucial along with the learning style characteristics of individuals. Considering the fact that

students may have different learning style characteristics, a teacher needs to adopt himself in terms of instructional activities to be congruent with the diverse styles of

the students. In general, language teaching based on auditorial techniques in the classroom, is not suitable for kinestetic individuals for instance. Being aware of this universal fact, it seems worthwhile to study if the instructional activities are matching students needs in terms of their learning style characteristics.

Besides the affective variables mentioned above, there are of course other factors that may have impact on student achievement in different subject matter areas. For instance, socio - economic status, gender, education level of the parents have been the concern of many research studies for different subject matter areas and for English language teaching as well (Küçüksüleymanoğlu, 1996). Among these, gender seems the most common variable studied by the researchers in various fields.

Gender differences in different subject matters such as mathematics and science achievement have been studied extensively in many countries and there is a general tendency about the gender differences in verbal abilities in favor of females (Licht and Dweck, 1983). In fact, there seems to be a literature support for such a gender difference in verbal abilities, in some international studies. In the country level there could be no gender difference observed in line with students achievement measures in science and mathematics, including Turkey (Martin et al., 2000). In the present study, gender difference will be studied along with attitudes toward the subject matter, which are English rather than achievement differences. There could be a difference in favor of females in learning a foreign language because of attitudinal differences between the two gender groups.

Thus, it seems quite revealing to study attitudes toward learning English, learning

style characteristics of individuals, classroom activities, and gender as predictor variables of school achievement in English courses. This study becomes even more crucial in a high school such as Middle East Technical University (METU) Foundation High school where the medium of instruction is in English in some other

courses like science and mathematics. Moreover, exploring the profiles of the students in terms of attitudes toward a school subject and learning style characteristics will not only help the English division in the school, but it might be enlightening for the teachers of other subject matter areas as well. It is also aimed to relate the attitude towards English with learning style characteristics, in order to understand if there is a mutual effect between two affective variables as well.

1.2. Purpose of the Study

There are four purposes of the present study. These are;

1. Attitude toward English among the high school students in the METU Foundation High School will be investigated across gender and grade levels in terms of mean scores in the subdimensions of attitudinal measure.
2. Student learning style types as described by Kolb (1983) will be documented across different grade levels and gender among the students in the METU Foundation High School.
3. Instructional activities as perceived by the students across the grade levels will be investigated. Relationship between the attitude towards English and learning styles of the students will be analyzed to see if there is any effect coming from learning style on students attitudes.
4. Keeping the scores obtained in the English courses as the dependent variable, the Prediction power of gender, learning style types, classroom activities, and attitudes of the students will be studied.

1.3. Significance of the Study

As it was explained in the introduction, affective variables are considered as important variables for enhancing students success in diverse educational levels. Since the main objective of any instructional process is to enhance student learning and help students to promote and develop self understanding skills, investigation of affective variables might help to foster such an objective within the school system. Especially in the METU Foundation High School there is no information about student perceptions in line with the instructional processes, their attitudes toward learning English and learning style types which are crucial elements of any successful teaching-learning activities if student learning and development are aimed. It is expected to trace student attitudes, and learning styles in the school system, and based on the students profiles in these variables some modifications in the instructional process itself could be actualized to enhance student progress in the English language. Moreover, such an evaluation will also help to understand the sources of failure in this particular course within the framework of affective domain.

CHAPTER II

REVIEW OF THE LITERATURE

In this chapter, related literature survey will be presented about attitudes toward English, learning style characteristics of students and its relation to attitudes, instructional process and its impact on student learning, and finally the impact of all of these variables on students achievement in English.

Attitude is defined as tendency to like or dislike an object or an event by Oppenheim (1966). When this construct is related to school base subjects there are quite extensive studies in line with different subject matter areas within the school system. When attitudes are evaluated together with learning a language, studies may be found as attitude towards learning a second language, or attitude towards learning a foreign language in different cultural settings. These studies generally evaluated student beliefs and thoughts about learning a second language, and in some cases, attitudinal changes are investigated as impact on student achievement.

In the study conducted by Fraser (1980), grade level and sex variables were studied in line with attitudes toward different subject-matter areas including English. Grade levels 7 through 10 were used in the study as samples. Among different subject matter areas, students' attitude toward English was the most favorable one.

Hermann (1980) discussed the attitudes of the students and discussed the relationship between the attitudes and success in learning a foreign language. His

discussion on the relationships concluded with the weak relationship between attitudes and success in learning a foreign language. He claimed that foreign language learning causes the formation of positive attitudes toward a language.

Ganguly and Ormerod (1980) discuss the dimensions of attitudes toward English. They argued about the bilingualism and six attitude scales representing the London Asian community's feelings toward English. In this discussion attitudes toward English were evaluated in terms of anxiety about performance in English, value of English in the total community, suitability of English in religious observances, role of home in encouraging English, a pro-own-language attitude, and usefulness of English for professional and social advancement.

In a study conducted by Llado-Torres (1984), a language attitude scale was administered in a group of 184 students to investigate the problems related to teaching of English in Puerto Rico. Students' attitudes were evaluated in terms of attitudes toward English teachers, teaching methods and materials, importance of learning English and any other language, and finally ability to use English.

Bader (1984), conducted a survey to native Arabic speaking students in the Department of English at Yourmouck University which revealed their dissatisfaction with their proficiency level due to their study plan and shortcomings of the methodology used in literature.

Zeidner and Bensoussan (1988), compared student attitudes toward oral or written tests and relationships of attitude to performance of 170 students in the advanced reading course English as a foreign language at Hafia University-Israel. This study indicated that students preferred written to oral tests and no meaningful relationship was observed between students' attitudes and test performance.

Benson (1991), carried out a survey to more than 300 Japanese first-year students regarding their attitudes toward English, self-perceptions for English skills, motivations for studying English, and functions for which English was felt to be most useful. It was concluded that English was useful for some modern functions, but not useful for domestic and local ones.

Hoffman (1995), investigated the attitudes of remedial students toward English and reported that their negative attitudes toward English derived from closeness of emotional and cognitive responses involving derailment of self as a language user; and successful students recognized the need for developmental studies instruction, made improvements in reading English, and developed coping skills in order to complete the course.

There are also studies combining attitude toward learning a second language with the learning style of the students and their impact on achievement as well. According to Gall , Gall, Jacobsen, Bullock (1990) the term learning style denotes students' way of learning which progresses through experiences depending on their preferences and needs. As Hunt (1979) stated, learning style describes a student in terms of those educational conditions under which he is most likely to learn. Learning style describes how a student learns, not what he has learned. According to Hunt learning should occur in a structural way and teachers or educators should be aware of this structure in order to prepare effective learning environments.

Dunn and Dunn (1979) stated that students have different learning styles, and their academic performance generally improves if they are allowed to study using their preferred style.

Dunns' Learning Style Model includes twenty-one elements which affect the learners (Neely and Alm, 1992):

1. Their immediate environment (sound, light, temperature, and furniture/seating design),
2. Their own emotionality (motivation, persistence, responsibility and the need for either externally imposed structure or the opportunity to do things their own),
3. Sociological preferences (learning alone, in a pair, in a small group, as part of a team, with an authoritative or collegial adult, and wanting variety as opposed to patterns and routines),
4. Physiological characteristics (perpetual strengths, time-of-day energy levels, and need for intake or mobility while learning),
5. Processing inclinations (global/analytic; right/left brain; and impulsive/reflective).

Thus learning style can be defined as the way that a student learns using his own means. It is the combination of his past habits and future demands reflected through his preferred style in which his aim is to achieve high level of learning.

Kolb (1985), on the other hand, argues that each person's learning style is a combination of the four basic learning modes and they are named as: Accommodator, Diverger, Converger, Assimilator. Kolb considers learning as a cycle of four stages that occur time after time. During the learning process one will probably repeat the cycle several times. In the Concrete Experience stage learner learns through "feeling" from specific experiences which he relates to people sensitively. Reflective Observation stage involves learning by "watching and listening". Dominant properties of this stage are careful observation before making

judgements, viewing issues from different perspectives and looking for the meaning of things. In Abstract Conceptualization stage, "thinking" becomes important. It is at this stage where/when learners analyze ideas logically, make systematic planning and act on an intellectual understanding of a situation. Active Experimentation stage entails learning by "doing". The learner has the abilities to get things done, he takes risks and influences people and events through action. Despite the fact that the Learning Style Inventory measures learners' learning styles to a great extent, it is possible to find more about they learn by gathering information from other sources-friends, instructors and co-workers.

Some selected studies related to learning styles and its impact on English language teaching are as follows:

Raphan and Gertner (1990), compared English as a second language and foreign language instruction in terms of the context of learning and course goals. This study considers the differences in the backgrounds, attitudes, motivations, sociocultural characteristics, personality factors and learning styles.

Lim (1995), studied students' perceptions of classroom environment and learning styles among 1733 Singapore 10th-graders. He found that school type had the most influence on the students' perceptions both actual and preferred classroom environments. He also concluded that gender has less influence and learning styles had the least influence.

Fournier and Schmidt (1995), carried out a study in which 50 preservice vocational teachers completed the Gregorc Style Delineator and received voice-input and dictation training. No differences were observed in performance or attitude for people with different learning styles. Students with concrete sequential learning styles and high attitudes toward technology had higher scores, those with low

attitudes had the poorest scores.

Another study conducted by Mathewss (1996), showed that students with learning styles favoring a de-emphasis of human relationships and an emphasis on deductive thinking rated themselves academically higher than did their peers with other styles of learning and that students who were people-oriented had the lowest overall academic self-assessment.

Joy (1996) claimed that learning style builds self awareness that serves to enhance classroom communication and provides students with opportunities to practice their writing skills

In the research carried out by Lin and Shen (1996), the learning style preferences of Taiwanese junior college students of English-as-a-Second-Language and student characteristics, language experience, and attitudes that appeared related to learning style preference were investigated. A questionnaire based on four learning style preferences (auditory, visual, kinesthetic/tactile, group/individual) was administered to 1000 EFL students in the first through third years of study at seven junior colleges. Results indicate that female students expressed more willingness to adopt more learning styles than males, and showed higher willingness to learn, learning achievement, and better teacher-student relationships. Second-year students had a better self-concept and teacher student relationship than third-year students did. Learning willingness, achievement, and self-concept correlated better with earlier English language learning. Most students, even low achievers, had a good relationship with the teacher.

He (1996) studied the historical, cultural, social, pedagogical, and psychological factors affecting Chinese students' language learning styles and attitudes particularly concerning English as a Second Language.

In the third group of studies, special emphasis was given to instructional processes and their impacts on student attitudes and achievement along with learning style characteristics of students.

Bloom (1976) stated that students can acquire learning procedures which will enable them to learn well under less than ideal qualities of instruction. He also stated that there is a substantial relation between quality of instruction and measures of school achievement and that instruction is important in determining and influencing students' achievement.

Fischer and Fischer (1979) pointed out the difference between instructional method and teaching style. They defined teaching style as 'a pervasive way of approaching the learners that might be consistent with several methods of teaching'. Turner (1979), stated that teachers should be skilled in several styles in order to match different learning styles of students. Friedman and Alley (1984), claimed that teachers need to utilize classroom activities which will be assisting students in developing flexible learning styles.

Campbell (1990) carried out a survey with the teachers of an elementary school and found out that the causes of the lack of individualizing student learning were related to class size, poor leadership, teacher training, and poorly developed learning style instruments. A remedial program was designed for classroom teachers to help them recognize differential learning styles and incorporate them into their repertoire of teaching. Results of this program showed that out of 31 sixth grade students, 27 students improved work habits, 26 students improved classroom attitudes, 10 students improved classroom behaviour.

Dunn and Dunn (1990) presented findings of a 1988 study of 104 middle school students examining the relationship between learner style preference-learning alone,

learning with peers, or no preference - and instructional grouping. Students performed equally well on four social studies lessons when instructional strategy matched learner with preferred learning style.

Bauder and Milman (1990) conducted a research on learning and teaching styles in English-as-a-Second Language at a Mexican university in 1989. The students surveyed demonstrated much more cognitive flexibility and willingness to learn through different cognitive modes than was expected. Male teachers showed a strong preference for competitive teaching, but competitive learning styles were given the least preference by students. Neither teachers nor students showed preference for impulsive learning and teaching. The majority of the students felt they could learn by all of the four perceptual modes: auditory, visual, kinestetic, and tactile. It was concluded that style matching may be impractical on a large scale, students could occasionally be grouped according to preferred learning styles and special effort could be made students develop increased cognitive flexibility when they demonstrate that they are bound to only a few learning styles.

In his study Ueno (1998) investigated the distribution of learning styles of students of Japanese as a Second Language, as measured by the Myers-Briggs Type Indicator; students' preferences for error correction in speaking and writing, as measured by a researcher-developed questionnaire; and relationships between students' learning styles and their preferences for error correction. Subjects were 38 undergraduate students in four second-semester Japanese classes. Results indicate that students fell into 12 of the 16 Myers-Briggs learning style categories, with extraverted students outnumbering introverted students significantly. A large majority of students (89.5 percent) preferred self-correction to explicit and implicit correction. No statistical significance was found in the relationship between learning style and error correction preference, which is regarded as the part of the classroom instruction.

In Turkey, attitudes of prospective teachers toward English were studied by the researchers.

Küçüksüleymanoğlu (1997) studied the effect of some background variables on prospective teachers' attitude toward English. She reported that sex, mother education level, study habits, desire for being a teacher, academic self concept were all important variables to explain attitudes of the prospective teachers.

Saraçoğlu (2000) also studied the relationship between the foreign language trainee teachers' attitudes towards lessons and level of their learning. She reported positive relations between the two variables and also significant differences across gender groups were observed.

Doyran (2000) studied student learning style characteristics in English classes. She found some negative relations between kinesthetic learning style characteristics of students and their proficiency examination scores.

In sum, research studies summarized above are pointing out that attitude, learning style, and instructional methods are all of equal importance in providing a desired learning outcome. These variables have positive impact on achievement as supported by several research studies. However, the way researchers deal with the variables under investigation is somehow different from one study to another. In some studies, the relationship between the learning style characteristics and attitude towards English was investigated, and in some others, dependent variable was taken as achievement level of the students. Instructional practices were also studied along with the affective characteristics of the students in the studies found at literature

survey. In the present study, even though the main purposes include all sorts of comparisons among the variables, identifying the contribution of attitude, learning style, and instructional activities on student achievement in English was given special emphasis.

CHAPTER III

METHOD

In this chapter, research questions, description of variables, sample, data collection instruments, data collection procedures, data analysis procedures, and finally limitations of the study are presented.

3.1. Overall Design of the Study

This study mainly investigates the attitudes of high school students toward English across different grade levels and gender groups. It is also aimed to evaluate the contributions of affective variables such as attitudes, learning styles, instructional activities on the achievement of the students in English. Instructional activities across grade levels, and learning style characteristic in line with the attitudes toward English were also investigated.

In general this study investigated the mean differences across the groups, and the relationships between a set of independent variables and a dependent variable which is achievement level of the students. In the mean difference analysis, attitude toward English questionnaire and its subscales were evaluated across grade level and gender groups. Since there are more than one variable investigated, MANOVA was used in the mean comparisons. In the second step, regression analysis was used to investigate the impact of learning style, instructional activities, attitudes toward English on students achievement scores in English. As a supplementary analysis attitudes across the learning style groups, and instructional

activities across the grade levels were also investigated.

3.2. Research Questions

1. How do attitudes toward English change among students across grade levels and gender groups?

2. What are the learning style characteristics of the students across different grade levels and gender groups?

3. Do instructional activities as perceived by the students in English change across grade levels and gender?

4. Do students have different attitudes towards English across different learning style types and gender?

5. What portion of variance is explained in the English achievement scores of the students by each of the following variables, such as gender, instructional activities in English classes as perceived by the students, learning styles, and attitude toward English?

3.3. Description of Variables

Attitude Towards English: This variable was measured by the instrument developed by Küçüksüleymanoğlu (1997) (Appendix A). This scale was originally designed as a four-dimensional scale. One of the dimensions which is attitude toward teaching profession was not used in the present study.

Learning Style: Kolb's Learning Style Inventory was used in order to measure this particular variable in the present study (1985). This instrument was adopted into the Turkish language by Aşkar and Akkoyunlu (1993) and the scale was used to classify students into one of the learning modes defined as, accomodator, assimilator, converger and diverger.

Instructional Activities: A scale to assess the frequencies of some instructional activities in the English classes was developed by Doyran (2000). However, in the present study a revised version of that instrument was used to asses student perceptions about the frequencies of some instructional activities which might be important to match learning style characteristics and the frequencies of diverse activities in the English classes.

Gender: This is a dichotomous variable to identify two sex groups who participated in the study.

Grade Level: This variable indicates the three grade levels as grade 9, grade 10, and grade 11.

English Achievement Scores: These are the scores obtained at the end of the school year by the students in English classes. At each grade level students take a general test in English courses. Thus, the score obtained by the students at each grade level depends on the same standard measure in the school. However, in order to increase variability in the score distribution, instead of 1 to 5 scoring schema, 1 to 100 scale unit was used in the present study.

3.4. Sample

Since this study is a case study, all the students at grade levels 9, 10,and 11 at METU Foundation High School constituted the source of the data. Thus, there will be no systematic sampling procedures used in the present study. However, findings of this study could be generalized to the population which are similar to the METU Foundation High School and previous student groups in this particular school. In determining the sample size of a study, effect size as well as the power of a statistical analysis should be considered by the researchers (Hinkle et.al,1988). However, since this is a case study which is specific to one particular high school, optimum sample size for a desired effect size and power was not determined since all the students were included in the study. On the other hand, considering the statistical power as 0.80, alpha as 0.05, and 10 point mean difference between the groups (given the standard deviation of the English grades as 17.96), the minimum sample size for each group could be determined approximately as 28 for the paired comparisons. For the three group comparisons for the same effect sizes and power, the table value for the minimum sample size is approximately 78. Questionnaires were administered to 450 students in the school. After the data collection procedures, questionnaires with some inconsistent answers and answers with response set were eliminated from the analysis. Thus, all of the analyses were carried out with total 318 questionnaire results. Table 3.1 below presents the distribution of students across grade levels and gender groups.

Table 3.1 Sample of the Study

	Grade 9	Grade 10	Grade 11	Total
Female	54	61	43	158
Male	66	51	43	160
Total	120	112	86	318

As it is seen in Table 3.1 almost equal number of male and female students participated in the study. On the other hand, the smallest group is grade 11. The sample sizes obtained as a result of questionnaire administration also seems adequate for the expected power and effect sizes. This sample also seems adequate for all of the analyses planned for the study. For instance, principle component analysis will require number of variables times 10 as an ideal sample size, considering the longest questionnaire with 30 items, this sample size is more than adequate for the stable factor structures.

3.4 Data Collection Instruments

Attitude toward English: This independent variable will be assessed by the instrument developed by Küçüksüleymanoğlu (1997). This instrument has five factors, such as, teaching as a profession, anxiety in English, interest in English, motivation in English, attitude toward class activities. Even though this instrument was originally designed for the prospective English teachers, except teaching as a profession dimension, the questions in the other four dimensions seem quite reasonable for the present study. The four dimensions will be used as predictor variables in the present study. However, the data is analyzed in terms of dimensionality in the present study. The Principle Component Analysis with Varimax Rotation was used in the collected sample to verify the existence of various dimensions in the scale. The first analysis was carried out with 30 items. In this analysis Varimax rotation was used, and factor structures obtained with respect to Varimax rotation were interpreted. The items of the scale clustered in various dimensions across seven factors with eigenvalues greater than one (Appendix B). As

it is seen in Appendix 2, in last factor there was only one item loaded, and in factor five, there were two items loaded. When the items were evaluated with respect to their content across the factors, there were meaningful groupings except the fifth factor, on which two items with dissimilar content were loaded. Having only one item on the last dimension, the researcher decided to delete two items on the fifth factor an one item on the seventh factor, and run the analysis again. The second run with Varimax rotation indicated that the scale was still multidimensional with eigenvalues 3.75; 2.87; 2.81; 2.15; 1.64; 1.60; and 1.48 respectively for the seven factors (Appendix C). The seven factors explained 60 percent of the variance in the attitudinal measurement. When item factors were evaluated closely, it was observed that the first factor clustered the items related to *enjoyment* in learning English, the second factor clustered the items related to *anxiety* in learning English, the third factor clustered the items related to *interest* in learning English, the fourth factor clustered the items related to *motivation* in learning English, the fifth factor clustered the items related to *confidence* in learning English, the sixth factor clustered the items related to *aspiration* to learn and use English, and finally the seventh factor clustered the items related to *importance* of English (Appendix C).

When factor loadings were closely evaluated it was observed that some of the items were loaded on more than one factor. For instance, item 7 'I hate English' was loaded on enjoyment and anxiety dimensions, item 8 'I would like to learn new things in English' loaded on confidence and motivation dimensions, item 10 'I am keen on participating in activities in English class' loaded on enjoyment and confidence dimensions. It seems that even if there are different dimensions possible in the scale, in the item level, there could be some overlapping meanings across the factors. Thus, it was decided to use factor scores as subscale scores in the further analysis in this study. Factor score used is regression score, which is in the form of a 'z' score with the mean of 0 and standard deviation of 1. In the calculation process all the items are taken into account in calculating the factor scores, but the items loaded

on that specific dimension are weighted more than the other items. The whole factor structure obtained in this study is somehow different than the original scale, but considering the group differences this change could be tolerable. As a result, regression factor scores obtained for the dimensions of enjoyment, anxiety, interest, motivation, confidence, aspiration, and importance subdimensions and these subdimensions were decided to be used in the further analyses. The Cronbach alpha reliability estimate was found as 0.90 for the whole attitude scale. Since the factor scores are used in the further analyses, no subscale reliabilities were considered for the clusters of the items. In this scale indicative items were coded as 5 for the 'Completely Agree', 4 for the 'Agree', 3 for the 'Undecided', 2 for the 'Disagree' and 1 for the 'Completely Disagree' alternatives. For the contraindicative items this scoring was reversed. Thus a high score indicates positive attitude in the subdimensions while a low score stands for negative attitudes. For instance, for the enjoyment subdimension, high score means that specific person enjoys English related activities. For the anxiety subdimension, high score means less anxious student, while a low score indicates more anxiety.

Learning Style: This independent variable will be assessed by the Turkish version of the Kolb's learning style inventory. This inventory was adapted into Turkish language by Aşkar and Akkoyunlu (1993). It is possible to categorize students in four learning style modes such as diverger, accomodator, converger, and assimilator by the use of this questionnaire. In the adaptation process, the Turkish version of the scale was administered to a group of students coming from different faculties. Aşkar and Akkoyunlu (1993) stated that the norms obtained for different occupational groups in Turkish sample were comparable with the original scale's norms. The researchers considered the reliability and validity of the instrument as adequate based on the findings of their studies. The Cronbach alpha reliabilities of this scale were found as 0.70 for concrete experience dimension, 0.63 for reflective observation dimension, 0.74 for abstract conceptualization, and 0.70 for active

experimentation in the present study. The reliability coefficients found in the present study and validity evidence brought by Aşkar and Akkoyunlu (1993) were considered adequate to use that particular scale in measuring students learning style characteristics.

Instructional Activities Scale: This independent variable will be assessed by a set of questions related to teaching-learning activities in the English classes. In fact, one of the dimensions in the attitude scale is related to the classroom activities, but in this particular questionnaire, student perceptions of some class activities, which are verbal, auditorial, kinestetic etc. will be assessed in terms of frequencies of occurences. This scale was developed in line with the scale developed by Doyran (2000). Items of this scale were analyzed with principle component technique in order to understand which specific teacher and student behaviors in the classroom were perceived together by the students. The results of Varimax rotation are presented in Appendix D. The PC run with Varimax rotation indicated that the scale was multidimensional with eigenvalues 2.54; 2.19; 2.06; 1.82; 1.49; and 1.18; respectively for the six factors. The six factors explained 59.42 percent of the variance in this particular scale. When clusters were evaluated separately, it was observed that the first factor clustered items related to use of student interaction and cooperation in the classroom activities, the second factor clustered items related to the use of visual materials in the classroom, the third factor clustered items related to use of individualized independent activities, the fourth factor clustered items related to the use of auditorial activities in the classroom, the fifth factor clustered items related to the use of group discussion and individual work together in the classroom, and the sixth factor clustered items related to use of traditional lecture techniques in the classroom (Appendix D). As in the case of attitudinal measurement, activities in some instances loaded on more than one factor. Thus, it was decided to use regression factor score in the further analysis for this scale as in the case of attitudinal measurement. The Cronbach alpha reliability of this scale was found as

0.74 in the present study. In that scale, high score indicates a high frequency of that activity in the classroom while a low score indicates less frequency in the related activities.

Achievement in English: This dependent variable will be students' general achievement scores obtained in the tests given at different grade levels. School records were used to obtain students first semester (Fall 2001) grades in English courses. In the analyses, grade levels were taken separately for the regression, because the curricula at grade levels 10 and 11 are more literature oriented; however, at grade level 9 basic rules of the English language and grammar are emphasized. The reliabilities and validity of the scores are assumed adequate for the study, since for each grade level, in all the classes the same measuring instruments are used in grading the students. Moreover, the final grade taken for this study is the composite of different scores obtained throughout the semester. Thus, this composite score might have satisfactory reliabilities and in terms of content related evidence, it is deemed adequate as well, since the content of the test is determined by the curricula developed for respective grade levels.

3.6. Data Collection Procedures

This is a survey study. Three questionnaires, which are Attitudes Towards English, Classroom Activities, and Learning Style Inventory were administered under the standard conditions in the English classes by the English teachers.

3.7. Data Analysis Procedures

In this study, beside some descriptive analyses, multiple comparisons methods were used in analyzing the data. Basically, Multivariate Analysis of Variance (MANOVA) and Multiple Linear Regression and Correlation Analyses (MRC) were used to test

the hypotheses.

MANOVA is used with two groups of subjects and at least two dependent variables are considered. Through the use of MANOVA technique the group mean differences across dependent variables are analyzed simultaneously. According to Stevens (1992) there are two reasons one should be interested in using more than one dependent variables: (1) subjects will be affected on more than one criterion variable in any behavioral research; and (2) studying the couple of different variables simultaneously will help researcher to understand problem under investigation in a more detailed way. Although it seems quite possible to use fragmented ANOVA in a multivariate problems, there are statistical reasons to use MANOVA instead of ANOVA since (a) using so many ANOVAs will seriously inflate the amount of type I error, (b) univariate ANOVA will ignore the correlation between the dependent variables, (c) analyzing total test score may not give detailed information about the construct across the grouping variables. MANOVA will analyze the subscale scores jointly to see if any of the subscale created a difference, which might stay insignificant in the total test score comparison. Thus, since the construct 'attitude' is multidimensional, in the present study, instead of analyzing the total test score across the grade levels and gender groups, multiple comparisons were carried out for the subscale scores of attitudinal measurement. Similarly, the attitudinal differences across different learning style types were also analyzed by MANOVA techniques in the present study. In MANOVA analyses, besides the significance of the variables, effect sizes (eta squares) will also be taken into consideration, which is an index to show the proportion of variance explained by the independent variables' effect (Grimm and Yarnold, 1995). In this index, 0.01 is considered as small effect, 0.06 is considered as moderate effect, and 0.14 is considered as large effect. The power of the statistical analyses is also considered as explained in the sample section. Even though the sample sizes are adequate for expected power of the statistical analysis, power as estimated through the analyses are also evaluated in the study for the

significant MANOVA results.

As an extension of simple linear regression, in MRC, a set of independent variables which are called as predictor variables are analyzed as their impact on a dependent, criterion variable. The predictor variables are combined in an equation, called multiple regression equation, which can be used to predict scores on the criterion variable from scores on the predictor variables (Hinkle et al., 1988). In general, using MRC is a modeling, and it requires some steps to test different combinations predictor variables as they explain the amount of variance on criterion variable. These steps are as follows:

1. Determine the regression model. This step involves determining the regression coefficients and the regression constant.
2. Determine the multiple correlation coefficient (R) and proportion of shared variance (R square). This step involves computing R and R square, the coefficient of determination.
3. Determine whether the multiple R is statistically significant.
4. Determine the relative importance of the predictor variables. This step involves testing the individual regression coefficients for statistical significance. (Hinkle et al., 1988, p.464).

There are alternative procedures for MRC, such as backward solution, forward solution, stepwise solution. In the present study, stepwise solution will be used in which the first variable selected for the MRC model is the predictor variable that has the highest correlation with the criterion variable. The next predictor variable selected is the one with the highest partial correlation with the criterion variable, with the effects of the first variable partialed out. Each time a predictor variable is entered to the model, a second significance test is carried out to determine the contribution of each previously selected predictor variable, as if it were the last variable entered (Hinkle et al., 1988; Grimm and Yarnold, 1995). Thus, in the

present study, the stepwise method were used where attitude, classroom activities, learning styles and gender constitute the predictor variables whereas achievement in English is the criterion variable.

3.8. Limitations of the Study

This study is limited to the students at METU Foundation High School. The results can only be generalized to the school which are similar to METU Foundation High School with respect to student characteristics.

Another limitation maybe in line with the instruments used. The attitude scale was limited to the dimensions covered by the questionnaire items only. Similarly, the questionnaire on instructional activities is limited to the activities cited in the questionnaire items. In the regression model, variables taken are only limited with learning styles, attitudes, instructional activities as independent variables predicting the achievement in English courses. However, there are other variables that might be related to this particular independent variable, such as study habits, socioeconomic status, self concept etc. which were not considered in the regression model tested.

CHAPTER IV

RESULTS

In this chapter, five research questions are answered. In the first question attitudinal change of the students across grade level and gender was studied for seven separate dimensions of the Attitude Toward English Scale. In the second question, learning style characteristics of the individuals across grade levels and gender groups were investigated in order to see if there are different learning styles throughout the high school education across the gender groups. In the third question, types of instructional activities across grade levels were studied in order to see if there were any difference in the perceptions of students in terms of instructional activities used at different grade levels. The purpose of this analysis is to link the learning style characteristics of the students with the instructional processes. In the fourth question the relationship between learning style characteristics and attitudinal scores were analyzed for each of the seven subscale score of the Attitudes Toward English Scale. Finally in the fifth question, the impact of gender, attitudes toward English, instructional activities and learning style modes of the students on their achievement in English were studies separately for each grade level.

4.1. Findings Related to Change in Attitude Towards English

In this analysis research question 'How do attitudes toward English change among students at METU Foundation High Schools across grade levels and gender groups?' was considered.

In order to answer this question MANOVA was used for the seven subscale scores of the Attitude Toward English scale as dependent variable, and gender and grade levels were taken as independent variables. In the subscale score level, regression factor scores were used as estimated by SPSS package program. Bonferroni test was used in the multiple comparisons procedures across the groups in the subscale level. Multivariate test indicated that there was a significant effect coming from grade level (Wilks' Lambda= 0.731; F=6.691; p=0.000), sex (Wilks' Lambda= 0.941; F=2.478; p=0.018), and interaction between grade level and sex (Wilks' Lambda= 0.889; F=2.381; p=0.003). Effect sizes for this multivariate test were obtained as 0.145 for the grade level comparison, 0.059 for the sex comparison, and 0.057 for the grade level and sex interaction. The effect coming from the grade level is large, and effects coming from the gender and interaction are moderate in this comparison. Observed power as estimated by the SPSS package program is above the expected value of 0.80 in the overall multivariate comparisons. However, in the subscale levels, the power obtained in the importance subdimension in the sex comparison and enjoyment subdimension in the interaction effect are 0.62 and 0.67 respectively.

When subscales were evaluated with respect to the mean differences it was observed that not all the subscale means were significantly different from each other.

Table 4.1 indicates the test of between subject effects results.

Table 4.1 Test of Between-subject Effects on Attitudes Across Grade and Gender

Dependent variable		Sum of Squares	df	Mean Square	F	Sig.
Grade	Enjoyment	19.241	2	9.621	10.434	.000
	Anxiety	2.338	2	1.169	1.227	.295
	Interest	10.693	2	5.347	5.541	.004
	Motivation	5.484	2	2.747	2.741	.066
	Confidence	.599	2	.300	.319	.727
	Aspiration	38.608	2	19.304	21.712	.000
	Importance	1.907	2	.954	.995	.371
Sex	Enjoyment	.115	1	.115	.125	.724
	Anxiety	.000	1	.000	.000	.982
	Interest	8.762	1	8.762	9.081	.003
	Motivation	.004	1	.004	.048	.827
	Confidence	2.017	1	2.017	2.147	.144
	Aspiration	.782	1	.782	.879	.349
	Importance	4.986	1	4.986	5.200	.023
Interaction	Enjoyment	6.749	2	3.375	3.660	.027
	Anxiety	9.115	2	4.558	4.785	.009
	Interest	1.178	2	.589	.611	.544
	Motivation	3.674	2	1.837	1.837	.161
	Confidence	9.321	2	4.661	4.962	.008
	Aspiration	1.201	2	.601	.676	.510
	Importance	1.394	2	.697	.727	.484

As it is seen in the Table 4.1 the grade levels are different in the subscales of enjoyment, interest and aspiration. The effect sizes for this comparison were found as 0.069 for the enjoyment, 0.038 for the interest and 0.133 for the aspiration subscales. Among the three subscales, aspiration has the large effect size, whereas, moderate effect size for the enjoyment and small effect size for the interest subscales were observed. On the other hand, gender differences are observed in interest and importance subdimensions. The interaction between the grade level and gender is significant in the subscales of enjoyment, anxiety and confidence. Multiple

comparisons with Bonferroni test indicated that the grade level 9 is significantly different than grade levels 10 and 11 in the enjoyment subscale (grade levels 9 vs.10, p=0.029; grade levels 9 vs. 11, p=0.000). The means and the standard errors of the grade levels in this subscale are 0.290 and 0.092 for the grade level 9; 0.000 and 0.094 for the grade level 10; and -0.371 and 0.112 for the grade level 11 respectively. As it is clearly seen, grade level 9 students have greater enjoyment scores than the other groups. In the interest subscale Bonferroni test indicated that there is a significant mean difference between the grade level 9 and 10 only (grade levels 9 vs. 10 p=0.002). The means and the standard errors for the grade levels in this subscale are -0.237 and 0.094 for the grade level 9; 0.192 and 0.097 for the grade level 10; 0.106 and 0.115 for the grade level 11 respectively. It is seen that grade level 9 students have the smaller mean score in the interest subscale. In the aspiration subscale, grade level 9 is significantly different than grade levels 10 and 11 as obtained by Bonferroni test (grade levels 9 vs. 10, p=0.000; grade levels 9 vs. 11, p=0.000). The means and standard errors for the grade levels in this subscale are 0.427 and 0.091 for the grade level 9; -0.149 and 0.093 for the grade level 10; and -0.478 and 0.110 for the grade level 11. It is seen that among the three grade levels, aspiration to learn is the greatest at the grade level 9, and it drops throughout the higher grade levels.

In the sex comparison females indicated more interest towards learning English than males. The effect sizes were found as 0.031 for the interest subscale, and 0.018 for the importance subscale. Both effect sizes are small in this comparison. The means and standard errors for the groups are 0.199 and 0.084; and -0.158 and 0.083 for the females and males respectively. Similarly, in the importance dimension, females gave more importance to learning English than males. The means and standard errors are 0.180 and 0.084; and 0.0 and 0.083 for the females and males respectively. In this comparison gender differences in importance subdimension is significant only 0.05 alpha level.

For evaluating the interaction effects, line graphs of the subscale scores across grade levels and gender groups were used. As it was explained before, the interaction between grade level and gender was significant for the enjoyment, anxiety and confidence subscales. The effect sizes found for this comparison are all small (0.025 for the enjoyment, 0.033 for the anxiety, 0.034 for the confidence subscales).

Figure 1 in Appendix E indicates the interaction effects between grade level and gender groups for the enjoyment subscale. It is clearly seen that the interaction effect comes from the male students at grade level 11 whose enjoyment scores dropped significantly with respect to the females.

Figure 2 in Appendix F indicates the line graph obtained for the anxiety subscale. It is seen that males become more anxious in learning English than females at the grade levels 10 and 11 but not at grade level 9. In this subdimension, high score indicates more positive attitudes, which means less anxiety towards learning English.

Figure 3 in Appendix F indicates the line graph obtained for the confidence subscale. As it is seen in the graph, males lose their confidence in learning English at grade level 11.

In sum, analyses of the attitudes across the grade levels indicated that there were differences across the grade levels in the subscales of enjoyment, interest and aspiration. In the enjoyment and aspiration subdimensions, attitude scores dropped at grade level 11. In the gender comparisons, females seemed more interested in learning English, and they gave more importance to English as well, compared to male students. Interaction effects indicated the loss of confidence and enjoyment toward the end of the high school education. On the other hand, males developed more anxiety than females in learning English.

4.2. Learning Style Characteristics Across Grade Levels and Gender

In this analysis research question 'What are the learning style characteristics of the students at METU Foundation High School across different grade levels and gender groups?' was considered.

In answering this question crosstabs of different learning style types across grade levels were obtained as indicated in Table 4.2 below.

Table 4.2. The Distribution of Learning Style Types Across Grade Levels

Grade	Diverger %	Accomodator %	Converger %	Assimilator %	Total %
9	24 36.9	16 44.4	27 40.3	50 35.5	117 37.9
10	27 41.05	15 41.7	25 37.3	40 28.4	107 34.6
11	14 21.05	5 13.9	15 22.4	51 36.2	85 27.5
Total	65 100	36 100	67 100	141 100	309 100

Chi-square analysis indicated no significant difference in the test of independence for the data given in Table 4.2 above (Chi-square=11.647; p=0.070). There is no difference in the distribution of the learning styles across the grade levels.

The same analysis was carried out for the learning style types and gender groups. Table 4.3 indicates the crosstabs for this comparison.

Table 4.3. The Distribution of Learning Style Types Across Gender Groups

Gender	Diverger %	Accomodator %	Converger %	Assimilator %	Total %
Female	39 60	15 41.7	45 67.2	56 39.7	155 50.2
Male	26 40	21 58.3	22 32.8	85 60.3	154 49.8
Total	65 100	36 100	67 100	141 100	309 100

Chi-square analysis indicated significant result for the test of independence between gender and learning style types (Chi-square=17.457; p=0.001). In general learning style types of the students become more assimilator across the gender groups, but at male group there seems more assimilators than females.

4.3. Instructional Activities Across Grade Levels and Gender

In this analysis 'Do classroom activities levels as perceived by the students in English change across grade levels?' was considered.

In order to understand if there is gender difference in the perceptions of instructional activities, MANOVA analysis carried out across grade level and gender groups. In that analysis no significant difference was observed between the perceptions of the male and female students as evidenced by the insignificant results in the subscale level (F= 0.457, p=0.499 for the interaction; F=3.833, p=0.051 for the visual; F=3.774, p=0.053 for the independence; F=1.972, p=0.161 for the auditorial; F=2.456, p=0.118 for the discussion; F=0.403, p=0.526 for the traditional subdimensions). Thus sex was not taken as a variable in this analysis.

In order to answer this question MANOVA analysis was carried out across grade levels with six factor scores of the classroom activities scale.

The multivariate analysis indicated that there was a significant overall effect in the perceptions of students about the instructional activities across the grade levels (Wilks' Lambda=0.475, F=20.261, p=0.000). The effect size found for this analysis was found as 0.310 which is large. The results of test of between subject effects are presented in the Table 4.4 below.

Table 4.4 Test of Between Subject Effects in Instructional Activities

Dependent variable	Sum of Squares	Df	Mean Square	F	Significance
Interaction	36.914	2	18.457	20.565	.000
Visual	.911	2	.456	.434	.648
Independence	69.251	2	34.623	44.969	.000
Auditorial	3.940	2	1.970	1.993	.138
Discussion	15.631	2	7.816	7.967	.000
Traditional	25.479	2	12.743	14.419	.000

As it is seen in Table 4.4 significant differences were found in the interaction, independence, discussion, and traditional subcomponents. The effect sizes were found as 0.130 for the interaction, 0.246 for the independence, 0.055 for the discussion, and 0.095 for the traditional subdimensions. The effect sizes found for this comparison were large for the interaction and independence subscales, moderate for the discussion and traditional subscales. When Bonferroni tests were obtained for the multiple comparisons, in the interaction subscale, the significant differences were observed between grade levels 9 and 11(p=0.000), and between grade levels 10 and 11 (p=0.000). The means and standard errors were found as 0.162, 0.093; 0.268, 0.095; and -0.597, 0.109 respectively for the grade levels 9, 10 and 11. The frequency of the activities taken in this subcomponent drops at grade level 11. In the independence subscale Bonferroni test gave significant difference for all the paired comparisons (p=0.000). The means and standard errors were found as 0.542, 0.086;

0.005, 0.088; and -0.714, 0.101 respectively for the grade levels 9, 10 and 11. The frequencies of the activities taken in this subcomponent drop as the grade level increases. In the discussion subscale, Bonferroni test indicated that there was a significant mean difference between grade levels 10 and 11 (p=0.001), and grade levels 9 and 11 (p=0.005). The means and standard error of the means were found as -0.114, 0.098; -0.215, 0.100; 0.360, 0.114 respectively for the grade levels 9, 10 and 11. As the grade level increases the frequency of class discussion increases too. Finally in the traditional subcomponent, Bonferroni test indicated significant mean differences across grade levels 10 and 11 (p=0.000) and grade levels 9 and 11 (p=0.000). The means and the standard errors for the means were found as -0.156, 0.093; -0.153, 0.094; and 0.525, 0.108 respectively for the grade levels 9, 10 and 11. The use of traditional teaching methodologies increase at grade level 11.

In sum, as the grade level increases, most of the activities are seldomly utilized in the school, in English classes except the activities cited in the discussion subscale.

4.4. Attitudes Across the Learning Style Types

In this analysis research question 'Do males and females have different attitudes towards English at METU Foundation High School across different learning styles?' was considered.

In answering this question, MANOVA analysis was used to test if there were any mean differences in each of the seven subscale scores of the attitude towards English across accomodator, assimilator, diverger, and converger groups and gender groups. The multivariate test indicated that there was no significant overall effect in the analysis (Wilks' Lambda= 0.928, F = 0.959, p= 0.513). Similarly, interaction effect between gender and learning style types was not significant (Wilks' Lambda=0.946, F=0.713, p=0.822). Since in the overall model there was no significant effect found

no further ex hoc analysis was carried out for this research question.

4.5. Factors Affecting Achievement in English

In this analysis the research question 'What portion of variance is explained in the English achievement scores of the students at METU Foundation High School by each of the following variables, such as gender, instructional activities in English classes as perceived by the students, learning styles, and attitude toward English?' was considered.

In this analyses group, for each grade level, a separate regression model was tested. Thus, three regression models were tested for each grade level. In the first step of the analyses, assumptions of regression analysis such as independent observations, errors with zero mean, and homoscedasticity, with multicollinearity effect were checked in the data. For the assumptions, standardized residuals were plotted with respect to predicted values, and for the multicollinearity, correlations among the independent variables were analyzed. In three of the models, all the assumptions were met in the data set.

In the regression models, subscales of the attitudes towards English, such as enjoyment, anxiety, interest, motivation, confidence, aspiration, and importance, subscales of instructional activities such as students interaction, use of visual aids, use of individualized independent activities, use of auditorial activities, group discussion and individual study, traditional teaching methodologies were used beside the dummy variables, such as gender and learning style types as independent variables. Dummy coding for the four learning style types such as converger, diverger, accomodator, and assimilator were converted into three categories, such as diverger versus other learning style types, converger versus other learning style types, and accomodator versus other learning style types. In the following section

the findings of three regression models for three grade levels are presented.

Regression model for grade level 9

When the regression analysis was run for the 9th graders, it was observed that multiple regression coefficient R, was 0.563 with the regression model in which anxiety, and confidence subcomponents of the attitude scale, and auditorial, and discussion subcomponents of the instructional activities scale predicted the achievement scores in English. Table 4.5 below indicates the model summaries with R- square change and its significance.

Table 4.5. Multiple R and R-square Changes for the Grade Level 9

Model					Change Statistic				
	R	R Square	Adjusted R Square	Standard Error of the Estimate	R Square Change	F Change	Df1	Df2	Sig.of F
1	.346	.120	.111	15.42	.120	12.934	1	95	.001
2	.430	.185	.168	14.92	.065	7.508	1	94	.007
3	.503	.253	.229	14.35	.069	8.534	1	93	.004
4	.563	.317	.288	13.80	.064	8.633	1	92	.004

1 Predictors: (Constant), anxiety
2 Predictors: (Constant), anxiety, confidence
3 Predictors: (Constant), anxiety,confidence,auditorial
4 Predictors: (Constant), anxiety,confidence,auditorial,discussion

The fourth model explained 32 percent of the variance in achievement measure, with the combined effect of the anxiety, confidence, auditorial, and discussion subdimensions of the scales.

Table 4.6 below gives the regression coefficients and their significance values.

Table 4.6. Regression Coefficients and Their Significance for the Grade Level 9

	Unstandardized Coefficients		Standardized Coefficients		
Model	**B**	**Std. Error**	**Beta**	**t**	**Sig**
(Constant)	55.960	1.415		39.555	.000
Anxiety	5.682	1.580	.346	3.596	.001
(Constant)	56.155	1.370		40.974	.000
Anxiety	5.114	1.542	.312	3.316	.001
Confidence	4.267	1.557	.257	2.740	.007
(Constant)	56.298	1.320		42.664	.000
Anxiety	5.159	1.484	.314	3.476	.001
Confidence	4.837	1.511	.292	3.201	.002
Auditorial	4.421	1.513	.264	2.921	.004
(Constant)	55.886	1.276		43.789	.000
Anxiety	5.619	1.435	.342	3.915	.000
Confidence	4.733	1.453	.286	3.257	.002
Auditorial	4.510	1.455	.269	3.100	.003
Discussion	-3.935	1.339	-.255	-2.938	.004

As it is seen in the Table 4.6 above, all the subscale scores are positively related with the dependent variable except the discussion dimension of classroom activities scores.

Regression analysis indicated that at grade level 9 two dimensions of attitudinal measurement, such as anxiety and confidence, and two dimensions of instructional activities scale, such as auditorial and discussion predicted the course grades. Among the four predictors, as the frequency of the activities taken in discussion dimension increases, student achievement level decreases. On the other hand, as anxiety level, confidence in learning English, and frequency of the use of auditorial materials increase, achievement scores increase too.

Regression model for grade level 10

When the regression analysis was run for the 10th graders, it was observed that multiple regression coefficient R was 0.60 with the regression model in which interest and anxiety subcomponents of the attitude scale, and interaction subcomponent of the instructional activities scale and diverger learning style predicted the achievement scores in English. Table 4.7 below indicates the model summaries with R- square change and its significance.

Table 4.7. Multiple R and R Square Changes for the Grade Level 10

Model					Change Statistic				
	R	R Square	Adjusted R Square	Standard Error of the Estimate	R Square Change	F Change	Df1	Df2	Sig.of F
1	.416	.173	.164	14.54	.173	18.822	1	90	.000
2	.510	.260	.244	13.83	.087	10.487	1	89	.002
3	.556	.310	.286	13.43	.049	6.303	1	88	.014
4	.601	.361	.331	13.00	.051	6.966	1	87	.010

1 Predictors: (Constant), interest
2 Predictors: (Constant), interest,interaction
3 Predictors: (Constant), interest,interaction,anxiety
4 Predictors: (Constant), interest,interaction,anxiety,diverger

The fourth model explained 36 percent of the variance in achievement measure, with the combined effect of the interest, anxiety, interaction, and diverger learning style.

Table 4.8 below gives the regression coefficients and their significance values.

Table 4.8. Regression Coefficients and Their Significance for the Grade Level 10.

	Unstandardized Coefficients		Standardized Coefficients		
Model	**B**	**Std. Error**	**Beta**	**t**	**Sig**
(Constant)	60.848	1.416		42.983	.000
Interest	6.669	1.537	.416	4.338	.000
(Constant)	59.372	1.421		41.768	.000
Interest	7.720	1.498	.481	5.155	.000
Interaction	4.630	1.430	.302	3.238	.002
(Constant)	59.381	1.381		43.001	.000
Interest	7.502	1.458	.468	5.147	.000
Interaction	4.050	1.408	.265	2.876	.005
Anxiety	3.777	1.505	.225	2.511	.014
(Constant)	57.420	1.529		37.555	.000
Interest	6.857	1.432	.428	4.790	.000
Interaction	4.178	1.363	.273	3.064	.003
Anxiety	4.011	1.459	.239	2.750	.007
Diverger	8.537	3.234	.231	2.639	.010

As it is seen in the Table 4.8 above, all the subscale scores are positively related with the dependent variable. Regression analysis indicated that at grade level 10 two dimensions of attitudinal measurement, such as interest and anxiety, and only one dimension of instructional activities scale, which is interaction predicted the course grades. Beside the subscale predictions, diverger type students seemed more successful in this grade level. Similarly, as the frequency of the interaction increases, students achievement level increases like in the case of anxiety. That particular subscale predicts the student achievement as in the case of grade level 9.

Regression model for grade level 11

When the regression analysis was run for the 11th graders, it was observed that multiple regression coefficient R was 0.60 with the regression model in which interest and anxiety subcomponents of the attitude scale, and diverger learning style predicted the achievement scores in English. Table 4.9 below indicates the model summaries with R- square change and its significance.

Table 4.9. Multiple R and R Square Changes for the Grade Level 11

Model					Change Statistic				
	R	R Square	Adjusted R Square	Standard Error of the Estimate	R Square Change	F Change	Df1	Df2	Sig.of F
1	.395	.156	.143	16.44	.156	11.657	1	63	.001
2	.556	.309	.287	14.99	.153	13.744	1	62	.000
3	.601	.361	.330	14.53	.052	4.946	1	61	.030

1 Predictors: (Constant), interest
2 Predictors: (Constant), interest,anxiety
3 Predictors: (Constant), interest,anxiety,diverger

The fourth model explained 36 percent of the variance in achievement measure, with the combined effect of the interest, anxiety, and diverger learning style.

Table 4.10 below gives the regression coefficients and their significance values.

Table 4.10. Regression Coefficients and their Significance for the Grade Level 11

Model	Unstandardised Coefficients		Standardised Coefficients		
	B	Std. Error	Beta	t	Sig
(Constant)	72.419	1.783		40.617	.000
Interest	6.397	1.874	.395	3.414	.001
(Constant)	71.772	1.635		43.886	.000
Interest	6.455	1.709	.399	3.777	.000
Anxiety	6.766	1.825	.391	3.707	.000
(Constant)	73.728	1.813		40.657	.000
Interest	5.881	1.677	.363	3.507	.001
Anxiety	6.004	1.803	.347	3.331	.001
Diverger	-11.210	5.040	-.234	-2.224	.030

As it is seen in the Table 4.10 above, all the predictor variables are positively related with the dependent variable except diverger learning style type. Regression analysis indicated that at grade level 11 two dimensions of attitudinal measurement, such as interest and anxiety are good predictors of student achievement in English. Beside the subscale predictions, diverger type students seemed less successful in this grade level.

In sum, regression analyses indicated that anxiety for learning English is a good predictor among the other subscales of attitude, since it was included in the regression equations for all the grade levels. Some of the instructional activities as perceived by the students seem quite effective at certain grade levels, such as auditorial, interaction, and discussion subcomponents, but some of them negatively predict achievement, as in the case of discussion at grade level 9. Divergers when compared to other learning style types are somehow different with respect to their achievement scores at grade levels 10 and 11. While they seem quite successful at

grade level 10, this relation is reversed at grade level 11.

In general, all the findings of the present study can be summarized as follows:

1. Grade level 9 students have greater enjoyment in learning English compared to other grade levels. 11th graders have the lowest score in enjoyment.
2. Grade 9 students indicated smaller interest in learning English compared to grade level 10 students.
3. Aspiration of students drops throughout the grade levels, with the highest aspiration at grade level 9 and lowest at grade level 11.
4. Females gave more importance to learning English than males.
5. Females seemed more interested in learning English than males.
6. Males are more anxious in learning English than females at grade levels 10 and11.
7. Males lose confidence in learning English at grade level 11.
8. Males lose enjoyment at grade level 11.
9. Females are more divergers and convergers in terms of their learning style types.
10. Males are more assimilators and accomodators in terms of their learning style types.
11. Interaction between students in the English classes drops at 11th grade level, as perceived by the students.
12. Independence in the English classes drops at 11th grade level as perceived by the students.
13. Discussion in the English classes increases at grade level 11 as perceived by the students.
14. Use of traditional teaching techniques increases at grade level 11 as perceived by the students.
15. Among a set of variables, anxiety in learning English predicted the achievement in English more than the other subdimensions which means as anxiety increases achievement level decreases.

16. Interest scores also seem an important variable to predict achievement in English.
17. Among the four learning style types, divergers are different with respect to their achievement scores in English. It positively predicts achievement at grade level 1 negatively predicts achievement at grade level 11 which means divergers are high achievers at grade level 10, and they are poor achievers at grade level 11.

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

5.1. Conclusions and Interpretations of the Findings

In this chapter, interpretations of the results are presented. In general, this study aimed at investigating attitudes toward English among high school students in METU Foundation High School across gender and grade levels in terms of mean scores in the subdimensions of attitudinal measure. This study also documents findings about students' learning style types as described by Kolb (1983) across different grade levels and gender among the students. Another purpose is the investigation of instructional activities as perceived by students across the grade levels. Finally, the relationships between the students' achievement scores and all the other variables assessed are evaluated for each grade level separately.

A questionnaire with three parts was administered to the 450 students of METU Foundation High School. Among them 318 were used after the elimination in line with the validity of response patterns given. Thus, the final sample is considered adequate for the rest of the analyses with respect to the distributions across grade levels and gender groups.

In sum, when the attitude of students towards the English course across grade levels and gender was analyzed as of grade levels enjoyment, interest and aspiration subscales were the ones where there are significant differences. Students aspire and

enjoy the English the most at 9th grade and they are more interested in the course at grade10. 10th grade students do not aspire and enjoy the course and they are not interested in it at all. As far as gender is concerned females seemed to be more interested in the course than male are and they give more importance than males do. When gender and grade level interaction was analyzed males lose enjoyment and confidence at grade 11 and they become more anxious at grades 10, and 11.

In the analysis of learning styles across grade levels and gender no significant difference was observed in the distribution of learning styles across grade levels but as of gender difference males were observed to be more assimilator and accommodator whereas females are diverger and converger types.

In the analyses to see whether the perceptions of students on instructional activities change no significant change was observed between the perceptions of males and females. On the other hand, the use of instructional activities named as interaction and independence is highest at grade 11 and the use of activities involving discussion and traditional methods increases at the same grade.

When student attitude towards English courses across different learning style and gender was analyzed no significant finding was observed.

As of factors affecting student achievement lack of anxiety and high confidence and use of auditorial methods contribute positively to students' achievement, however, the use of discussion method affects achievement negatively at grade 9. At grade 10, interest, interaction, anxiety and diverger type of learning style affect achievement positively. At grade 11 interest and anxiety affect contribute positively to the achievement of students but diverger type of students seemed to be less successful in the course. In the rest of the chapter, discussions about the findings are presented.

5.1.1. Interpretations of the Results Related to the Change in Attitude Scores Throughout Grade Levels and Gender

The results related to attitude scores indicated a strong relation of this affective variable with the achievement scores in English, as evidenced by the large effect sizes obtained in grade level comparison. In attitude scale, three subcomponents indicated significant results across the grade levels, namely, enjoyment, interest and aspiration. Among those subscales the largest effect was observed in the aspiration subcomponent. In the enjoyment subscale, the effect size is moderate, but it is small in the interest subcomponent. In the enjoyment subcomponent, mean of the students drops significantly, towards the end of the high school education. 11th graders have less enjoyment in English related activities. What affects students' attitude towards English courses is the priority they give to other courses which they think have more effect on university exam preparation. At this grade level, students seem reluctant to take part in any class activity especially if they are to participate individually. The course's nature requires the use of both receptive (reading, listening) and productive skills (writing, speaking) in which student involvement is essential. Students of this grade may have negative reactions in realizing and practicing these requirements for they do not regard the English course as an appropriate means for their immediate purpose, during the university preparation period.

Another reason for this might be the decreasing attention to any school based activity including English courses. All the students take tutorial university examination preparation courses, and they never strive for the school subjects. This fact seems likely to make them less interested in almost all of the school subjects regardless of their branches. Mathematics and Science courses may still have some importance as they are considered to contribute to the university exam preparation to

a certain extent. Thus, through the years school courses gradually lose importance and 11th grade is the year when English is one of the courses to which students attribute no value at all. Students may even display strong resistance towards the efforts of the teachers and blame the education system for its pointless imposition, claiming that it hampers their aim. However, tutorial courses have such an impact on students that no matter how demanding the course's requirements can be they are of extreme importance and to be fulfilled seriously. This fact places English courses to a lower position where students' indifference becomes more evident indicating their devaluing the course.

On the other hand, 9 graders indicated more enjoyment in the English courses as they have higher expectations compared to 10^{th} and 11^{th} grades. In the 9th grade English courses being based on First Certificate Examinations makes the students attribute considerable importance towards the course, as they are more apt to realize the use the course brings. This grade is the first year students are exposed to English literature and this is another factor affecting their attitude towards the course positively. They mostly enjoy literature as it enables them to express themselves freely in a new and different tradition. Another reason, which explains their positive attitude towards the course, is its being 8 hours a week and no other course's devoting this amount of time at this level. As far as weighted average is concerned the importance of the English course becomes more obvious as students' weighted grades at the end of each year contribute considerably to the graduation grade which affects university entrance exam result accordingly. This is the main reason why English courses receive a positive attitude in the 9th grade.

At 10th grade, interest level of students towards English courses gets better compared to 9th grade despite the fact that number of hours given for English courses at this level is halved. Grade 10 is the period when students reach the highest awareness level as far as their interest towards the course is concerned. They become

fully aware of the importance of the course and more interested in it as at the end of this year they might take the FC Exam and if they get a high grade they will be exempt from English proficiency exam in the

beginning of their university education and this will save them a year. Another reason for the change of their interest might be the exposure of students to English related activities throughout the grade levels 9 and 10. The more they are involved with the subject, the more they are interested in dealing with English related activities, such as reading in English, watching TV channels in English etc.

Student aspiration to learn English drops throughout each grade level and it is the highest in the 9th grade. Students at this grade enjoy the course and seem devoted to fulfill its requirements quite willingly. However, as the grade level increases, students stated that they were less interested in writing in English and lost their desire to learn English. The reason for this finding might be all related to the factors explained for the enjoyment subdimension.

Even the effect sizes are not as large as in the grade level comparison, there are significant gender and interaction effects observed in some of the subcomponents of the attitudinal measurement.

It is mainly females who give more importance to the course compared to males. This difference may stem from attitudinal differences between the two gender groups as supported by literature and there is a general tendency about gender differences in verbal abilities in favor of females (Licht and Dweck, 1983). In line with the related literature, females seem more interested in learning English than males in the present study. In the anxiety subscale, females are less anxious in learning English without having the fear of not being able to show expected level of performance in the course under the burden of both the school and tutorial courses for university examination

preparation in grades 10 and 11, but males are observed to be relatively more anxious.

On the other hand, males lose confidence in learning English in the 11th grade and this might explain the fact that males devote all their time and energy for the university entrance exam and leave everything about the English course aside. What is striking about males in this study is that their attitude towards the English course in the enjoyment subscale declines through the years, in that, despite their enjoyment being very high in the 9th grade it drops gradually in the 10th grade and has its lowest level in the 11th grade. Females, however, show the same tendency in the 9th grade and lose their attitude in the enjoyment subscale but keep constant attitudewise throughout the 10th and 11th grades. Hence it is possible to conclude that females do not show much difference in their attitude through the years whereas males start losing their enjoyment right after the 9th grade and show a drastic fall towards the end of 11th grade.

As far as anxiety is concerned, females become less anxious concerning English courses through the years and at grade 11 their anxiety level drops significantly. On the other hand, males' anxiety at the beginning of 9th grade rises significantly in the 10th grade and rises only very slightly in the 11th grade.

Another finding of this study is the increase in the females' confidence scores in learning English through the years which reaches its highest level in the 11th grade, whereas males' confidence remains the same in the 9th and 10th grades and drops significantly in the 11th grade. This finding could also be explained by the gender differences in the verbal abilities between the two groups (Licht and Dweck, 1983). These three findings about the interaction effects between grade level and gender groups for enjoyment, anxiety and confidence subscales show that females are more verbal ability oriented so they are more keen on learning English than males and

despite the university entrance exam preparation they still attribute certain level of enjoyment towards the course in the 10th and 11th grades. The fall in their anxiety and rise in confidence towards English learning through the years are supporting each other.

5.1.2. Interpretations of the Results Related to Learning Style Characteristics Across Grade Levels

It was pointed out that if the way students were taught is appropriate to their learning style this would have a positive effect on their learning. (Dunn and Griggs, 1989; Kolb, 1976; Orsak, 1990; Sinatra, 1990). Students may have different learning style characteristics, which is supported by the results of this study. Students at METU Foundation High School, indicated various learning style characteristics, with more assimilator (60.3%)and accomodator (58.3%) among males, and more converger (67.2%) and diverger (60%) among females. In the Kolb's Learning Style Inventory, assimilators are defined as combining learning steps of Abstract Conceptualization in which learning involves using logic and ideas rather than feelings, to understand problems or situations, and Reflective Observation, where people understand ideas and situations from different points of view. They would rely on patience, objectivity, and careful judgement but would not necessarily take any action. They would rely on their own thoughts and feelings informing opinions. People with this learning style learn by watching, listening and thinking and they are best at understanding a wide range of information and putting it into concise, logical form. Such people are less focused on other people and more interested in abstract ideas and concepts. Generally people with this learning style find it more important that a theory have logical soundness than practical value. This learning style is important for effectiveness in information and science careers which might also explain prospective career preferences of the students. Males mostly

being assimilators possibly indicates the present fact that they are not keen on learning through practicing; instead they would rather observe and view issues from different perspectives. They are inclined to gather information rather than putting the obtained information into practice.

Accomodators, combine learning steps of Concrete Experience in which personal involvement with people in everyday situations are emphasized relying on ability to be open-minded and adaptable to change and Active Experimentation where experimenting with influencing or changing situations is important and the main concern is what really works, as opposed to simply watching a situation. People with this learning style learn from feeling and by doing and have the ability to learn primarily from "hands-on" experience. Such people probably enjoy carrying out plans and involving themselves in new and challenging experiences. Their tendency may be to act on "gut" feelings rather than on logical analysis. In solving problems, they may rely more heavily on people for information than on their own technical analysis. This learning style is important for effectiveness in action-oriented careers such as marketing or sales. This may also be regarded as one of the indicators of preferred careers.

In the present study, females indicated more converger and diverger learning style characteristics. Kolb (1985), defines convergers as people combining Abstract Conceptualization which involves using logic and ideas, rather than feelings, to understand problems or situations and Active Experimentation where experimenting with influencing or changing situations is important and the main concern is what really works, as opposed to simply watching a situation. People with this learning style learn by thinking and by doing and are best at finding practical uses for ideas and theories. They have the ability to solve problems and make decisions based on finding solutions to questions and problems. They prefer dealing with technical tasks and problems than with social and interpersonal issues. These learning skills are

important for effectiveness in specialist and technology careers.

Divergers, on the other hand, are defined as combining learning steps of Concrete Experience in which personal involvement with people in everyday situations are emphasized relying on ability to be open-minded and adaptable to change and Reflective Observation where people understand ideas and situations from different points of view. They would rely on patience, objectivity, and careful judgement but would not necessarily take any action. They would rely on their own thoughts and feelings informing opinions. People with this learning style learn from feeling and by watching and listening and are best at viewing concrete situations from many different points of view. Their approach to situations is to observe rather than take action. Such people may enjoy situations that call for generating a wide range of ideas, as in brainstorming sessions. They would probably have broad cultural interests and like to gather information. This imaginative ability and sensitivity to feelings is needed for effectiveness in arts, entertainment, and service careers. Thus, students at METU Foundation High School have different learning style preferences, that in the instructional processes, they might have different experiences in line with the instructional activities. In sum this finding of the present study is congruent with the other studies conducted within the framework of learning styles (Dunn and Dunn, 1979; Gall et al., 1990; Neely and Alm, 1992).

5.1.3. Interpretations of the Results Related to Instructional Activities Across Grade Levels

Nineteen instructional activities were clustered under six different groups each representing a separate category having similar properties. Among them the activities forming interaction, independence, discussion and traditional

subcomponents were of significant difference compared to the others across the grade levels. The effect sizes observed for this comparison is large for the interaction and independence dimensions, but they are moderate for the discussion, and traditional subdimensions. This clearly indicates that the mean differences observed across the grade levels for the interaction and independence dimensions are more than the other two dimensions, which are also significant.

In the interaction subscale the use of activities is the highest in the 9th grade and it drops gradually in the 10th and 11th grade levels. When the classroom activities clustered in this subcomponent are closely investigated the frequency of student student cooperation, for instance, drops at grade level 11 (Appendix H). This fact is very typical in using group work as well, where in very few cases this activity is used in the English courses. In the same dimension teachers also use instructional materials other than the course book less than the other grade levels at grade level 11, and similarly, activities using audiotapes are also very rare at grade level 11. The drop in the frequencies also is observed in the independence subcomponent at grade level 11. In that specific dimension, as in the cases of the activities given in interaction dimension, students declared very few usages of, independent individual study, using internet, student presentation, and exercises and practice activities at grade level 11 (See Appendix H).

In the last two dimensions where effect sizes are moderate, students at grade level 11 declared that they have more lecturing, and silent reading. With the use of blackboard, there seems a very slight difference of grade level 11 with respect to other grade levels when the frequencies are taken into consideration. This item is negatively loaded with the respective dimension. In the most favorable alternative of this item, which states the use of blackboard in every new unit is less than both grade levels 9 and 10. Because of the nature of the English courses at that grade level, teachers might probably use the blackboard less than the other grade levels. Since

the lecturing item is heavily and positively loaded on that specific dimension, it seems that teachers' dominant teaching mode at this level is lecturing.

In the 11th grade, where students' main focus is university entrance examination, the course content is based on literature, namely short story analysis, for the purpose of providing a more relaxing atmosphere through which students feel freer to express themselves. However, this student-oriented method works in the intended way only for two or three months of the academic year, this is the time where student participation through discussions is as expected then with the same reason for university exam preparation, it gives way to a completely different method where it is the teacher who is carrying out the tasks by himself using lecturing method. This involves his telling and explaining the story, as if he has to ease the students' work and unless he does this, there will be no other chance to keep this very little interest on the course. In grades 9 and 10 the course is teacher-oriented only in the condition of students' request in case of essential clarification when serious problems arise.

5.1.4. Interpretations of the Results Related to Attitudinal Change Across learning Style Types

In this analysis, no relationship was found between the learning style types and attitudes toward English. This is because the Kolb's learning style is basically used to explain how an individual behaves when confronted with a learning task, rather than attitudinal changes. Thus learning style might be more related to student success at the end of a learning task. That is why in the present study, the researcher also focused on the impact of learning style on student achievement in English.

5.1.5. Interpretations of the Results Related to Factors Affecting Achievement in English

The regression analyses resulted with slightly different models explaining the factors influencing achievement in English. At grade level 9, anxiety, and confidence subdimensions of the attitude toward English scale, auditorial and discussion subdimensions of the instructional activities scale explained a significant variance in the achievement scores. At grade level 10, interest and anxiety subdimensions of the attitude toward English scale, interaction subdimension of instructional activities scale and diverger learning style explained a significant variance in achievement scores. At grade level 11, interest and anxiety subdimensions of attitude toward English scale, and diverger learning style explained a significant variance in achievement scores.

As of factors affecting achievement in English anxiety predicted the achievement in English more frequently than the other dimensions. In that, achievement is negatively affected when anxiety increases in all grade levels. In the 9th grade, confidence is another factor predicting the achievement in English, it affects the achievement positively when it increases. Among instructional activities, auditorial and discussion predict the achievement in English in grade level 9. Auditorial activities include teacher's and students' reading out loud and the majority of the students stated that they use these methods in every new unit. Therefore, these instructional methods as perceived by the students are effective in predicting the achievement in English. Group discussion is another factor predicting achievement. This instructional method works in favor of students when achievement is concerned as evidenced by literature (Bloom, 1979; Dunn, 1990; Saraçoğlu 2000).

In the 10th grade, interest is a factor predicting achievement in English apart from anxiety. As long as students are interested in learning English, their achievement English is affected positively. In the interest subscale majority of the students indicated that their interest towards the course depends on the fact that apart from what the course program provides they are also fond of dealing with of extra curricular activities such as reading books in English in their spare times, following new publications in English, watching television channels broadcasting in English, and being interested in any other activity in English. Interaction is an important instuctional activity in predicting achievement. When students are exposed to variety of means to interact on individualized or group based activities, their achievement is relatively higher than the others. As of learning styles, diverger type students seemed more successful in this grade level as evidenced by positive regression coefficient. As evidenced by literature learning style is an important factor in determining success (Dunn and Dunn 1987; Hunt, 1979). Having the mean of their achievement score of 69.93 with the standard deviation of 15.52 among 27 students, compared to the others having the mean of their achievement score of 59.92 with the standard deviation of 15.33 among 85 students, divergers are much more superior than all the other learning style types at this grade level. What makes divergers this much effective in predicting achievement is the fact that they are the ones who enjoy situations that involve generating a wide range of ideas they may also have broad cultural interests and like to gather information. Their imaginative ability and sensitivity to feelings are in congruence with the interest they attribute towards learning English (Kolb, 1983).

Like 9th and 10th grade levels anxiety is a factor predicting achievement in grade 11 as well. Interest also is another factor predicting achievement in English at the11th grade level. That is to say, when the interest they attribute toward English increases, their achievement also increases. Like the students in the 10th grade, 11th grade

students stated that they enjoy dealing with extra curricular activities in English; however, in this grade level divergers are not the ones who predict achievement positively as evidenced by a negative regression coefficient, unlike the ones in the 10th grade. In 11th grade, the mean of the achievement scores is 58.93 with the standard deviation of 22.31 for 14 diverger type of students and the mean of the achievement scores is 75.83 with the standard deviation of 15.46 for other 72 students. It can be concluded that divergers are less successful compared to other students in grade 11. The way divergers are involved in learning is by watching and feeling. However, others are more successful as they are the ones who learn by thinking and doing. Whatever they are exposed to during learning is meaningful only if they are put into practice after analyzing logically. Being in the last year of high school education and getting prepared to higher education students might feel impelled to take risks and influence people and events through action. This is how they are advised to be in university preparation courses in order to be successful and eliminate the ones who do not have similar properties.

The contrasting findings between grade levels 10 and 11 in line with the divergers can also be explained with the frequencies of the instructional activities, and the change in emphasis given to different sorts of engagements across these two grade levels. When the frequencies given in Appendix 8 are closely investigated, differences can be observed across these two grade levels that there are more silent reading in the classroom, less usage of materials other than course book, less students presentations, less students-students cooperation, and group work among students, less internet related activities, and less individual independent study at grade level 11. Divergers are the ones who are in the process of concrete experience, which requires a learning cycle emphasizing personal involvement with people in everyday situations, and reflective observation, which requires viewing issues from different perspectives and careful observation (Kolb, 1985). It is clearly seen that at grade level 11 students' personal relations with others as well as their

individualized independent studies are restricted to a greater extent compared to grade level 10. Having the lack of interpersonal relations might have hindered divergers to be in a correct path to learn form feeling, and lack of independent individualized study might have prevented them from gathering information on a learning task which are two typical experiences within this learning mode.

5.2.Implications for Practice

This study investigated several factors affecting achievement in English at METU Foundation High School. The findings first pointed out that not only cognitive variables, affective characteristics of the students, such as attitudes, and instructional activities are both important variables explaining achievement in English. On the other hand, learning style was found as one of the determinants of achievement as well. In the light of the findings of this study, in the high school level, teachers and school administrators might also deal with anxiety reduction activities in line with the different subject matter areas. It is not possible to talk about a casual relationship between the achievement and attitude of the students, but, since they are related, any attempt to enhance students' positive feelings toward a school subject, will have a positive impact on achievement. Similarly, student success will foster their attitudes as well. This study contributed to the field by considering the subcomponent of the construct named as attitude. Beside anxiety, confidence and interest are also very important variables related to achievement as well. The effect of learning style pointed out that, this variable may be important for some students to be successful. Thus, school administrators and teachers of different branches should take this variable into consideration in preparing school curricula for different subject matters. Another finding of the study is the change of the instructional activities throughout the grade levels. Especially at grade level 11, some important classroom activities are overlooked, and this might have a negative effect on students success in the

course materials.

In general, this study indicated the complexity of a teaching- learning process, and drew attention to some affective variables about students, and activities within the classroom. Apart from all these, implementing a revised syllabus for each grade level Fulfilling the needs and expectations of both students and teachers, not focusing on a particular exam-based course material –this is the current trend having several shortcomings- but the one with a more flexible and promising content seems likely to contribute better than the ones being used.

5.3. Implications for Further Research

It is clearly seen that for further studies the following actions may take place:

1. More complex regression analyses including some other variables affecting student achievement in English.
2. In-depth analysis for different learning style modes and their impacts on student achievement.
3. Considering the multidimensional characteristics of achievement in English, one can take the different subcomponents of the construct and study the impact of a set of independent variables on each of the subdimensions.
4. Teacher might be given a special focus in studying the student attitudes and instructional activities. Their attitudes toward teaching English and classroom activities they prefer to use might have an impact on students success as well as their attitudes.
5. Course design might be considered in line with the congruence between attitudes of the student towards the course and the utility of instructional activities.

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APPENDIX A

QUESTIONNAIRE

ÖĞRENCİ ANKETİ

Bu anket okulumuzdaki öğrencilerin İngilizce'ye yönelik duygu ve düşüncelerini, İngilizce dersinde yapılan etkinliklere yönelik görüşlerini, ve öğrenme stillerini anlamak için araştırma amacı ile hazırlanmıştır. Bu ankete vereceğiniz cevapların doğru ve samimi olması elde edilen bilgilerin okulumuzdaki eğitim ve öğretim etkinliklerine verimli bir şekilde yansımasını sağlayacaktır. Bu nedenle her bir soruyu dikkatle okuyarak size en uygun gelen yalnız bir seçeneği işaretleyiniz. Her soruyu boş bırakmadan cevaplayınız. Ankete verdiğiniz bilgiler araştırmacı tarafından kesinlikle gizli tutulacak ve kişisel düzeyde elde edilen cevaplar kullanılmayacaktır.

Yardımlarınız için çok teşekkür ederiz.

DİKKAT ! ANKET ARKALI ÖNLÜ BASILMIŞTIR. SAYFALARIN ARKA YÜZÜNDEKİ SORULARI DA CEVAPLANDIRMAYI UNUTMAYINIZ

Bölüm 1

Aşağıda İngilzce konularına yönelik bir dizi cümle vardır. Bunların her birini okuyarak size en uygun gelen seçeneğe X işareti koyunuz.

	Kesinlikle Katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Kesinlikle Katılmıyorum
1.İngilizce öğrenmek zevklidir					
2.İngilizce dersi sıkıcıdır					
3.İngilizce derslerinde kendimi rahat hissederim					
4.Boş zamanlarımda İngilizce kitaplar okurum					
5.İngilizce dersinde başarılı olacağım konusunda kuşkularım var					
6.İngilizce çalışmak için istekli değilim					
7.İngilizceden nefret ediyorum					
8.İngilizce ile ilgili yeni şeyler öğrenmek istiyorum					
9.İngilizce derslerine korku ve endişe içinde giriyorum					
10.İngilizce dersindeki etkinliklere istekli bir şekilde katılıyorum					
11.İngilizce konuşmayı sevmem					
12.İngilizcemi ilerletmek için daha çok zaman harcamak istiyorum					
13.İngilizce bilmek gelecekte bana yarar sağlayacaktır					
14.İngilizce yazı yazmaktan hoşlanıyorum					

	Kesinlikle Katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Kesinlikle Katılmıyorum
15.İngilizce ile ilgili yeni yayınları takip ediyorum					
16.İngilizce ile ilgili her tür etkinlik hoşuma gider					
17.Televizyonda İngilizce yayın yapan kanalları izlerim					
18.İngilizce bilgimi geliştirmek ve bu konuda daha çok çalışmak istiyorum					
19.İngilizce çalışırken rahat ve sakinimdir					
20.İngilizce dersleri ilginç değildir					
21.Daha az İngilizce dersi almak istiyorum					
22.İngilizce korkulu rüyamdır					
23.İngilizceyi iyi bir şekilde öğrenmek için elimden geleni yapıyorum					
24.İngilizce dersinde verilen ödevleri yapmaktan zevk alıyorum					
25.Ders kitapları dışında başka İngilizce kaynaklar okurum					
26.İngilizce çalışmayı sevmiyorum					
27.İngilizce bilmeseler de insanların hayatta başarılı olacağına inanıyorum					
28.İngilizceyi anlamaya çalışmak beni endişelendiriyor					
29.İngilizce gündelik yaşam için önemlidir					
30.İngilizce genel kültürün gelişmesine katkıda bulunur					

Bölüm 2

Bu bölümde İngilizce dersinde yapılan etkinliklerin sıklığı konusunda bilgi toplanmak istenmektedir. Lütfen her bir etkinliği sizin ya da İngilizce öğretmeninizin hangi sıklıkta yaptığını size en uygun gelen seçeneğe X işareti koyarak belirtiniz.

	Hiç	Dönem Boyunca Ortalama 1-2 kez	Ayda Ortalama 1-2 kez	Haftada Ortalama 1-2 kez	Her yeni konuda
1.Öğretmenin tahtayı kullanarak ders yapması					
2. Sınıf içi drama /role playing yapılması					
3.Grup tartışması					
4.Öğretmenin yalnız anlatarak ders yapması					
5. Öğretmenin tepegöz kullanarak ders yapması					
6.Öğretmenin ses kasetleri kullanarak ders yapması					
7.Öğretmenin video kullanarak ders yapması					
8.Sınıf içinde öğrencilerin sessiz okuma yaparak çalışması					
9.Öğretmenin ders kitapları dışında materyal kullanması					
10. Öğrencilerin bireysel sunum yapması					
11. Ders sırasında geri planda müzik kullanılması					
12.Öğrencilerin kendi aralarında ikili çalışma yapması					
13.Öğrencilerin kendi aralarında grup çalışması yapması					
14.Öğretmenin çalışılan materyali yüksek sesle okuması					
15.Öğrencinin çalışılan materyali yüksek sesle okuması					
16.Öğretmenin resim, grafik v.s gibi görsel materyaller kullanması					
17. Öğrencilerin alıştırma ve İngilizce konuşma pratiği yapması					
18. İngilizce ödevi hazırlamak için öğrencilerin internet kullanması					
19.Öğrencilerin bir konu üzerinde kaynak materyaller bulup incelemesi					

Öğrenme Stilleri Envanteri

Aşağıda her birinde dörder cümle bulunan on iki tane durum verilmektedir. Her durum için size en uygun cümleyi 4, ikinci uygun olanı 3, üçüncü uygun olanı 2, en az uygun olanı ise 1 olarak ilgili cümleciğin başında bırakılan boşluğa yazınız.

Örnek olarak doldurulmuş bir cümle

0. Öğrenirken 4 mutluyum. 1 hırslıyım. 2 mantıklıyım. 3 dikkatliyim.

Hatırlamanız için:

4 = en uygun olan
3 = ikinci uygun olan
2 = üçüncü uygun olan
1 = en az uygun olan

Lütfen aşağıdaki bölümü siz derecelendirin.

1.Öğrenirken	— duygularımı gözönüne almaktan hoşlanırım.	— izlemekten ve dinlemekten hoşlanırım.	— fikirler üzerine düşünmekten hoşlanırım.	— birşeyler yapmaktan hoşlanırım.
2. En iyi	— duygularıma ve önsezilerime güvendiğimde öğrenirim.	— dikkatlice dinlediğim ve izlediğimde öğrenirim.	— mantıksal düşünmeyi temel aldığımda öğrenirim.	— birşeyler elde etmek için çok çalıştığımda öğrenirim.
3. Öğrenirken	— güçlü duygu ve tepkilerle dolu olurum.	— sessiz ve çekingen olurum.	— sonuçları bulmaya yönelirim.	— yapılanlardan sorumlu olurum.
4. Ben	— duygularımla öğrenirim	— izleyerek öğrenirim.	— düşünerek öğrenirim.	— yaparak öğrenirim.
5. Öğrenirken	— yeni deneyimlere açık olurum.	— konunun her yönüne bakarım.	— analiz etmekten ve onları parçalara ayırmaktan hoşlanırım.	— denemekten hoşlanırım.
6. Öğrenirken	— sezgisel biriyim.	— gözleyen biriyim.	— mantıklı biriyim.	— hareketli biriyim.
7. En iyi	— kişisel ilişkilerden öğrenirim.	— gözlemlerden öğrenirim.	— akılcı kuramlardan öğrenirim.	— uygulama ve denemelerden öğrenirim.
8. Öğrenirken	— kişisel olarak o işin bir parçası olurum.	— işleri yapmak için acele etmem.	— kuram ve fikirlerden hoşlanırım.	— çalışmamdaki sonuçları görmekten hoşlanırım.
9. En iyi	— duygularıma dayandığım zaman öğrenirim.	— gözlemlerime dayandığım zaman öğrenirim.	— fikirlerime dayandığım zaman öğrenirim.	— öğrendiklerimi uyguladığım zaman öğrenirim.
10. Öğrenirken	— kabul eden birivim.	— çekingen birivim.	— akılcı biriyim.	— sorumlu birivim.
11. Öğrenirken	— katılırım.	— gözlemekten hoşlanırım.	—değerlendiririm.	— aktif olmaktan hoşlanırım.
12. En iyi	— alıcı ve açık fikirli olduğum zaman öğrenirim.	— dikkatli olduğum zaman öğrenirim.	— fikirleri analiz ettiğim zaman öğrenirim.	—pratik olduğum zamanöğrenirim

APPENDIX B

FACTOR ANALYSIS RESULTS FOR THE ATTITUDE SCALE

Rotated Component Matrix[a]

	Component						
	1	2	3	4	5	6	7
ATT6	.746	.165	.154				
ATT2	.711	.111	.121				-.116
ATT24	.683			.152		.177	
ATT26	.669	.110		.227	.112		
ATT20	.639	.113			.129		.246
ATT10	.613	.232			-.235	.161	.122
ATT1	.550	.201	.205	.310	.138		-.245
ATT7	.486	.448	.201	.134	.251		.154
ATT23	.417		.214	.375		.141	-.226
ATT9		.720		.247			
ATT5	.243	.663	.106			-.117	
ATT28		.651	.163		.345		
ATT22	.173	.610			.446	.106	.114
ATT19	.174	.593	.231		.325		-.237
ATT3	.250	.549	.102	.123	-.216		
ATT25			.809	.114			
ATT4	.197	.110	.773	.106			
ATT15	.156		.765		.126		
ATT17		.133	.606	.218			.361
ATT16	.347		.413	.252	.225		
ATT8	.117	.258	.126	.743		.102	-.115
ATT12	.399	-.180	.111	.573	.267	-.118	.232
ATT11	.182	.417	.153	.564		.166	
ATT18	.296	-.125	.253	.506	.375		.179
ATT13		.106			.658	.159	
ATT21	.377	.229	.124	.203	.429		.195
ATT30	.139				.345	.739	
ATT29		.115		.150		.672	.348
ATT14	.269	.117	.360	.174		.437	-.306
ATT27						.204	.781

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 25 iterations.

APPENDIX C

FACTOR ANALYSIS RESULTS FOR THE REVISED ATTITUDE SCALE

Rotated Component Matrix

	Component						
	1	2	3	4	5	6	7
ATT6	.722	.163	.133			.176	
ATT2	.722		.129				
ATT20	.659	.183	.118	.290		-.288	
ATT24	.644			.144		.293	.138
ATT26	.621	.195		.309		.198	
ATT10	.591				.428	.138	
ATT1	.493	.186	.169	.217	.142	.427	
ATT7	.485	.476	.225	.244	.181		.130
ATT28		.749	.145				
ATT22	.163	.737		.188			.221
ATT19	.149	.711	.175			.284	
ATT5	.234	.608		-.108	.234	.111	-.190
ATT25			.807			.101	
ATT15	.155	.126	.770				
ATT4	.179		.758			.191	
ATT17		.131	.632	.301	.124		.102
ATT16	.297	.112	.396	.277		.252	
ATT12	.321		.104	.756			
ATT18	.229		.260	.660			.160
ATT8		.134	.104	.547	.402	.345	
ATT11		.348	.133	.459	.356	.286	.123
ATT3	.260	.176	.159		.717		
ATT9		.488			.612		
ATT23	.317		.128	.238		.615	
ATT14	.199	.193	.280			.570	.304
ATT30	.128	.130			-.117	.103	.828
ATT29			.102	.117	.281		.674

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 10 iterations.

APPENDIX D

FACTOR ANALYSIS RESULTS FOR THE INSTRUCTIONAL ACTIVITIES SCALE

Rotated Component Matrix[a]

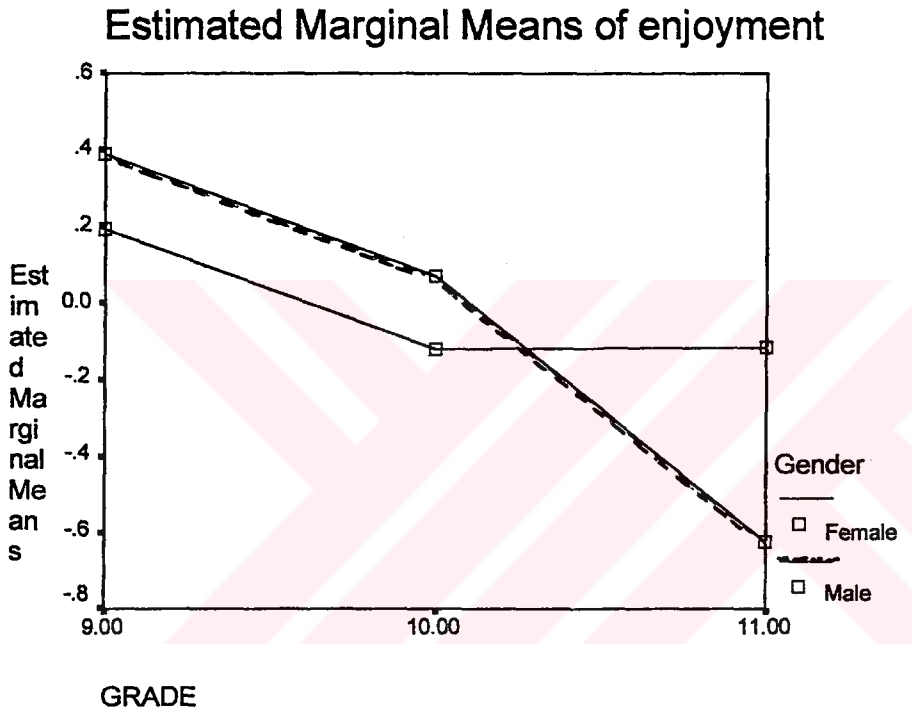
	Component					
	1	2	3	4	5	6
Student-student cooperation	.847		.148		.154	
Group work among students	.805				.283	
Using materials other than course book	.526	.364	.167	.332	-.118	
Using audio tapes	.456	.152	.407		-.223	-.126
Using video tapes	.135	.774	.157			
Using overhead projector	-.189	.713	.216			
Using visual aids	.440	.508	.160	.373	-.153	
Role playing	.231	.494	.188	.122	.108	
Using background music	.321	.474	-.336	.218	-.258	.260
Individual independent study	.204	.155	.706			
Using internet		.249	.700			
Student presentation	.267		.580		-.346	
Exercise and practice	.229	.110	.434	.189	.283	-.175
Teachers' reading out laod				.829	.180	
Students' reading out laod			.147	.805	.120	
Group discussion				.123	.679	-.121
Silent reading	.132			.150	.661	.291
Lecturing		-.129	.103			.839
Using blackboard	.293	-.252	.211	.278	-.252	-.484

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 12 iterations.

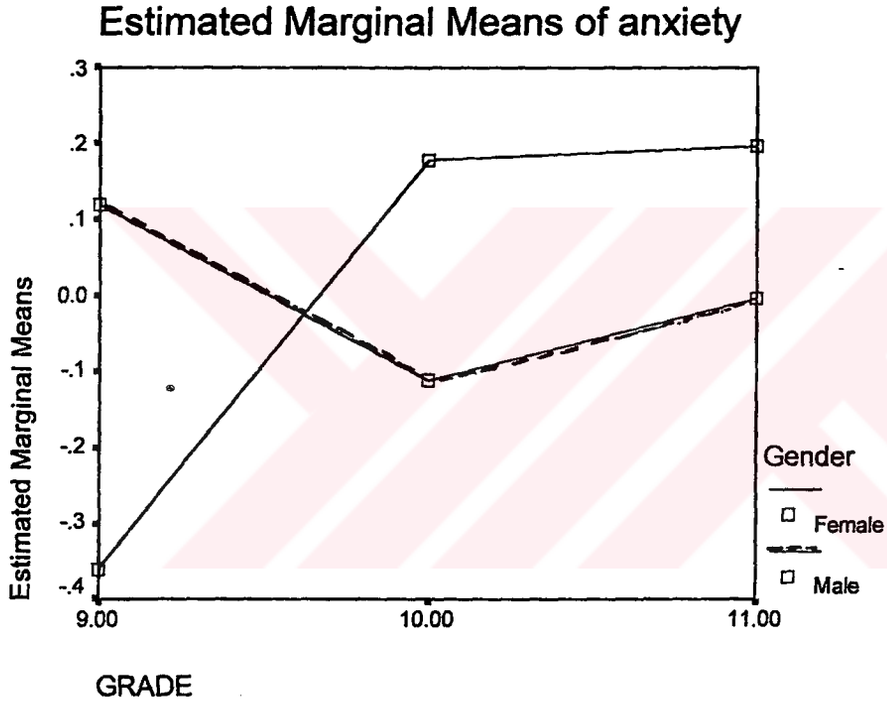
APPENDIX E

INTERACTION BETWEEN GRADE LEVEL AND SEX FOR THE ENJOYMENT SUBSCALE


Estimated Marginal Means of enjoyment
Estimated Marginal Means
.6
.4
.2
0.0
-.2
-.4
-.6
-.8
9.00
10.00
11.00
GRADE
Gender
Female
Male

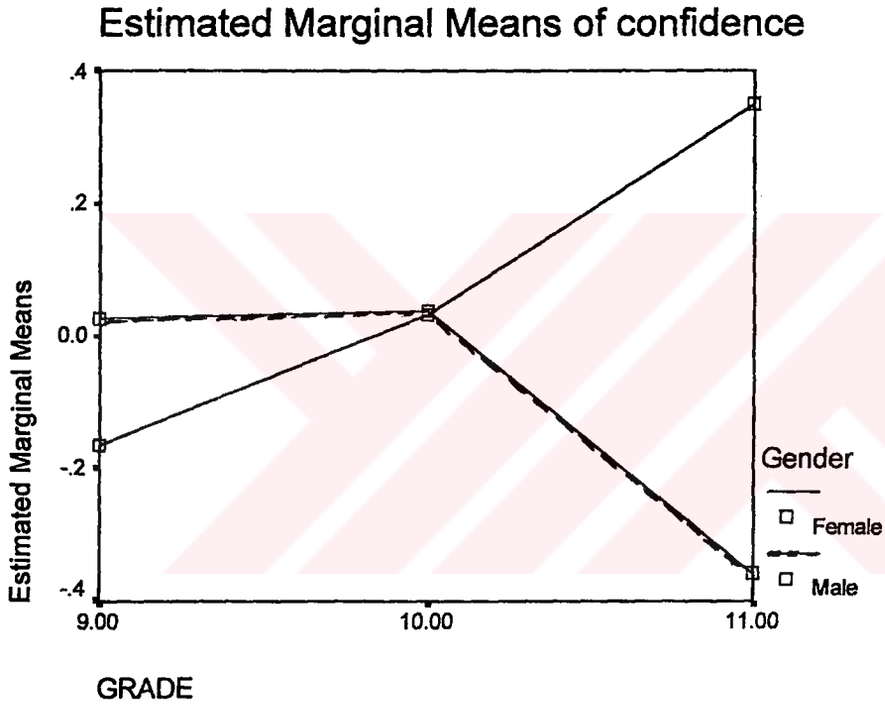
APPENDIX F

INTERACTION BETWEEN GRADE LEVEL AND SEX FOR THE ANXIETY SUBSCALE


Estimated Marginal Means of anxiety
Estimated Marginal Means
.3
.2
.1
0.0
-.1
-.2
-.3
-.4
9.00
10.00
11.00
GRADE
Gender
Female
Male

APPENDIX G

INTERACTION BETWEEN GRADE LEVEL AND SEX FOR THE CONFIDENCE SUBSCALE


Estimated Marginal Means of confidence
Estimated Marginal Means
.4
.2
0.0
-.2
-.4
9.00
10.00
11.00
GRADE
Gender
Female
Male

APPENDIX H

FREQUENCY DISTRIBUTION OF THE INSTRUCTIONAL ACTIVITIES SCALE ITEMS

			GRADE		
			9.00	10.00	11.00
Using blackboard	Never	Count	2	6	11
		Col %	1.7%	5.4%	13.1%
	1-2 times in a semester	Count		5	12
		Col %		4.5%	14.3%
	1-2 times in a month	Count	13	9	16
		Col %	11.0%	8.1%	19.0%
	1-2 times in a week	Count	22	29	18
		Col %	18.6%	26.1%	21.4%
	In every new unit	Count	81	62	27
		Col %	68.6%	55.9%	32.1%
Role playing	Never	Count	69	66	75
		Col %	58.0%	58.9%	88.2%
	1-2 times in a semester	Count	30	27	3
		Col %	25.2%	24.1%	3.5%
	1-2 times in a month	Count	11	13	4
		Col %	9.2%	11.6%	4.7%
	1-2 times in a week	Count	6	3	3
		Col %	5.0%	2.7%	3.5%
	In every new unit	Count	3	3	
		Col %	2.5%	2.7%	
Group discussion	Never	Count	47	34	39
		Col %	39.2%	30.6%	45.3%
	1-2 times in a semester	Count	32	37	7
		Col %	26.7%	33.3%	8.1%
	1-2 times in a month	Count	25	23	6
		Col %	20.8%	20.7%	7.0%
	1-2 times in a week	Count	10	13	16
		Col %	8.3%	11.7%	18.6%
	In every new unit	Count	6	4	18
		Col %	5.0%	3.6%	20.9%
Lecturing	Never	Count	30	36	12
		Col %	25.0%	33.0%	14.6%
	1-2 times in a semester	Count	15	16	7
		Col %	12.5%	14.7%	8.5%
	1-2 times in a month	Count	16	18	9
		Col %	13.3%	16.5%	11.0%
	1-2 times in a week	Count	31	16	24
		Col %	25.8%	14.7%	29.3%
	In every new unit	Count	28	23	30
		Col %	23.3%	21.1%	36.6%
Using overhead projector	Never	Count	88	97	76
		Col %	73.3%	86.6%	88.4%
	1-2 times in a semester	Count	19	7	4
		Col %	15.8%	6.3%	4.7%
	1-2 times in a month	Count	11	4	5
		Col %	9.2%	3.6%	5.8%
	1-2 times in a week	Count	1	4	
		Col %	.8%	3.6%	
	In every new unit	Count	1		1
		Col %	.8%		1.2%
Using audio tapes	Never	Count	20	21	65
		Col %	16.8%	18.9%	75.6%

			GRADE		
			9.00	10.00	11.00
Using audio tapes	1-2 times in a semester	Count	14	26	8
		Col %	11.8%	23.4%	9.3%
	1-2 times in a month	Count	45	42	7
		Col %	37.8%	37.8%	8.1%
	1-2 times in a week	Count	30	17	4
		Col %	25.2%	15.3%	4.7%
	In every new unit	Count	10	5	2
		Col %	8.4%	4.5%	2.3%
Using video tapes	Never	Count	86	87	78
		Col %	72.3%	77.7%	90.7%
	1-2 times in a semester	Count	14	14	3
		Col %	11.8%	12.5%	3.5%
	1-2 times in a month	Count	17	7	2
		Col %	14.3%	6.3%	2.3%
	1-2 times in a week	Count	1	2	2
		Col %	.8%	1.8%	2.3%
	In every new unit	Count	1	2	1
		Col %	.8%	1.8%	1.2%
Silent reading	Never	Count	25	42	12
		Col %	21.0%	37.5%	14.0%
	1-2 times in a semester	Count	20	17	5
		Col %	16.8%	15.2%	5.8%
	1-2 times in a month	Count	34	30	10
		Col %	28.6%	26.8%	11.6%
	1-2 times in a week	Count	24	11	36
		Col %	20.2%	9.8%	41.9%
	In every new unit	Count	16	12	23
		Col %	13.4%	10.7%	26.7%
Using materials other than course book	Never	Count	26	34	48
		Col %	22.0%	30.6%	55.8%
	1-2 times in a semester	Count	18	19	16
		Col %	15.3%	17.1%	18.6%
	1-2 times in a month	Count	36	26	14
		Col %	30.5%	23.4%	16.3%
	1-2 times in a week	Count	21	12	4
		Col %	17.8%	10.8%	4.7%
	In every new unit	Count	17	20	4
		Col %	14.4%	18.0%	4.7%
Student presentation	Never	Count	40	47	75
		Col %	34.2%	42.0%	89.3%
	1-2 times in a semester	Count	33	35	6
		Col %	28.2%	31.3%	7.1%
	1-2 times in a month	Count	25	21	1
		Col %	21.4%	18.8%	1.2%
	1-2 times in a week	Count	15	3	1
		Col %	12.8%	2.7%	1.2%
	In every new unit	Count	4	6	1
		Col %	3.4%	5.4%	1.2%
Using background music	Never	Count	60	30	21
		Col %	50.4%	26.8%	24.4%
	1-2 times in a semester	Count	25	24	16
		Col %	21.0%	21.4%	18.6%

			GRADE		
			9.00	10.00	11.00
Using background music	1-2 times in a month	Count	6	19	13
		Col %	5.0%	17.0%	15.1%
	1-2 times in a week	Count	24	20	27
		Col %	20.2%	17.9%	31.4%
	In every new unit	Count	4	19	9
		Col %	3.4%	17.0%	10.5%
Student-student cooperation	Never	Count	13	21	38
		Col %	10.8%	18.9%	44.2%
	1-2 times in a semester	Count	19	13	21
		Col %	15.8%	11.7%	24.4%
	1-2 times in a month	Count	45	27	15
		Col %	37.5%	24.3%	17.4%
	1-2 times in a week	Count	29	34	8
		Col %	24.2%	30.6%	9.3%
	In every new unit	Count	14	16	4
		Col %	11.7%	14.4%	4.7%
Group work among students	Never	Count	21	29	37
		Col %	17.6%	25.9%	43.5%
	1-2 times in a semester	Count	33	21	27
		Col %	27.7%	18.8%	31.8%
	1-2 times in a month	Count	38	26	17
		Col %	31.9%	23.2%	20.0%
	1-2 times in a week	Count	16	24	2
		Col %	13.4%	21.4%	2.4%
	In every new unit	Count	11	12	2
		Col %	9.2%	10.7%	2.4%
Teachers' reading out load	Never	Count	7	10	8
		Col %	6.0%	9.3%	9.4%
	1-2 times in a semester	Count	18	15	4
		Col %	15.4%	14.0%	4.7%
	1-2 times in a month	Count	27	28	11
		Col %	23.1%	26.2%	12.9%
	1-2 times in a week	Count	31	28	31
		Col %	26.5%	26.2%	36.5%
	In every new unit	Count	34	26	31
		Col %	29.1%	24.3%	36.5%
Students' reading out load	Never	Count	13	19	17
		Col %	10.9%	17.3%	19.8%
	1-2 times in a semester	Count	19	23	10
		Col %	16.0%	20.9%	11.6%
	1-2 times in a month	Count	37	27	16
		Col %	31.1%	24.5%	18.6%
	1-2 times in a week	Count	29	28	27
		Col %	24.4%	25.5%	31.4%
	In every new unit	Count	21	13	16
		Col %	17.6%	11.8%	18.6%
Using visual aids	Never	Count	30	39	54
		Col %	25.4%	34.8%	62.8%
	1-2 times in a semester	Count	33	24	13
		Col %	28.0%	21.4%	15.1%
	1-2 times in a month	Count	35	19	11
		Col %	29.7%	17.0%	12.8%

			GRADE		
			9.00	10.00	11.00
Using visual aids	1-2 times in a week	Count	12	14	7
		Col %	10.2%	12.5%	8.1%
	In every new subject	Count	8	16	1
		Col %	6.8%	14.3%	1.2%
Exercise and practice	Never	Count	14	22	37
		Col %	11.8%	20.0%	43.5%
	1-2 times in a semester	Count	23	27	17
		Col %	19.3%	24.5%	20.0%
	1-2 times in a month	Count	35	27	15
		Col %	29.4%	24.5%	17.6%
	1-2 times in a week	Count	29	22	6
		Col %	24.4%	20.0%	7.1%
	In every new unit	Count	18	12	10
		Col %	15.1%	10.9%	11.8%
Using internet	Never	Count	33	52	68
		Col %	27.7%	47.7%	79.1%
	1-2 times in a semester	Count	42	30	10
		Col %	35.3%	27.5%	11.6%
	1-2 times in a month	Count	28	8	4
		Col %	23.5%	7.3%	4.7%
	1-2 times in a week	Count	5	9	2
		Col %	4.2%	8.3%	2.3%
	In every new unit	Count	11	10	2
		Col %	9.2%	9.2%	2.3%
Individual independent study	Never	Count	36	58	79
		Col %	30.0%	51.8%	91.9%
	1-2 times in a semester	Count	46	32	2
		Col %	38.3%	28.6%	2.3%
	1-2 times in a month	Count	26	18	4
		Col %	21.7%	16.1%	4.7%
	1-2 times in a week	Count	8	4	
		Col %	6.7%	3.6%	
	In every new unit	Count	4		1
		Col %	3.3%		1.2%