THE EFFECTS OF MASTERY LEARNING AND THE POSSESSION OF NECESSARY PREREQUISITES ON ACHIEVEMENT OF TURKISH STUDENTS STUDYING ENGLISH AS A SECOND LANGUAGE

by

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ABSTRACT

The aim of this study is to test whether or not the combined effect of Mastery Learning Method of Instruction in addition to the provision of Cognitive Entry Behaviors produces higher achievement levels than those obtained through Mastery Learning or Cognitive Entry Behaviors alone in relation to the control classes. The study is conducted at a private high school in Istanbul, including the preparatory level English class students studying English as a second language.

The hypotheses of the study are:

HYPOTHESIS I : THE ACHIEVEMENT OF UNSUCCESFUL STUDENTS RECEIVING COGNITIVE ENTRY BEHAVIORS WILL BE HIGHER THAN THOSE NOT RECEIVING THIS HELP ON THE PRE-TEST.

HYPOTHESIS II: THE ACHIEVEMENT LEVELS OF CLASSES RECEIVING COGNITIVE ENTRY BEHAVIORS WILL BE HIGHER THAN CLASSES NOT RECEIVING THIS HELP ON THE PRE-TEST.

HYPOTHESIS III: THE COMBINED EFFECT OF COGNITIVE ENTRY BEHAVIORS AND MASTERY LEARNING WILL PRODUCE HIGHER ACHIEVEMENT LEVELS THAN EITHER INTERVENTION ALONE ON THE SUMMATIVE TEST.

HYPOTHESIS IV: COGNITIVE ENTRY BEHAVIORS WILL HAVE ADDITIVE EFFECT TO MASTERY LEARNING METHOD OF INSTRUCTION.

To test these four hypotheses of the study, One-Way Analysis of Variance, Two-Way Analyses of Variance, Newman-Keuls formula, T-tests, effect size analyses are used and E correlation ratios were utilized. The results of the data obtained in the study show that:

1. The achievement levels of only the students who were unsuccesful during the first semester but received Cognitive Entry Behaviors in the semester break are significantly higher than the unsuccessful students who did not receive any Cognitive Entry Behaviors, on the pre-test.

2. The achievement levels of the two classes which receive Cognitive Entry Behaviors are higher than the other two classes, and in most cases significantly so, on the pre-test.

3. The achievement level of the class under Mastery Learning Method of Instruction in combination to receiving Cognitive Entry Behaviors is significantly higher than all of the other classes on the summative test. This class is followed by the mastery learning only and the class which received Cognitive Entry Behaviors. In addition, all of these three classes reach significantly higher levels of achievement in comparison to the control class.

4. Cognitive Entry Behaviors have an additive effect to Mastery Learning Method of Instruction.

It is seen from the results of the study that the combined effect of Mastery Learning and Cognitive Entry Behaviors lead to achievement levels which are 2.76 standard deviations over the control class. Mastery Learning alone leads to levels of achievement which are 1.76 standard deviations above the mean over the control class. The provision of Cognitive Entry Behaviors alone produces achievement levels which are about .73 standard deviatian over the control class.

ÖZET

Bu çalışmanın amacı, öğrencilerin Bilişsel Giriş Davranışlarına sahip olmalarının Tam Öğrenme Yönteminin de uygulandığı sınıflarda, öğrencilerin başarılarını sadece Tam Öğrenmenin sağladığı düzeylerden daha yükseğe çıkarıp çıkaramadığını sınamaktır. Başka bir deyişle, bu iki değişkenin birleşik etkilerinin yalnız Tam öğrenmenin etkisinden fazla olup olmadığını sınamak, çalışmanın amacıdır. Çalışma, İstanbulda özel bir lisede gerçekleştirilmiş olup, yabancı dil olarak İngilizce öğrenmekte olan hazırlık sınıfı Türk öğrencilerini içermektedir.

Bu çalışmanın denenceleri şunlardır:

DENENCE I: BİLİŞSEL GİRİŞ DAVRANIŞLARI KAZANDIRILAN BAŞARISIZ ÖĞRENCİLERİN ÖN-TEST'TEKİ BAŞARI DÜZEYLERİ, BİLİŞSEL GİRİŞ DAVRANIŞLARINA SAHİP OLMAYAN DİĞER BAŞARISIZ ÖĞRENCİLERİN DÜZEYLERİNDEN DAHA YÜKSEK OLACAKTIR.

DENENCEII: BİLİŞSEL GİRİŞ DAVRANIŞLARINI KAZANAN SINIFLARIN ÖN-TEST'TEKİ BAŞARI DÜZEYLERİ, BİLİŞSEL GİRİŞ DAVRANIŞLARINA SAHİP OLMAYAN SINIFLARIN DÜZEYLERİNDEN DAHA YÜKSEK OLACAKTIR.

DENENCE III: ERİŞİ TESTİ PUANLARINDA TAM ÖĞRENME YÖNTEMİ İLE BİLİŞSEL GİRİŞ DAVRANIŞLARININ BİRLEŞİK ETKİSİ, SADECE TAM ÖĞRENME VEYA BİLİŞSEL GİRİŞ DAVRANIŞLARININ TEK BAŞINA GÖSTERDİĞİ ETKİDEN, ÖNEMLİ DERECEDE

DAHA YÜKSEK OLACAKTIR.

DENENCE IV: BİLİŞSEL GİRİŞ DAVRANIŞLARININ TAM ÖĞRENME YÖNTEMİNE OLAN ETKİSİ TOPLAMSALDIR.

Çalışmanın bu dört denencesini sınayabilmek için, tek yönlü varyans analizi, iki yönlü varyans analizi, Newman-Keuls formülü, T-testleri, etki oranı analizleri kullanılmış ve iki değişkenin E korelasyon oranları hesaplanmıştır. Çalışmadan elde edilen bulgular şunlardır:

1. Birinci sömestrde başarısız olan,ancak sömestr tatilinde Bilişsel Giriş Davranışlarına sahip olmaları sağlanan öğrencilerin Ön-Test'te gösterdikleri başarı düzeyi, Bilişsel Giriş Davranışlarını kazanmamış olan başarısız öğrencilerin düzeyinden önemli derecede daha yüksek olmuştur.

2. Bilişsel Giriş Davranışlarını kazanan iki sınıfın Ön-Test'teki başarı düzeyi, Bilişsel Giriş Davranışlarını kazanmamış diğer iki sınıfın başarı düzeyinden büyük çoğunlukla daha yüksek olmuştur.

3. Tam öğrenme yöntemiyle birlikte Bilişsel Giriş Davranışlarını da kazanan sınıfın erişi testindeki başarı düzeyi diğer üç sınıfın başarı düzeylerinden önemli derecede daha yüksek olmuştur. Tam Öğrenme Yöntemi ve Bilişsel Giriş Davranışları sınıfları sırayla bu sınıfı takip etmişlerdir. Bu üç sınıfın başarı düzeyi kontrol sınıfının başarı düzeyine kıyasla önemli düzeyde daha yüksek olmuştur.

4. Bilişsel Giriş Davranışlarının Tam Öğrenme Yöntemine olan etkisi toplamsal çıkmıştır.

Çalışmanın sonuçlarından görülmektedir ki, kontrol sınıfına kıyasla, Tam Öğrenme Yöntemiyle Bilişsel Giriş Davranışlarının birleşik etkisi ortalama olarak 2.76 stantard sapma daha yüksektir.

Tam Öğrenme Yöntemi ile öğrenen sınıfın başarısı ise kontrol sınıfına kıyasla 1.76 standard sapma daha yüksek çıkmıştır. Öte yandan, Bilişsel Giriş Davranışlarının kontrol sınıfına kıyasla tek başına etkisi .73 standard sapma daha yüksek olmuştur.

CHAPTER I

INTRODUCTION: STATEMENT OF THE PROBLEM

One of the main corcerns of the field of educational pyschology is trying to find out the reasons concerning why students succeed or fail at school. According to Carroll, the primary job of educational psychology is developing and applying knowledge to the prevention and remediation of learning difficulties of students (Carroll, 1963). The task at hand, then becomes finding out the factors that influence school success or school failure. It is evident that student failure has become a very salient problem in most formal educational systems. It has been shown by research that if the variables and school conditions are appropriately used, student variation in achievement can be minimized (Bloom, 1971). Bloom (1976) thinks that schools should be effective enough to reduce variances in achievement among learners so that a greater number of students can attain higher levels of learning expected from the few alone. Research shows that 90% of the students can learn school subjects up to the same level that only the top 10% of students have been learning under traditional conditions (Bloom, 1972), if the variables that affect achievement are appropriately used.

Mastery Learning, both as a theory and a method of instruction, aims to bring almost all of the students to very high levels of learning. Research shows that Quality of Instruction alone can account for about 25-42 percent of the variation in achievement (Bloom, 1976). There are

of course, some other variables which explain variations in achievement. Among those are the Cognitive Entry Behaviors and the Affective Entry Characteristics of the learner, which in short, are the history of students both academically and affectively (Bloom, 1976). "Some of the previous history of the learner can easily determine the nature of the students interaction with the learning task and the learning outcomes of that interaction", Blom states in his book Human Characteristics and School Learning (Bloom, 1976, p.30). By cognitive Entry Behaviors , Bloom means "the prerequisite learning needed for a particular learning task", and by Affective Entry Characteristics"motivational attitudes towards learning and the self before starting on a learning task" (Bloom, p.30,73,1976). Research shows that these two variables together explain 60 percent of the variation in achievement (Bloom, 1976).

It will be useful here to give a brief summary of Bloom's Theory and Method of Instruction which is called Mastery Learning. The aim of Bloom's Mastery Learning Method of Instruction is to bring all or almost all the students to very high levels of learning. Research shows that studying under Mastery Learning Method of Instruction produces a difference of about one standard deviation above the mean of the students studying under traditional methods of instruction (Bloom, 1976).

Bloom states that group instruction usually produces errors in learning at each stage of a course and these errors are compounded with later learning errors. A system of feedback to teachers and students can reveal these errors in learning shortly after they occur. Thus, if correctives are introduced when needed, the learning errors can be corrected before they are compounded with later learning units(Bloom, 1978). This correction and help can enable the students to achieve mastery of each learning task. Bloom (1978) also states that when the students

receive the necessary prerequisites for each new learning task, they will gain self-confidence and develop positive attitudes towards learning and towards the self (Bloom 1978).

There are three independent variables in Bloom's Instructional Theory and Method affect the level and type of achievement, the rate of learning and the affective outcomes. Blooms instructional model developed in 1968 is shown below.

Student Characteristics | Instruction | Learning outcomes

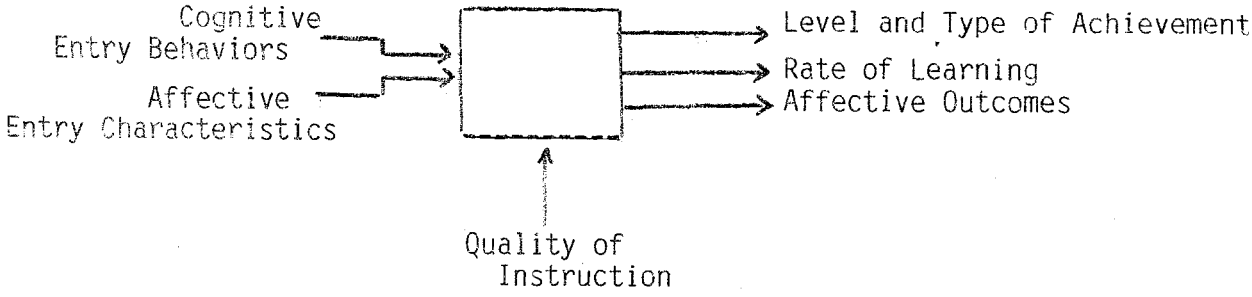


Figure 1. The model of Bloom's Instructional Theory (Bloom, 1976, p.11)

As seen from the model there are three independent variables which are the Student Characteristics and the Quality of Instruction that affect school learning. According to the model there are two different types of student characteristics:

Cognitive Entry Behaviors, which are defined as the necessary prerequisites needed for a learning task to be accomplished by the student.

Affective Entry Characteristics, which are defined as the students'

motivations, interests and attitudes towards learning the new learning tasks. These characteristics are developed by the students' previous history of learning related to learning tasks and self perceptions.

Learning Task is defined as a basic unit consisting of elements to be learned. It can be analyzed, evaluated, taught and learned over a period of time which is usually between two to ten hours of instruction.

Quality of Instruction determines the efficiency with which a learner will accomplish a learning task. The basic elements of the quality of instruction are cues , participation, reinforcement, and feedback and correctives.

Cues tell the student what is to be learned, what to do and how to do it. Participation is the extent to which the students' involvement in the learning task is gained. Reinforcement is administered by the teacher and it increases the probability of reoccurence of the behavior preceding it.

Feedbacks consist of brief formative tests given to the students at the end of each learning task. They give an information about what the student has learned and what he/she still needs to learn in order to achieve the criterion of mastery. The students who do not reach the level of learning are given the appropriate correctives by going over the learning task again. After the teacher corrects the errors, a parallel form of the formative test is given to those who could not reach the predetermined level of learning. This procedure is followed until the completion of the final learning task.

Student characteristics and quality of instruction affect three types of learning outcomes : Level an Type of Achievement, Rate of

Learning and Affective Outcomes.

Level and Type of Achievement: If the student characteristics and the quality of instruction are altered positively, about 80-85% of the students reach levels of learning expected from the top 15-20% of the students under non-mastery conditions. Also student variation is decreased and they become more similar in their achievement.

Rate of Learning: If the students are provided with the necessary prerequisites for the new learning tasks and if systematic feedback and corrective procedures are used, the rate of learning increases and the variance among the students in terms of rate of learning decreases.

Affective Outcomes:As a result of mastery learning method of instruction, students develop positive attitudes towards learning and towards the self and they enter further learning more positively.

This study deals with the combined affect of two different interventions, mastery learning method of instruction and cognitive entry behaviors, on achievement of English learned at preparatory level by Turkish secondary school students. The main problem of the study is to test whether mastery learning method of instruction used in addition to providing the students with the necessary Cognitive Entry Behaviors for the initial learning task, has an additive effect on achievement levels of students.

Four Instructional methods are used for four different groups of English preparatory level students in this study.

1. Mastery learning method of instruction in combination with supplying the necessary cognitive entry behaviors to the initial task, (ML+CEB class): Before begining the instruction,

the unsuccesful students were provided with the cognitive entry behaviors which were the necessary prerequisites for the first of a series of 3 learning tasks studied.

2. The mastery learning class, (ML class): This class studied only under mastery learning method of instruction. The unsuccessful students of this class were not provided with the necessary prerequisites for the first of a series of 3 learning tasks.

3. The class provided with the necessary Cognitive Entry Behaviors, (CEB class): The unsuccessful students of this class were provided with the Cognitive Entry Behaviors which are the necessary prerequisites for the first of a series of 3 learning tasks. After receiving the Cognitive Entry Behaviors the class continued its traditional methods of instruction through the 3 learning tasks.

4. Control Class, (C class): The unsuccessful students of this class were not provided with the Cognitive Entry Behaviors which are necessary for the 3 learning tasks that were going to be taught. This class studied under traditional methods of instruction with no intervention.

Four hypotheses are tested in the study. These are:

HYPOTHESIS I : THE ACHIEVEMENT LEVELS OF UNSUCCESSFUL STUDENTS RECEIVING COGNITIVE ENTRY BEHAVIORS WILL BE HIGHER THAN THOSE NOT RECEIVING THIS HELP ON THE PRE-TEST.

HYPOTHESIS II : THE ACHIEVEMENT LEVELS OF CLASSES RECEIVING COGNITIVE ENTRY BEHAVIORS WILL BE HIGHER THAN CLASSES NOT RECEIVING THIS HELP ON THE PRE-TEST.

HYPOTHESIS III: THE COMBINED EFFECT OF COGNITIVE ENTRY BEHAVIORS AND MASTERY LEARNING WILL PRODUCE HIGHER ACHIEVEMENT LEVELS THAN EITHER INTERVENTION ALONE ON THE SUMMATIVE TEST.

HYPOTHESIS IV: COGNITIVE ENTRY BEHAVIORS WILL HAVE AN ADDITIVE EFFECT TO MASTERY LEARNING METHOD OF INSTRUCTION.

It is expected in the study that, (ML+CEB) class which receives Cognitive Entry Behaviors in addition to being instructed under mastery learning method of instruction will approach to two standard deviations over the control class in terms of their achievement on their summative test scores. The other two classes, (ML) and (CEB) classes, where the students of the former were instructed under mastery learning method of instruction and the latter were provided with the necessary Cognitive Entry Behaviors, are expected to approach to one standard deviation over the control class.

The next section deals with the review of appropriate literature.

CHAPTER II

SURVEY OF LITERATURE

The main concern of the study is to test whether or not the combined effect of Mastery Learning Method of Instruction in addition to receiving Cognitive Entry Behaviors produces higher achievement levels in comparison to control conditions than those obtained through Mastery Learning or Cognitive Entry Behaviors alone. Mastery Learning and the Cognitive Entry Behaviors are the two interventions used in the study which influence achievement levels. It is expected in the study that the class which is instructed under Mastery Learning Method of Instruction in addition to receiving Cognitive Entry Behaviors will reach levels of learning about two standard deviations over the control class, while the Mastery Learning only class and the class which receives Cognitive Entry Behaviors only will reach levels of learning about one standard deviation over the control class.

Research findings show that (Bloom, 1976, Afreşa, 1983, Nwabueze, 1984, Eginlioğlu 1985) Mastery Learning Method of Instruction produces achievement levels which are approximately one standard deviation over the control class instructed under traditional methods. The basic idea underlying Bloom's (1976) mastery learning theory and method is that all or almost all of the students can learn to very high levels of learning any given subject, if the quality of instruction and the time needed for that subject are appropriate for the characteristics of

the learner. Research done by Airasion (1969), Hogwan (1970), and Kersh (1971) show that students studying under mastery learning method of instruction reach levels of learning about one standard deviation over the students studying under traditional methods. Findings also show that four-fifth of the students under mastery learning conditions reach level of achievements that is reached by only one fourth of the students under traditional methods of instruction.

Yıldıran (1977) found that high levels of achievement which are produced by mastery learning method of instruction affects retention, transfer, and the use of higher mental processes. Yıldıran's study indicates that retention, transfer, higher and lower mental processes, and affective outcomes are affected by the level of learning not by the rate of learning, aptitude, IQ level, or time-related effort.

According to Bloom, "the motion underlying mastery learning is that most students can attain a high level of learning capability if instruction is approached sensitively and systematically, if students are helped when and where they have learning difficulties, if they are given sufficient time to achieve mastery, and if there is some clear criterion of what constitutes mastery" (Bloom, 1976,p.4).

Carroll states that (1963) , instruction must be adapted for the special needs and characteristics of the learner. He put a special importance on time needed and spent in learning. According to Carroll, if the quality of instruction is anything less than optimal, it is possible that the learner will need more time to learn the task than he would otherwise need (Carroll, 1963). Some other research done by Bloom (1976), Harnischfeger and Wiley (1974), and Rosenshine and Berliner (1978) also showed that time is an important determinant in the degree of learning. Carroll (1963) states that if the learner is

given the appropriate time he/she needs and if he/she spends the necessary time to learn a given subject, it would be possible for him/her to reach a pre-set criterion level. Carroll also states that the learner will reach the desired level of learning if the ratio of the time needed and the time spent on a particular subject equals 1.

Another important determinant in the degree of learning is the sensitive and sytematic approach to instruction. Bloom states that(1976) if the instruction includes sytematic feedbacks and correctives, achieving mastery would be easy. In most of formal educational systems, teachers do not use systematic feedbacks and correctives in relation to the errors that occur in individual learner. According to Bloom (1976) if the errors during a learning unit are corrected before compounding in later units, then most of the students will attain mastery. Thus error correction becomes inevitable in the application of mastery learning instruction. Through the use of formative tests implemented after each learning task, the teacher finds out the objectives that are accomplished and that are not, by the students. By gaining this information the teacher corrects the errors and tries to fill in the missing areas of the students about the related subject. Parallel forms of the formative tests give an information to the teacher about his/her correction. Research done by Block (1971, 1974) show that the feedback and correctives brought the average student in the mastery class up to 80 percent achievement in learning.

There are also three other determinants in the quality of insruction. These are the cues and directions provided to the learner, the participation of the learner in learning activity, and the reinforcement which the learner secures in some relation to the learning (Bloom, 1976, p.115). Research done by Bloom (1976) show that, in general, these four

qualities of instruction which are the cues, reinforcement, participation and feedback/correctives procedures can account for 25-42 percent of the variation in student learning.

Besides quality of instruction, there are two other important determinants in the degree of learning which can be stated as entry behaviors according to Bloom's instructional theory. According to Bloom some of the previous history of the learner, both academically and affectively, can easily determine the learning outcomes of the learner.(Bloom, 1971). Bloom states that it is impossible for a learner to achieve mastery on a learning task if he/she does not possess the essential entry behaviors or motivation for it. Glaser (1968) termed these essentials as entry behaviors. By Cognitive Entry Behaviors Bloom refers to those prerequisite types of knowledge, skills, and competencies which are essential to the learning of a particular new task or set of tasks. Research done by Bloom (1976) shows that Cognitive Entry Behaviors can account for 50 percent of the variation in achievement. Payne (1963),and Bracht and Hopkins (1972) also state that if all the students have the necessary prerequisites before begining a learning task, their variation in achievement can be reduced.

Studies done both in macro and micro levels show that there is a strong positive relation between the Cognitive Entry Behaviors of a student and his/her achievement in subsequent courses or learning tasks (Bloom, 1976). In macro studies the emphasis is put on a course, term, or year of instruction in a subject, the achievement at the and of the course or term of instruction, and certain measures available prior to the begining of the course. In micro studies cognitive entry behaviors for particular learning tasks within a set or series of learning tasks are more directly dealt. In both of the studies Cognitive Entry

Behaviors account for up to one-half (r=+.70) of the variance on relevant cognitive achievement measures over subsequent learning tasks.

The other important entry behavior in Mastery Learning Theory is the Affective Entry Characteristics of the learner which is regarded as a complex compound of interest, attitudes and self-views of the learner (Bloom, 1976). Carroll (1963), on the other hand, defines this entry behavior as motivation, that is, the effort the learner is willing to make to accomplish a learning task. Studies done by Block(1970), Arlin (1973), Anderson (1973), Özçelik (1974), and Levin (1975) show that the students studying under mastery learning conditions show an increase in their interest towards the subject over short periods of time. Studies done by Bloom (1976) show that the Affective Entry Characteristics of the learner explain 25 percent of the variation in achievement.

Research done for many years show that Mastery Learning increases levels of achievement in learning. Some other interventions besides the ones explained above were also used in some other studies done in Turkey. Afreşa (1983) tested the effect of Improved Teaching in addition to Mastery Learning in comparison to control classes on both achievement and retention of the learned material. She found that most of the students instructed under mastery learning method of instruction used in combination with Improved Teaching reached higher achievement levels and scored highly on retention measures than the students in the control class. Nwabueze (1984), on the other hand, tested the combined effect of mastery learning and improved teaching. He found that the class which studied under mastery learning in addition to improved teaching not only scored higher than the control class but also reached

higher levels of achievement than the mastery learning and improved teaching classes. The results of his study also showed that the effects of improved teaching and mastery learning on student achievement were additive. Another study done by Eğinlioğlu(1985) tested the effects of mastery learning and improved materials on achievement. She found that the class instructed under mastery learning in addition to improved materials scored not only higher than the control class but also reached higher achievement levels than the class instructed under mastery learning only.

CHAPTER III

METHODOLOGY

This section includes the research design, the concerns of the study followed by a section dealing with the hypotheses and their operational definitions. The main concern of the study is to test whether or not Cognitive Entry Behaviors (CEB) have an additive effect on achievement when used in combination with Mastery Learning Method of Instruction (ML).

RESEARCH DESIGN

Subjects of the Study

The sample of this study was chosen from Robert College, a private high school in Istanbul, Turkey. The medium of instruction at Robert College is English. The majority of students come from upper and upper-middle class families. There are five preparatory English classes in this school offered the year after the completion of elementary school, preceding the first year of secondary school. These preparatory classes last for a whole academic year and each of them are taught by a different teacher.

The study included 4 preparatory level classes. These four classes were chosen on the basis of availability, because one of the teachers of the 5 preparatory classes did not want participate in the

study. The sample for this study included the students of these four classes who were randomly assigned to their classes by the administration in entering the school. The students were between 11 and 12 years of age. This sample comprised a total of 88 students; 22 students in each of the four sections. These were sections A,B,C and E and were taught by a different teacher.

Subject Area

The subject area of the study was preparatory level English. The students had little or no knowledge of English when they entered the school. This research started when they completed their first semester of studying English. The subject matter was selected from an introductory English tekxtbook English for a Changing World by C.Banks, S.Briggs, J.Huizenga, C.Peterson and J.Veramendi (1976). This book is made up of two parts and units 6,7 and 8 of the second part were the subject matter area. These 3 learning tasks were:

Unit 6: Conversations.

"To give directions; to follow directions" and

"Past Progressive Tense; when with past progressive and simple past tenses".

Unit 7: Readings

" To describe location; to read brief notices, to write brief notices" and

" Prepositional Phrases".

Unit 8: Conversations

" To read advertisements, to make an appointment, to express obligations, to talk about plans" and

"Future tense with will, has/have to and verb".

These units were intentionally chosen by the researcher, because all of the classes were going to be taught these units at the begining of the second semester when the second part of the study began.

Design of the Study

In this study the setting was a school community where the 4 English preparatory level classes were chosen as a sample. The two major independent variables of the study are Mastery Learning Method of Instruction (ML) and the Cognitive Entry Behaviors(CEB) which are the necessary prerequisites for a learning task. The design of the study is given in Figure 2.

Bilişsel Giriş Davranışları	Mastery Learning: Yes	Mastery Learning: No
Yes	ML + CEB (Section E)	CEB (Section A)
No	ML (Section B)	CONTROL (Section C)

Figure 2. The Design of the Study.

As seen in Figure 2, there are 2 classes instructed under Mastery Learning Method and 2 classes receiving Cognitive Entry Behaviors. One class (ML+CEB) class was instructed under Mastery Learning Method and received Cognitive Entry Behaviors. A second

class (ML class) was instructed under mastery learning method but did not receive Cognitive Entry Behaviors. A third class (CEB class) received Cognitive Entry Behaviors and was instructed under traditional methods of instruction. The control class, fourth class, neither received Cognitive Entry Behaviors nor was instructed under mastery learning method. This class was instructed under traditional methods of instruction.

The study consisted of 2 parts. The first part was conducted during the semester break of the school. The second part, on the other hand, was conducted during the begining of the second semester and included the first 3 learning tasks.

After the students received their first semester grades, the students who were unsuccessful in classes ML+CEB and CEB(those who received a grade of 5 and below out of 10) were invited to participate in a 15 hour review course which was conducted during the semester break by the researcher. This review emphasized the inadequate areas of the students in the first semester course in English and aimed to give them necessary prerequisites for the second semester. Before begining to the review course the most important learning objectives of the units of the first semester were chosen by the researcher. The review was mostly done according to these objectives which were the necessary prerequisites for the first 3 learning tasks of the second semester. The pre-test which was given to the students on the first day of the second semester included the items tapping these important objectives (see Appendix, p. 59)

The unsuccessful students of the other two classes (ML and CONTROL), on the other hand, did not receive Cognitive Entry Behaviors, which are the necessary prerequisites for the first 3 learning tasks

of the second semester, during the semester break. On the first day of the second semester, all of the students of the four classes were given a pre-test in order to see the effects of Cognitive Entry Behaviors given during the semester break. A comparison was made between the achievement levels of only the unsuccessful students of classes receiving CEB and those not receiving this help as well as the comparison of whole classes including unsuccessful student receiving Cognitive Entry Behaviors (ML + CEB and CEB) and those who did not (ML and CONTROL).

There were 3 learning tasks in the second part of the study. The criterion level of achievement was set at 90% level of learning of the material. ML+CEB class and the ML class were instructed under mastery learning method of instruction through the 3 learning tasks. In these classes a formative test was given to all of the students at the end of each learning task. Feedback and correctives were given to the students who did not reach the 90% criterion level of achievement after going over the objectives that they did not get. After these feedback and correctives, a parallel form of the formative test was administered to them. These formative tests took about 10 to 20 minutes, consisting of 8 to 12 items (see Appendix, p. 69)

The other two classes, (CEB and Control classes), were instructed under traditional methods of instructions through the 3 learning tasks.

The students in the CEB class received only the first forms of the formative tests at the end of each learning task, but they did not get any systematic feedback and correctives, nor did they get the parallel forms of the formative tests. The control class, on the other hand, did not receive any of the formative tests.

At the end of all the 3 learning tasks, a summative test was administered to all students in the four classes on the same day.

Preperation for the Study

The sample of this study was intentionally chosen from Robert College, because this school includes a large number of preparatory English classes. In addition, the researcher was already acquinted with the schoolthrough her field work experience. After getting the permission of conducting this research from the school director, the five teachers of the preparatory classes were asked to participate in the research. Four of them volunteered. The teachers were instructed about the instructional methods that they were going to use by the thesis advisor before the study began.

At the end of the first semester, the semester grades of each student in the English course were taken from the school files. The students whose grades were 5 and under were invited to a review course by writing an explanatory letter to their parents by the researcher. (There were 8 such students in the ML+CEB class and 5 in the CEB class. The 5 unsuccessful students in the ML class and 5 others in the control class were not invited to this review). The identification of the researcher, the description of the study, and the importance of the students' participation were discussed in this letter. Before begining the review course, a permission to study in the school at the semester break was taken from the school administration.

Training the Experimental Teachers

At the end of the first semester, 2 mastery learning class teachers (ML+CEB class and ML class) were informed about the mastery learning method of instruction. In addition to this, some parts of the source book Human Characteristics and School Learning, by B.Bloom (1976) were provided to these teachers. The objectives of the three learning tasks were given to the mastery learning class as well (ML+CEB and ML). The teachers of the other 2 classes (CEB class and control class) who were not going to use the mastery learning method of instruction through the 3 learning tasks did not get any information about instruction. They used their traditional methods.

Procedures

In the review course, which took place during the semester break, the implementation of Cognitive Entry Behaviors lasted a week, three hours each day totalling to 15 hours of instruction. After this review, the completion of the three learning tasks lasted for 3 weeks between the 25th of February and 15th of March. The whole study lasted a month.

On the first day of the second semester, a pre-test was administered to all classes in order to see the effects of the review course given in the semester break.

Each learning task took approximately 3 class periods of instruction. At the end of each learning task, a formative test was given to all of the students except the control class students. Feedback and correctives, and the parallel forms of the formative tests were administered to the students in the two mastery learning classes

(ML+CEB and ML classes) who could not reach the 90% level of criterion on the first formative test after the researcher corrected the tests. Each formative test as well as its parallel form was developed according to the objectives of each unit. A summative test based on the objectives of the three learning tasks was given to all of the students at the end of all of the learning tasks, on the same test.

Data Collection and Analysis

Initial Measures

The academic performances of the students of the four classes in English for the first semester of the academic year 1984-1985 were obtained from the school files. One-way analysis of variance test was used in order to see if there were any differences among the four classes in terms of their first semester English grades.

Process Measures

A pre-test was administered to all classes in order to see the effects of Cognitive Entry Behaviors given during the semester break. One-way analysis of variance test was used to investigate if there were any differences among the four classes. Besides, Newman-Keuls formula was used to see the differences between the classes which received Cognitive Entry Behaviors and which did not. Newman-Keuls formula is the proper statistic to be used here in comparing each group with the others. However, t-tests were also used for comparing this research with research done elsewhere.

In the first analysis only the unsuccessful students who received Cognitive Entry Behaviors and those who did not were used. The same analysis was also done using whole classes.

Formative tests were given to the students in the ML+CEB, ML, and CEB classes at the completion of each learning task. The students in the two ML classes were given correctives if they had not reached the pre-set criterion level followed by the parallel form of the formative test. The two classes under traditional methods did not receive systematic correctives or the parallel forms of the formative tests.

Final Measures

When the three learning tasks were completed a summative test was given to all of the four classes (see Appendix, p.89) Two - way analysis of variance test was used to test the effect of Mastery Learning and Cognitive Entry Behaviors on achievement levels of students. In additon, the Newman-Keuls formula and t-test were used to compare each of the four group's summative test scores with the others. Effect-size analyses and the amount of variance accounted for by each of the two independent variables, ML and CEB, as well as both of their contribution were calculated.

CONCERNS OF THE STUDY

In this study, the primary concern was investigating the combined effect of Cognitive Entry Behaviors and Mastery Learning Method of Instruction on achievement levels of students. Research shows that Mastery Learning Method of Instruction raises achievement levels to about one standard deviation above the mean of classes under traditional methods of instruction. The question asked here is whether giving students the necessary prerequisites for a learning task prior to instruction in addition to mastery learning method, increases levels of learning still further and whether or not this effect is additive.

There are 4 hypotheses in the study. The first hypothesis is stated as:

HYPOTHESIS I: THE ACHIEVEMENT LEVELS OF UNSUCCESSFUL STUDENTS RECEIVING COGNITIVE ENTRY BEHAVIORS WILL BE HIGHER THAN THOSE NOT RECEIVING THIS HELP ON THE PRE-TEST.

Variables and Their Operational Definitions

The Independent Variable is receiving the Cognitive Entry Behaviors which are the necessary prerequisites for the learning tasks to be accomplished. Only the students who were unsuccessful (those receiving grades of 5 or below during their first semester) were given the necessary prerequisites for the first 3 learning tasks of the second semester during the semester break by tapping the most important objectives in the first part of the semester and teaching these objectives to the unsuccessful students. In the class ML+CEB there were 8 unsuccesful students while in the CEB class there were 5 such. The unsuccesful students in the ML class (5 such students) and the control class (again 5) were not given this help during the semester break.

The Dependent Variable of this hypothesis is achievement levels of students as measured by a pre-test. This test was prepared according to the objectives of each unit of the textbook,

English for a Changing World,(1976) taught in the first semester. It consisted of 30 questions which were derived from 24 objectives, and 40 minutes were given to answer the questions (see appendix, p. 59, for the test). For developing the objectives of the pre-test, Bloom's taxonomy was used. Only the achievement levels of the students who were unsuccesful were used for comparison purposes

in the first hypothesis.

The Controlled Variables are the first semester English grades of the groups. These grades were obtained from the school records. One-way analysis of variance test showed that there were no significant differences among the groups in terms of their first semester English grades.

The second hypothesis of the study is stated as:

HYPOTHESIS II: THE ACHIEVEMENT LEVELS OF CLASSES RECEIVING COGNITIVE ENTRY BEHAVIORS WILL BE HIGHER THAN CLASSES NOT RECEIVING THIS HELP ON THE PRE-TEST.

Variables and their Operational Definitions: The Independent Variable of this hypothesis is receiving the Cognitive Entry Behaviors which are the necessary prerequisites for the first 3 learning tasks of the second semester. The whole classes including the unsuccesful students receiving the CEBs were compared with classes including unsuccesful students not receiving this help on the pre-test.

The Dependent Variable is the achievement levels of the classes (whole classes are used for comparison purpores) as measured by a pre-test. The questions of this test (see appendix, p.59) were prepared according to the objectives of each unit of the textbook English for a Changing World (1976) taught in the first semester. It consisted of 30 questions which were derived from 24 objectives, and 40 minutes were given to answer them.

The Controlled Variables are the first semester English grades of the groups. No significant differences were found in terms of the first semester English grades among the four sections according to the

results of One-way analysis of variance test. For this hypothesis total classes were used for comparison.

The third hypothesis of the study is stated as:

HYPOTHESIS III. THE COMBINED EFFECT OF COGNITIVE ENTRY BEHAVIORS AND MASTERY LEARNING WILL PRODUCE HIGHER ACHIEVEMENT LEVELS THAN EITHER INTERVENTION ALONE ON THE SUMMATIVE TEST.

Variables and their Operational Definitions

The Independent Variables of this hypothesis are the mastery learning method of instruction and receiving Cognitive Entry Behaviors. Cognitive Entry Behaviors are the necessary prerequisites for the 3 learning tasks to be accomplished in the begining of the second semester. The students received the necessary prerequisites for the first 3 learning tasks of the second semester during the semester break. The other independent variable of this hypothesis is the mastery learning method of instruction. The main subvariables of this method of instruction used in this study are cues, reinforcement, participation, feedback and correctives. Cues, reinforcement and participation were used through the instruction of the learning tasks. Formative tests and their parallels (see Appendix, p. 69) provided information for the teacher as to which of the objectives are accomplished for each learner. Thus correctives were given to those students who did not reach the 90% criterion level of achievement on these tests, in ML+CEB and ML classes.

The Dependent Variable of this hypothesis is the achievment levels of the students measured by a summative test. This test tapped achievement in English, Chapters 6,7 and 8 of the textbook English for a Changing World (1976) (See appendix, p. 89) for this test)

This test consisted of 30 questions which were derived from 16 objectives, and 40 minutes were given to answer them. It is expected that the combined effect of ML and CEB would lead to higher achievement levels than either intervention alone. It is also expected that all of the interventions would have higher achievement levels in comparison to the control class.

The fourth hypothesis of the study is stated as:

HYPOTHESIS IV: COGNITIVE ENTRY BEHAVIORS WILL HAVE AN ADDITIVE EFFECT TO MASTERY LEARNING METHOD OF INSTRUCTION,

Variables and their Operational Definitions

The independent variables of this hypothesis are again the mastery learning method of instruction and receiving Cognitive Entry Behaviors. The combined effect of these two independent variables on achievement is measured.

The dependent variable of this hypothesis is the achievement levels of the students measured by a summative test, consisting of 30 questions which were derived from 16 objectives, and 40 minutes were given to answer them. This test tapped achievement in English, Chapters 6,7 and 8 of the textbook English for a Changing World (1976). It is expected that the combined effect of CEB and ML would be additive.

The next section will deal with the results of the study.

CHAPTER IV

RESULTS

This study is constructed to test four hypotheses. The first hypothesis is that the achievement levels of students of the 2 classes who were unsuccessful during the first semester but who later received Cognitive Entry Behaviors during the semester break will be significantly higher than the failing students in the other 2 classes who did not receive this help as measured by a pre-test. The second hypothesis of the study is that the achievement levels of the classes which include students receiving Cognitive Entry Behaviors will be significantly higher than the achievement levels of classes including students who do not receive this help. The third hypothesis of the study is that the achievement level of the class under Mastery Learning Method of Instruction combined with Cognitive Entry Behaviors will be significantly higher than all of the other classes. It is hypothesized that this class will be followed by the mastery learning class and the class which received Cognitive Entry Behaviors. The fourth hypothesis of the study is that Cognitive Entry Behaviors and mastery learning method of instruction will have an additive affect on achievement.

The main question asked in this study is whether giving students the necessary prerequisites for a learning task in addition to mastery learning method of instruction increases levels of learning over those obtained by mastery learning alone, and whether or not this

effect is additive.

The above stated hypotheses are tested under four learning conditions. One class studied under the combined effect of Mastery Learning Method of Instruction and Cognitive Entry Behaviors. The second class studied under Mastery Learning Method of Instruction, only. The third class studied under traditional methods of instruction but the students who were unsuccessful received Cognitive Entry Behaviors. The fourth and the last class studied under traditional methods of instruction and did not get Cognitive Entry Behaviors.There were 22 students in each of the classes. All of the students participated in the study. (For the design of the study see Figure 2, p.16).

Results of the Data Analyses Prior to Instruction

In order to test these hypotheses one-way analysis of variance test, two-ways analyses of variance test, T-tests, Newman-Keuls Formula, effect size analyses were used and E Correlation Ratios were utilized. Although the students were randomly assigned into the four sections of preparatory level English classes , they were statistically compared with each other in order to find out if there were any significant differences in terms of their previous semester English grades. These comparisons are shown in tables given below. One-way analysis of variance test (ANOVA) is used for these comparisons (TABLE 1).

Table 1. Comparison of the Previous Semester English Grades of Mastery Learning combined with Cognitive Entry Behaviors (ML+CEB), Mastery Learning (ML), Cognitive Entry Behaviors (CEB) and Control (C) classes, using One-Way Analysis of Variance test.

SOURCE	DF	MS	F	Significance level
Treatment sum of squ.	3	.465	.2622	N.S
ERROR	84	1.776	-	-

The results of Table 1 show that there are no significant differences among the classes in terms of their previous semester English grades. According to the results of this analysis, the classes are not different from each other at the begining of the study.

Analysis Done on Each Hypothesis

In this section, the analyses done to test each of the four hypothesis of the study are included.

The first hypothesis of the study is:

HYPOTHESIS I: THE ACHIEVEMENT LEVELS OF UNSUCCESFUL STUDENTS RECEIVING COGNITIVE ENTRY BEHAVIORS WILL BE HIGHER THAN THOSE NOT RECEIVING THIS HELP ON THE PRETEST.

In order to test this hypothesis, One-way analysis of variance test, Newman-Keuls formula and T-tests were used. One-way analysis of variance test was used to check if there were any significant differences among the students due to giving Cognitive Entry Behaviors. Table 2 shows the one-way ANOVA test done on the pre-test scores of the unsuccesful students in the four classes.

TABLE 2. One-Way Analysis of Variance on the Pre-Test Scores of the unsuccesful students in the four classes (ML+CEB, ML, CEB and CONTROL).

SOURCE	DF	MS	F	Significance level
Treatment sum of squ.	3	206.901	15.3481	P < .001 SD
ERROR	19	13.4804	-	-

Results of Table 2 show that there are significant differences among the unsuccessful students of the four classes on the pre-test scores due to receiving Cognitive Entry Behaviors at α=.001 significance level.

The pre-test scores are again compared by using Newman-Keuls formula to check if there is a significant difference between the scores of the unsuccessful students who received Cognitive Entry Behaviors (ML+CEB and CEB classes) and those who did not (ML and CONTROL classes).Table 3 gives the comparisons.

TABLE 3. Comparison of the Pre-Test Scores of The Unsuccesful Students of the classes who received Cognitive Entry Behaviors (ML+CEB and CEB) and who did not (ML and CONTROL classes), using the Newman-Keuls formula.

	DF	MS error	Calculated q	Significance level
ML+CEB and CONTROL	19	13.4804	8.423	4.70 $q_{r\alpha=.01}$
ML+CEB and ML	19	13.4804	7.085	4.70 $q_{r\alpha=.01}$
CEB and CONTROL	19	13.4804	5.261	4.70 $q_{r\alpha=.01}$
CEB and ML	19	13.4804	4.056	3.61 $q_{r\alpha=.05}$

The results of Table 3 show that there are significant differences between the pre-test scores of the unsuccessful students of the classes who received Cognitive Entry Behaviors (ML+CEB and CEB classes) and those who did not (ML and CONTROL classes). When the ML+CEB students who receive the prerequisites are compared to the students in the control class not receiving the prerequisites the difference is significant at the α=.01 level. When the unsuccessful students in the ML+CEB class receiving prerequisites are compared to the students in the ML class not receiving this help the difference is significant at the α=.01 level. When the students in the CEB class receiving Cognitive Entry Behaviors are compared to those not receiving these in the control class, the difference is again significant at the α=.01 level. Similarly when the unsuccessful students in the CEB class receiving prerequisites are compared with unsuccessful students in the ML class not receiving this help, the difference is significant at the α=.05 level.

For comparison purposes T-test analyses were also used to test the first hypothesis of the study. Table 4 shows the comparisons between the scores of the unsuccesful students who received Cognitive Entry Behaviors (ML+CEB and CEB classes) and those who did not (ML and CONTROL classes).

TABLE 4 . Comparison of the means of the unsuccesful students' scores on the pre-test who received Cognitive Entry Behaviors (ML+CEB and CEB classes) and those who did not (ML and CONTROL classes), using T-tests.

	possible points	mean	standard deviation	number	t-value	significa level
ML+ CEB	100	95.78	2.95	8	1>4=6.42	1>4 =.001
					1>2=5.61	1>2 =.001
ML	100	85.30	3.79	5		
CEB	100	91.96	3.79	5	3>4=3.47	3>4 = .01
					3>2=2.78	3>2 = .05
CONTROL	100	83.32	4.08	5		

The results of Table 4, using t-tests, are similar to the results of Newman-Keuls formula. In all cases, the students who receive Cognitive Entry Behaviors score significantly higher than those who do not on the pre-test. Thus, the first hypothesis of the study is confirmed according to these results.

The second hypothesis of the study deals with the whole classes. It is stated as:

HYPOTHESIS II: THE ACHIEVEMENT LEVELS OF CLASSES RECEIVING COGNITIVE ENTRY BEHAVIORS WILL BE HIGHER THAN CLASSES NOT RECEIVING THIS HELP ON THE PRE-TEST.

To test this hypothesis, one-way analysis of variance test, Newman-Keuls formula and t-test analyses were used. A one-way analysis of variance was used to check if there was a significant difference among any of the classes due to receiving Cognitive Entry Behaviors. Table 5 shows the one-way analysis of variance done on the pre-test scores of the four classes.

TABLE 5. One-way Analysis of variance on the Pre-test scores of the four classes (ML+CEB, ML, CEB and control).

SOURCE	DF	MS	F	Significance level
Treatment sum. of suq.	3	163.02	10.3799	$p<.001$ S.D
ERROR	84	15.7052	-	

Results of TABLE 5 show that there are significant differences among the four classes on the pre-test scores, at $\alpha=.001$ significance level.

The pre-test scores are again compared by using the Newman-Keuls formula to check if there is a significant difference between the classes which received Cognitive Entry Behaviors (ML+CEB and CEB classes) and which did not (ML and CONTROL classes). Table 6 shows the comparisons of the pre-test scores.

TABLE 6. Comparison of the Pre-Test scores of all students in classes receiving Cognitive Entry Behaviors (ML+CEB and CEB) and those who did not (ML and CONTROL), using the Newman-Keuls formula.

	DF	MS_{error}	Calculated q	Significance Level
ML+CEB and CONTROL	84	15.71	7.85	4.28 $q_{r\alpha=.01}$
ML+CEB and ML	84	15.71	4.47	4.28 $q_{r\alpha=.01}$
CEB and CONTROL	84	15.71	4.10	3.40 $q_{r\alpha=.05}$
CEB and ML	84	15.71	0.72	N.S.

Table 6 shows that there is a significant difference at the $\alpha=.01$ level when all of the students in the ML+CEB class including the unsuccessful students who receive Cognitive Entry Behaviors are compared to all of the students in the control class including those unsuccessful students who do not receive Cognitive Entry Behaviors. The difference is again significant at the $\alpha=.01$ level when the students in the ML+CEB class including the unsuccessful students who receive Cognitive Entry Behaviors are compared to all of the students in the ML class including those unsuccessful students who do not receive Cognitive Entry Behaviors. Similarly, when the CEB class including the unsuccessful students who receive the prerequisites are compared to the CONTROL class including the unsuccessful students not receiving this help, when whole class are used as a basis of comparison, the difference is significant at the

α=.05 level. However, when the unsuccessful students receiving Cognitive Entry Behaviors included in the CEB class are compared with the ML class including the unsuccessful students not receiving this help, using whole classes as a basis of comparison, the difference is not significant on the pre-test, using the Newman-Keuls formula.

As a whole, results of Table 6 show that there are significant differences among the classes including students receiving Cognitive Entry Behaviors and those that do not, when whole clases are compared. The only exception is between the mastery learning class (ML) not receiving Cognitive Entry Behaviors and the class receiving these prerequisites (CEB).

Although the Newman-Keuls formula is the appropriate statistic to use after analysis of variance comparing each group with the other, t-tests are also used to further substantiate the hypothesis. Table 7 gives the t-test analyses for the classes which received Cognitive Entry Behaviors (ML+CEB and CEB) and which did not (ML and CONTROL).

TABLE 7. Comparison of the pre-test means of all classes including students receiving Cognitive Entry Behaviors (ML+CEB and CEB) and those who do not (ML and CONTROL), using t-tests.

	possible points	mean	standard deviation	number	t-value	significance level
ML+CEB	100	96.15	2.13	22	1>4 5.21 1>2 3 23	1>4 .001 1>2 .01
ML	100	92.38	4.61	22	3>4 2.06 3?2 N.S	3>4 .05 3?2 .N.S
CEB	100	92.99	3.68	22		
CONTROL	100	89.52	4.85	22		

The results of the t-test analyses shown in Table 7 are parallel to the results obtained from the Newman-Keuls formula. The classes including unsuccessful students who receive Cognitive Entry Behaviors score higher than classes including unsuccessful students not receiving this help on the pre-test when whole classes are used as a basis of comparison. The only exception is the pre-test comparison of the CEB class with the ML class including unsuccessful students receiving Cognitive Entry Behaviors in the CEB class, and those who do not receive this help in the ML class when whole classes are used as a basis of comparison.

Thus, the results show that even when whole classes are compared the same trend is clearly seen. According to these results, the second hypothesis of the study is generally confirmed.

Analysis of Effectiveness of Instruction

The criterion level was set at 90% level of achievement on the objectives of the 3 learning tasks as witnessed on the formative and summative examinations. The number of students who reachedthis criterion level of achievement on each of the three formative tests as well as the summative test are shown in the table below. The percentages of the students reaching the criterion level in each class are also shown.

TABLE 8. Numbers and Percentages of the students reaching the 90% criterion level of learning on formative and summative tests in each of the four classes. (ML+CEB, ML, CEB, Control).

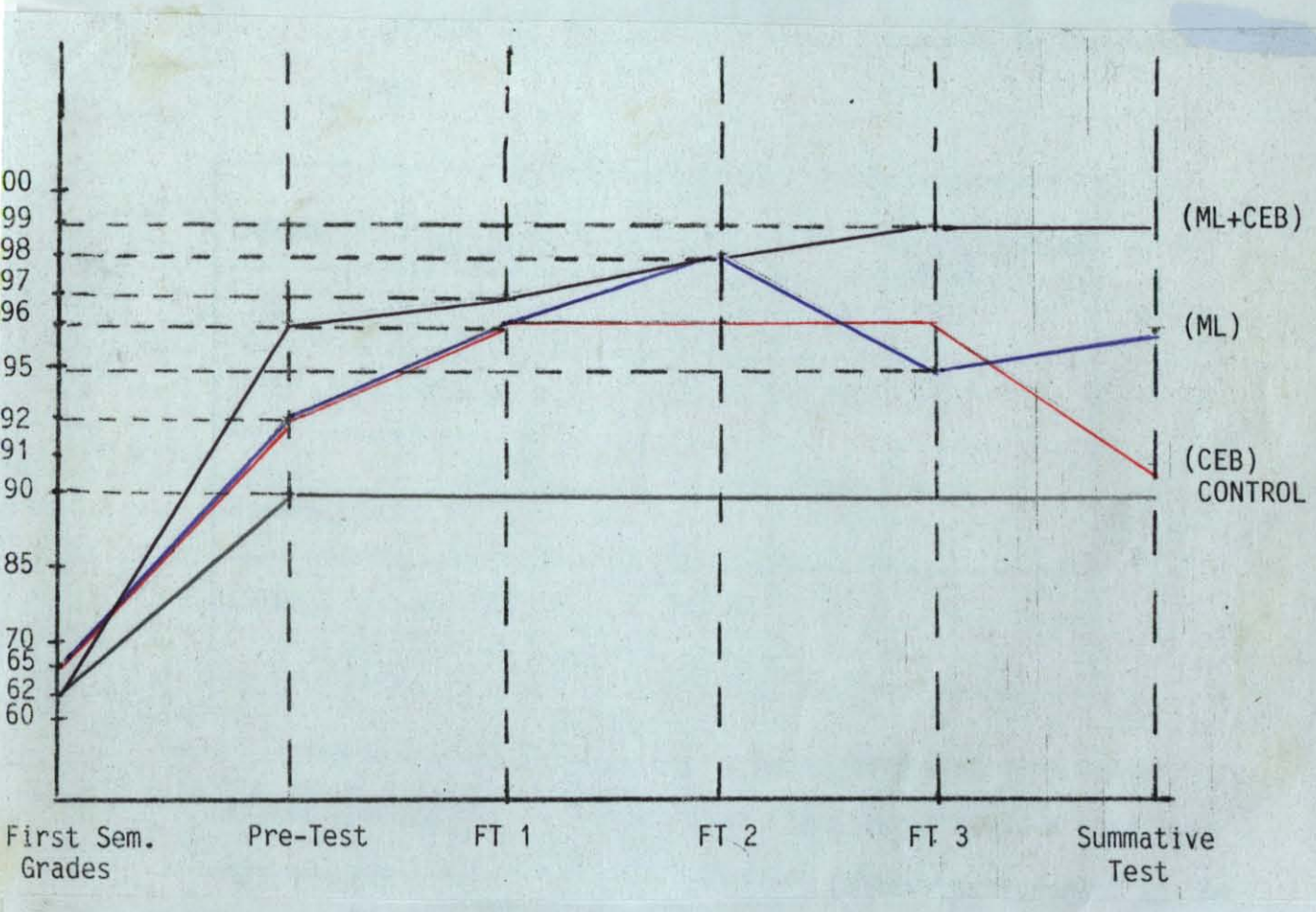
TYPE OF TEST form/summ.	ML+CEB	ML	CEB	CONTROL
FT 1	21/22 95%	21/22 95%	21/22 95%	Didn't get
FT 2	19/22 86%	19/22 86%	16/22 72%	Didn't get
FT 3	21/22 95%	20/22 90%	18/22 81%	Didn't get
SUMMATIVE	22/22 100%	21/22 95%	17/22 77%	12/22 54.9

As seen from Table 8, which shows the numbers and percentages of students who reached the criterion level on the formative (FT) and summative (SUMMATIVE) tests, the class where mastery learning instruction and Cognitive Entry Behaviors are combined reached the highest percentage on all measures followed by the mastery learning class. The Cognitive Entry Behaviors class followed them. The lowest scores and the percentages were obtained in the control class. As seen from the table, 100% of the students under the combined effect of mastery learning and Cognitive Entry Behaviors reached the 90% level of criterion on the summative test. 95% of the students reached the same criterion level of learning were in the mastery learning class on the summative test. In the class which received Cognitive Entry Behaviors

77% of the students, and in the control class only 54% of the students reached the same criterion level on the summative test.

The mean perfonmances of each group were plotted to show graphically how the groups started to differ in performance after the first formative test as a result of Mastery and Cognitive Entry Behaviors. Graph 1 shows this differences among the groups.

GRAPH 1. The graph of the mean performances of Each Class on the Formative and Summative Tests.



The third hypothesis of the study deals with the achievement levels of the mastery learning class (ML+CEB) which received Cognitive Entry Behaviors compared to the other 3 classes (ML, CEB and CONTROL) on the summative test. It is stated as:

HYPOTHESIS III: THE COMBINED EFFECT OF COGNITIVE ENTRY BEHAVIORS AND MASTERY LEARNING WILL PRODUCE HIGHER ACHIEVEMENT LEVELS THAN EITHER INTERVENTION ALONE ON THE SUMMATIVE TEST,

To test this hypothesis two-ways analyses of variance, Newman-Keuls formula, t-tests and effect-size analyses were used. Table 9 shows the two-way ANOVA test between four classes.

TABLE 9. Two-way analyses of variance of the Effects of Mastery Learning and the Cognitive Entry Behaviors on the Summative Test.

SOURCE	Sum of squares	DF	MS	F	Significance level
CEB	203.743	1	203.743	17.501	.001
ML	980.22	1	980.22	84.199	.001
CEBxML interaction	4.779	1	4.779	0.410	N.S
ERROR	977.894	84	11.641	-	-

Table 9 shows that mastery learning method of instruction effects achievement at α=.001 level. Results of Table 9 also show that receiving Cognitive Entry Behaviors effects achievement at the same, α=.001, significance level. Table 9 also shows that ML and CEB interaction is not significant.

Before analyzing the data on the summative test, it will be useful to give some descriptive statistics for this test.

HYPOTHESIS III: THE COMBINED EFFECT OF COGNITIVE ENTRY BEHAVIORS AND MASTERY LEARNING WILL PRODUCE HIGHER ACHIEVEMENT LEVELS THAN EITHER INTERVENTION ALONE ON THE SUMMATIVE TEST,

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Before analyzing the data on the summative test, it will be useful to give some descriptive statistics for this test.

TABLE 10. Descriptive Statistics of the summative test.

	Possible points	$\bar{x}$	σ	Numbers
ML+CEB	100	99.07	1.54	22
ML	100	95.56	3.47	22
CEB	100	91.93	4.43	22
CONTROL	100	89.35	3.52	22

The summative test scores of the four classes are compared with each other by using the Newman-Keuls formula. Table 11 gives the comparisons of the four classes.

Table 11. Comparison of the summative test scores of the four classes, using Newman-Keuls formula.

	DF	MS error	calculated q	significance level
ML+CEB and CONTROL	84	11.641	13.36	$\alpha=.01^{4.28}$
ML and CONTROL	84	11.641	8.54	$\alpha=.01^{4.28}$
CEB and CONTROL	84	11.641	3.54	$\alpha=.05^{3.40}$
ML+CEB and ML	84	11.641	4.82	$\alpha=.01^{4.28}$
ML+CEB and CEB	84	11.641	9.82	$\alpha=.01^{4.28}$

Table 11 shows that there is a significant difference at the $\alpha=.01$ level when the summative test scores of the class under mastery learning method of instruction in addition to receiving Cognitive

Entry Behaviors (ML+CEB class) and the control class are compared. The difference is again significant at α=.01 level when the class under mastery learning method of instruction only (ML class) is compared with the control class. When the class which received Cognitive Entry Behaviors only (CEB class) is compared with the control class, the difference is found at α=.05 significance level. Table 11 also shows that the comparison between ML+CEB class and the ML class gives a significant difference at α=.01 level. Similarly, the difference is again at α=.01 level when the ML+CEB and the CEB classes' summative test scores are compared with each other.

Since t-tests have been used for comparison purposes for other research using the mastery learning method of instruction, the same analyses are used in this study as well. T-test analyses are used as a source of additional evidence for comparing two different instructional methods. Table 12 gives the t-test analyses between the four classes.

TABLE 12. Comparison of the means of the Summative Test scores of the four classes, using t-test analyses.

	ML+CEB	CONTROL	ML	CEB	significance level
possible points	100	100	100	100	ML+CEB>C α=.001 t=14.5
mean	99.07	89.35	95.56	91.93	ML>C α=.001 t=5.6
stand. deviat.	1.54	3.52	3.47	4.43	ML+CEB>ML α=.001 t=5.4 ML+CEB>CEB α=.001 t=7.1
number	22	22	22	22	ML>CEB α=.02 t=2.5 CEB>C α=.05 t=2.1

As can be seen in Table 12 there are significant differences between the mean performances of the three interventions in comparison to the control class. Furthermore, the class receiving both treatments (ML+CEB class) is significantly higher in achievement in comparison to either intervention used alone.

Effect size analyses are also used to test the third hypothesis of the study.

When effect size analysis is done on the ratio of the difference between the means of Mastery Learning combined with the Cognitive Entry Behaviors (ML+CEB) and the control class in relation to the standard deviation of the control class, a difference of 2.76 standard deviation is found between these two classes[1] ;

$$\frac{99.07-89.35}{3.52} = 2.76$$

Effect size analysis is also done on the ratio of the difference between the means of the Mastery Learning (ML) and control classes in relation to the standard deviation of the control class. A difference of 1.76 standard deviation is found between these two classes[2];

$$\frac{95.56 - 89.35}{3.52} = 1.76$$

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1. $\frac{ML+CEB\bar{X} - C\bar{X}}{C_S}$

ML+CEB : Mastery Learning combined with Cognitive Entry Behaviors

C : Control Class

$\bar{X}$: Mean

S : Standard Deviation

When effect size analysis is done on the ratio of the difference between the means of Cognitive Entry Behaviors (CEB) and the control classes in relation to the standard deviation of the control class, a difference of 0.73 standard deviation is found between them.[3]

$$\frac{91.93-89.35}{3.52} = 0.73$$

When the effect size analysis is done on the ratio of the difference between the means of mastery learning combined with Cognitive Entry Behaviors (ML+CEB) and mastery learning only (ML) classes in relation to the standard deviation of the mastery learning class, a difference of 1.01 standard deviation is found between them [4].

$$\frac{99.07-95.56}{3.47} = 1.01$$

---

2. $\frac{ML\bar{x}-C\bar{x}}{C_s}$

ML: Mastery Learning

C: Control class

$\bar{x}$: mean

S: Standard deviation

3. $\frac{CEB\bar{x}-C\bar{x}}{Cs}$

CEB: Cognitive Entry Behaviors

C: Control Class

$\bar{x}$: Mean

S: Standard deviation

The same analysis gives a difference of 1.61 standard deviation when it is done on the ratio of the difference between the means of Mastery Learning combined with Cognitive Entry Behaviors (ML+CEB) and Cognitive Entry Behaviors only (CEB) classes in relation to the standard deviation of the Cognitive Entry Behaviors class[5],

$$\frac{99.07-91.93}{4.43} = 1.61$$

The results of these analyses clearly confirms the third hypothesis of the study. The significant differences between the four classes are due to the effect of Mastery Learning method of instruction in addition to Cognitive Entry Behaviors. The class under Mastery Learning method of instruction in addition to receiving Cognitive Entry Behaviors is followed by the Mastery Learning class and the class receiving Cognitive Entry Behaviors, respectively.

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4. $\frac{ML+CEB\bar{X}-ML\bar{X}}{ML_S}$

ML+CEB : Mastery Learning combined with Cognitive Entry Behaviors

ML : Mastery Learning

$\bar{X}$: Mean

S : Standard Deviation

5. $\frac{ML+ CEB\ \bar{X} -CEB\bar{X}}{CEB_S}$

ML+CEB : Mastery Learning combined with Cognitive Entry Behaviors

CEB : Cognitive Entry Behaviors

$\bar{X}$: Mean

S : Standard Deviation

The fourth and the last hypothesis of the study deals with the additive effect of the Cognitive Entry Behaviors to the mastery learning method of instruction. It is stated as:

HYPOTHESIS IV: COGNITIVE ENTRY BEHAVIORS WILL HAVE AN ADDITIVE EFFECT TO MASTERY LEARNING METHOD OF INSTRUCTION.

To test this hypothesis, two-way analyses of variance results (Table 9) on summative test scores are used. In addition, E correlation ratios are computed from the two-way analyses of variance. The results of the two-way analyses of variance clearly show that the interaction of ML and CEB is not significant. Hence, their effect is clearly additive. The following table shows the E correlation ratios and the amount of variance accounted for by each intervention.

TABLE 13 . E correlation ratios and the amount of variance accounted for by mastery learning method of instruction and Cognitive Entry Behaviors, on the basis of two-way analyses of variance.

	E correlation ratios	Amount of variance accounted for (%)
ML and Achievement	.672	.452
CEB and Achivement	.307	.094
Multiple E correlation ratio	.737	.544

As seen from the Table 13, mastery learning alone accounts for 45.2% of the variation in achievement and Cognitive Entry Behaviors alone accounts for 9.4% of the variation in achievement. Together, the two interventions account for 54.4% of the variation in achievement. Thus, the last hypothesis is confirmed since the interaction is not significant. Hence, the effect of mastery learning method of instruction and the effect of Cognitive Entry Behaviors are additive.

CHAPTER V

SUMMARY AND CONCLUSIONS

This chapter includes the summary of the problem, the methodology and the results of the study. This section also states the limitations and the implications of this research.

The Problem

The purpose of the study was to test whether mastery learning method of instruction when used in combination with Cognitive Entry Behaviors which are the necessary prerequisites for learning new tasks could increase the achievement levels in learning more than what mastery learning method of instruction or receiving Cognitive Entry Behaviors produce alone in comparison to traditional methods of learning. It is expected in the study that Cognitive Entry Behaviors when used in combination to mastery learning method of instruction will raise levels of learning to two standard deviations above the mean over the control classes. It is also expected in the study that the two interventions, mastery learning method of instruction and the Cognitive Entry Behaviors when used alone will raise levels of learning to one standard deviation over the control conditions. The main issue of the study is whether the combined effects of the two interventions, mastery learning method of instruction and Cognitive Entry Behaviors, would be additive.

Four independent learning methods were tested in the study. These are mastery learning combined with Cognitive Entry Behaviors, mastery learning used alone, Cognitive Entry Behaviors used alone, and traditional methods of instruction. The highest achievement levels were expected from the class which studied under mastery learning method of instruction and received Cognitive Entry Behaviors, while the least achievements were expected from the control group in which the traditional methods of instruction was used.

Methodology

This study was conducted at Robert Colloge, a private high school in İstanbul, Turkey. There were 88 students coming from upper and upper-middle class families in 4 sections. There were five preparatory level English classes in this school offered the year after the completion of elemantary school, preceding the first year of secondary school. Each of them were taught by a different teacher and four of them were used in the study. There were 22 students in each of the four classes.

The study consisted of two parts. The first part was conducted during the semester break of the school and took 1 weak, totalling 15 hours of instruction. The unsuccessful students of the classes mastery learning combined with Cognitive Entry Behaviors and Cognitive Entry Behaviors used alone received the necessary prerequisites in the first part of the study. At the end of the semester break all of the students got a pre-test in order to see the effects of Cognitive Entry Behaviors given during the semester break. In the second part of the study there were 3 learning tasks to be studied under mastery learning method of instruction and traditional methods of instruction. Two of the classes were instructed under mastery learning and two of them under traditional

methods. Each learning task took an avarage of 3 hours to be taught. The criterion level of achievement was set at 90% level of learning of the material. There were 3 formative tests given at the end of each learning task. Two mastery learning classes took both forms of these formative tests; the parallel form after correctives. The class receiving Cognitive Entry Behaviors only took the first forms but did not get the parallel forms of the formative tests. The control class, on other hand, did not get any of the formative tests. At the end of the completion of the 3 learning tasks a summative test was given to all of the classes.

The teachers were instructed about the instructional methods that they were going to use by the thesis advisor before the study began. The teachers were provided by Bloom's Human Characteristics and School Learning (1976) before the begining of instruction, the objectives of each learning task and the tests were provided to the teachers by the researcher.

Hypothesis and Results

In this study, the primary concern was to test the effects of mastery learning method of instruction when used in combination with Cognitive Entry Behaviors on achievement levels of preparatory level English classes. Research shows that when mastery learning is used alone, it produces levels of learning which are generally one standard deviation over the control classes(Bloom, 1976). In this study, it is expected that the combined effect of mastery learning method of instruction and Cognitive Entry Behaviors will produce levels of learnigg which are about two standard deviations over the control classes.

There were four hypothesis in the study. Several statistical techniques were used to test these hypotheses. Comparison of the groups, using one-way analysis of variance, showed that these four classes were

similar in terms of their first semester English grades at the end of the first semester.

In this study, the criterion level was set at 90% level of achievement. 100% of the students in the class which received Cognitive Entry Behaviors and which was instructed under mastery learning reached this criterion level on the summative test. Mastery learning class followed this class with 95% of the students reaching this criterion level on the summative test. There were 77% of the students who reached 90% level of criterion in the class which received Cognitive Entry Behaviors only on the summative test. On the other hand, only 54% of the students reached 90% criterion level in the control class on the same test.

There were four hypothesis tested in the study. The first hypothesis was stated as:

HYPOTHESIS I: THE ACHIEVEMENT LEVELS OF UNSUCCESSFUL STUDENTS RECEIVING COGNITIVE ENTRY BEHAVIORS WILL BE HIGHER THAN THOSE NOT RECEIVING THIS HELP ON THE PRE-TEST.

The first hypothesis was tested first by using one-way analysis of variance comparing the scores of the unsuccesful students in all classes with each other on the pre-test. The results showed that there were significant differences among the four unsuccessful groups of students on the pre-test at α=.001 level due to receiving the necessary Cognitive Entry Behaviors. The results of Newman-Keuls formula and t-tests showed that there were significant differences between the four unsuccessful groups of students when the scores of the students who received Cognitive Entry Behaviors during the semester break and those

who did not are compared on the pre-test. A significant difference was found at α=.01 level between the students who received Cognitive Entry Behaviors in class ML+CEB and those unsuccessful studends who did not in Control class. The same significance level was also observed between the students who received Cognitive Entry Behaviors in the class ML+CEB and those unsuccessful students who did not in class ML. When the scores of the students in class CEB who received Cognitive Entry Behaviors and in control class who did not are compared a significance level of α=.01 level. When the comparison is done between the unsuccessful students in the class CEB who received Cognitive Entry Behaviors and in the class ML who did not, a significance level of α=.05 is found. T-tests were also used to compare the scores of the students who received Cognitive Entry Behaviors in class ML+CEB and in CONTROL class. A significant difference of α=.001 is found between these students. The same level of significance is found when the ML+CEB class unsuccessful students and the ML class unsuccessful students are compared. The comparison between the students of the CEB class who received Cognitive Entry Behaviors and the students of CONTROL class who did not showed that the significance level was at .01 level. When it is done between the class CEB and the class ML this level was found as α=.05.

In the light of the evidences stated above, the first hypothesis of the study is clearly confirmed.

The second hypothesis of the study was stated as:

HYPOTHESIS II: THE ACHIEVEMENT LEVELS OF CLASSES RECEIVING COGNITIVE ENTRY BEHAVIORS WILL BE HIGHER THAN CLASSES NOT RECEIVING THIS HELP ON THE PRE-TEST.

In this hypothesis whole classes were used for comparison purposes, not only the unsuccesful students. The same statistical analyses were used to test the second hypothesis. One-way analysis of variance test showed that there were significant differences among the four classes on the pre-test scores at α=.001 level. The results of Newman-Keuls on the other hand, showed that the significant differences between the classes ML+CEB and CONTROL, ML+CEB and ML and CEB and CONTROL were α=.01, α=.01 and α=.05 respectively. Only the comparison between the CEB class and the ML class showed that there were not any significant differences between these two classes when the whole classes were compared. The results of t-tests were in the same direction as the results of Newman-Keuls formula. The significant differences between ML+CEB and CONTROL, ML+CEB and ML, and CEB and CONTROL were at α=.001, α=.01 and α=.05 levels respectively. Only the comparison between the CEB and the ML classes showed that there was not any significant difference between these two classes the whole classes were compared on the pre-test. According to these results the second hypothesis was also generally confirmed.

The third hypothesis of the study dealt with the achievement levels of the mastery learning class which received Cognitive Entry Behaviors (ML+CEB) compared to the other 3 classes (ML, CEB and CONTROL) on the summative test scores.

It is stated as:

HYPOTHESIS III: THE COMBINED EFFECT OF COGNITIVE ENTRY BEHAVIORS AND MASTERY LEARNING WILL PRODUCE HIGHER ACHIEVEMENT LEVELS THAN EITHER INTERVENTION ALONE ON THE SUMMATIVE TEST.

Two-way analyses of variance test showed that there were

significant differences among the four classes in terms of their summative test scores. When Newman-Keuls formula was used comparing the scores of ML+CEB and control classes a difference of α=.01 level was found favouring the ML+CEB class. The comparison between ML and Control classes showed a difference at the α=.01 level. The difference was at α=.05 level between CEB and control classes. When the ML+CEB was compared with CEB and ML classes, a difference of α=.01 level of significance was found in both comparisons favoring the class under both interventions.

The results of t-tests showed that the class which received Cognitive Entry Behaviors and which was instructed under mastery learning method of instruction reached the highest level of achievement when compared to the other classes. The ML only class also reached the highest level of achievement when it was compared to the CEB only and the control classes. The CEB class was also significantly higher than the control class on the summative test. The lowest achievement level was found in the control class.

The effect size analyses showed a difference of about 2.7 standard deviation when the class which received Cognitive Entry Behaviors and which was instructed under mastery learning method of instruction is compared with the control class. The same analysis showed a difference of about 1.76 standard deviation when the mastery learning and control classes are compared, and 0.73 standard deviation when the class which received Cognitive Entry Behaviors and the control class are compared. When the class which receive Cognitive Entry Behaviors and which was instructed under mastery learning method of instruction is compared to the mastery learning only class, a difference of about 1.01 standard deviation is found.

The same analysis gave a difference of 1.6 standard deviation between the classes mastery learning combined with Cognitive Entry Behaviors and the Cognitive Entry Behaviors only.

The results of this hypothesis showed that the third hypothesis of the study was clearly confirmed.

The fourth and the last hypothesis of the study dealt with the amount of variance each intervention accounts. It was stated as:

HYPOTHESIS IV: COGNITIVE ENTRY BEHAVIORS WILL HAVE AN ADDITIVE EFFECT TO MASTERY LEARNING METHOD OF INSTRUCTION.

To test this hypothesis, two-way analyses of variance results (Table 9) on summative test scores are used. The results showed that the 2 interventions had an additive effect since the interaction between them was not significant. In addition, E correlation ratios which give the amount of variance accounted for by each intervention were computed.

Mastery learning alone accounted for 45.2% of the variation in achievement and Cognitive Entry Behaviors alone accounted for 9.4% of the variaiton in achievement. Together, the two interventions accounted for 54.6% of the variation in achievement. Thus, the results showed that this hypothesis was also confirmed.

The data obtained in this study clearly show that:

1. The achievement levels of only the students who were unsuccesful during the first semester but received Cognitive Entry Behaviors in the semester break are significantly higher than the other unsuccesful students who did not receive Cognitive Entry Behaviors during the semester break.

2. The achievement levels of the two classes which include students who receive Cognitive Entry Behaviors are generally significantly higher than the other two classes which include students who did not receive Cognitive Entry Behaviors when whole classes are used as a comparison basis.
3. The achievement level of the class under mastery learning method of instruction in combination to receiving Cognitive Entry Behaviors is significantly higher than all of the other classes. This class is followed by the mastery learning only and the class which received Cognitive Entry Behaviors. In addition, all of these 3 classes reached significantly higher levels of achievement in comparison to the control class.
4. Cognitive Entry Behaviors have an additive effect to mastery learning method of instruction.

Limitations of the study and suggestions for further research

This study was conducted in a private school in İstanbul. The language of instruction was English at that school and most of the teachers who participated in the study were English speaking Americans. In this study English for a Changing World by J. Huizenga et all (1976) was used asa textbook. The preperatory level English classes had already started that book during the first semester and continued in the second semester. The reason for choosing this school was that there were many preparatory level English classes all using the same textbook. All of the classes were instructed by a different teacher.

There were 4 classes used in this study. The researcher had a meeting with the teachers of the mastery learning classes. Information about the instructional method was given to the teachers by the

researcher and the thesis advisor. The teachers were provided with the necessary objectives and a source book relating to the instructional methods that they were going to use.

One major limitation of the study is the time spent for giving the necessary prerequisites to the unsuccessful students during the semester break (this help lasted only for 15 hours of instruction). It is suggested for further research that there should be more time given to the unsuccesful students in order to provide them with the necessary Cognitive Entry Behaviors, and more time spent for the instructional method.

Conclusion and Implications

In this study the aim was to test the combined effect of two different interventions, mastery learning and Cognitive Entry Behaviors on achievement levels of students studying English as a second language at the preparatory level.

Research done for many years show that when other interventions are used together with the mastery learning method of instruction , the achievement levels of students raise even further than the students who were instructed under mastery learning alone. Mastery Learning generally produces a difference of about one standard deviation over control conditions. While the two interventions, Mastery Learning and Cognitive Entry Behaviors, used in combination produce approximately 2 standard deviations over control conditions. This gives clear evidence on the above stated points.

In this study, Mastery Learning method of instruction explained 45 percent of the variation in achievement while the Cognitive Entry

Behaviors 10 percent. Although the percentage of explanation in variation by Cognitive Entry Behaviors is lower than the explanation of mastery learning alone, it should not be forgotten that this 10 percent was gained by only 15 hours of extra time spent for the unsuccesful students.

As a results, it is easily seen that by giving the necessary prerequisites for the new learning tasks, variations in achievement can be easily altered. It is expected that learners in any form of education can reach higher levels of learning by using different types of interventions. Further research is needed for the substantiation of this hypotheses under different conditions and with different groups of students.

APPENDIX

PRE-TEST

Objective 1 : The student will be able to use the new words of the unit in a sentence.

Instruction : Choose the correct word for the sentence below.

1. Please write them on the ..... .

(a) class

(b) blackboard

(c) give

(d) direction

Objective 2 : The student will be able to use the question word "what" in a sentence.

Instruction : Choose the correct word for the sentence below.

1. ..... is this? It's a chalk.

(a) who

(b) how

(c) what

(d) where

Objective 3 : The student will be able to use the question word "who" in a sentence.

Instruction : Choose the correct word for the sentence below.

1. ..... is Mrs. Sellers? She is a teacher.

(a) who

(b) what

(c) where

(d) when

Objective 4 : The student will be able to use the question word where in a sentence.

Instruction : Choose the correct word for the sentence below.

1. ..... is your brother? He is at the hospital.
   (a) what
   (b) where
   (c) when
   (d) which

Objective 5 : The student will be able to use verbs with prepositions in present cont. tense.

Instruction : Choose the correct words to fill in the blanks.

1. The boy is ..... his book.
   (a) looking for
   (b) looking ahead
   (c) looking here
   (d) looking up to

Objective 6 : The student will be able to recognize the plural forms of the nouns.

Instruction : Choose the correct words to fill in the blanks.

1. Where are the .....?
   (a) mans
   (b) man
   (c) men
   (d) mens

Objective 7 : The student will be able to use "some and any" in sentences.

Instruction : Choose the correct word for the sentence.

1. There isn't ..... milk on the table.
   (a) any
   (b) some
   (c) almost
   (d) quite

Objective 8 : The student will be able to use the words which decribe size and quantity.

Instruction : Choose the correct word for the sentence

1. The desk isn't big ..... him.
   (a) enough for
   (b) about
   (c) on
   (d) enough

Objective 9 : The student will be able to use "going to" form of the future tense in the statements correctly.

Instruction : Choose the correct word for the sentence.

1. Mr.Black isn't washing the car now. He is .....wash it tomorrow.
   (a) going to
   (b) go
   (c) not
   (d) will

Objective 10 : The student will be able to use the words which describe suggestions by using imperatives.

Instruction : Choose the correct word for the sentence.

1. The desk is too heavy. ..... move it.
   (a) doesn't
   (b) isn't
   (c) don't
   (d) wasn't

Objective 11 : The student will be able to differentiate between how much and how many in relation to given situations.

Instruction : Choose the correct word.

1. .....eggs are there in the basket?
   (a) how much
   (b) how long
   (c) how often
   (d) how many

2. .....money do you have?
   (a) how many
   (b) how much
   (c) how long
   (d) how about

Objective 12 : The student will be able to use the possesive adjactive pronouns in the statements correctly.

Instruction : Choose the correct word for the sentence.

1. Ayşe and Murat are students. ..... teacher is a man.
   (a) their
   (b) her
   (c) our
   (d) your
2. She is reading ..... a book.
   (a) her
   (b) they
   (c) their
   (d) she

Objective 13 : The student will be able to use the adjectives which describe length.

Instruction : Choose the correct word for the sentence.

1. Is Mrs.Baez tall? No, she isn't. She is .....
   (a) fat
   (b) thin
   (c) tall
   (d) short

Objective 14 : To use the pronouns <u>one</u> and <u>ones</u> in the statement correctly.

Instruction : Choose the correct words for the sentence.

1. The yellow car is in the street. The blue ..... is at the garage.

   (a) one

   (b) ones

   (c) one's

   (d) ones'

Objective 15 : The student will be able to differentiate between too much and too many.

Instruction : Choose the correct word for the sentence

1. There are ..... glasses of milk on the table.

   (a) too much

   (b) too many

   (c) too long

   (d) too short

Objective 16 : The student will be able to differentiate between so and because .

Instruction : Choose the correct word for the sentence.

1. I'm going to wear my blue shirt, ... the green one is too dirty.

   (a) so

   (b) at

   (c) long

   (d) because

Objective 17 : The student will be able to use the simle past tense form of the irregular verbs.

Instruction : Choose the correct word for the sentence.

1. Betty ..... the train station 3 o'clock yesterday.

   (a) left

   (b) leaved

   (c) lefted

   (d) leavet

Objective 18 : The student will be able to use the simple present tense statements with time adverbs such as tonight , this evening, today or every Sunday

Instruction : Choose the correct word for the sentence.

1. I usually stay at home .....

   (a) every Sunday

   (b) this evening

   (c) today

   (d) tonight

Objective 19 : The student will able to change the positive sentences into negative forms in simple present an simple past tenses.

Instruction : Change the positive sentences into negative forms.

1. He is a dentist. No, he ..... a dentist.

   (a) aren't

   (b) isn't

   (c) don't

   (d) doesn't

2. I studied English last night

   (a) I didn't studied English last night .

   (b) I didn't study English last night.

   (c) I not study English last night.

   (d) I did studies English last night.

Objective 20 : The student will be able to change the singular nouns to plural nouns.

Instruction : Change the singular word to plural form.

1. There is a cat at the corner of the street.

   (a) There are cats at the corner of the street.

   (b) There is cats at the corner of the street.

   (c) There are cat at the corner of the street.

   (d) There is a cats at the corner of the street.

Objective 21 : The student will be able to recognize actions that are happening in (now) present continuous.

Instruction : Choose the correct sentence below.

1. (a) Are these men working at the bank?

   (b) Do these men working at the bank?

   (c) Does the men working at the bank?

   (d) Is these men working at the bank?

Objective 22 : The student will be able to to recognize simple past tense in question form, and in positive form.

Instruction : Choose the correct words below.

1. ..... you and Ahmet go the party yesterday? Yes we did.

   (a) was

   (b) are

   (c) did

   (d) do

2. I ..... to her yesterday, but I didn't talk to her today.

   (a) talked

   (b) going to talk

   (c) talk

   (d) talking

Objective 23 : The student will be able to recognize the word "can" in sentences.

Instruction : Choose the correct words for the sentences below.

1. Birds ..... fly hundreds of miles.

   (a) can

   (b) does

   (c) are

   (d) want

2. ..... you come to my party? I'm inviting you.

   (a) are

   (b) does

   (c) can

   (d) did

Objective 24 : The student will be able to to differentiate between somebody and anybody in sentences.

Instruction : Find the negative of the sentence.

1. There is somebody in the room.

   (a) There isn't anybody in the room.

   (b) There isn't somebody in the room.

   (c) There isn't nobody in the room.

   (d) There is nothing body in the room.

FORMATIVE TESTS

Learning Task 1 : To Give and Follow Directions, Past Progressive and and Simple Past Tenses.

FORMATIVE 1A

Objective 1 : The student will be able to recall the meaning of the new words in the lesson.

Instruction : Choose correct words below.

1. My grade in the ..... course is 6.
   (a) finish
   (b) history
   (c) cassette
   (d) kid
2. It's a very hard ..... . You need extra help.
   (a) learn
   (b) easy
   (c) assignment
   (d) melon

Objective 2 : The student will be able to use the new words of the lesson in sentences.

Instruction : Choose the correct sentences below.

1. Which one of the sentences uses the word assignment correctly.
   (a) The student friendly assignment the lesson
   (b) The kids can't assignment the ball.
   (c) Theteacher gave us a very hard assignment.
   (d) The father of Mehmet assignment the work.

2. Which one of the sentences uses the word finish correctly?

   (a) I can't finish this work now, because I have no time.

   (b) This is a finishwork.

   (c) I like to do finish work.

   (d) He finishes to the party tonight.

Objective 3 : The student will be able to recognize the past progressive tense in a given context.

Instruction : Choose the correct form of the verbs to fill in the blanks in the sentences below.

1. They ..... a picture last night.

   (a) are drawing

   (b) were drawing

   (c) was drawing

   (d) will draw

2. I ..... you yesterday .

   (a) was looking for

   (b) will look for

   (c) look

   (d) will looking for

Objective 4 : The student will be able to identify the negative and interrogative forms of the past progressive tense.

Instruction : Choose the negative form of the below sentence.

1. They were looking for a new book .

   (a) They were not looking for a new book.

   (b) They did not looking for a new book.

   (c) They was looking for a new book.

   (d) They were looking not for a new book.

Instruction : Choose the question form of the sentence below.

1. Two men were talking about you.
   (a) Were two men talking about you?
   (b) Was two men talking about you?
   (c) Did two men talking about you?
   (d) Two men were talking not about you?

Objective 5 : The student will be able to identify the positive form of the past progressive tense.

Instruction : Choose the positive form of the sentences below.

1. Was she sitting in a corner?
   (a) She did sit in a corner.
   (b) She were sitting in a corner.
   (c) She was sitting in a corner.
   (d) She wasn't sitting in a corner.
2. Were you listening to the teacher?
   (a) You were listening to the teacher.
   (b) You listened to the teacher.
   (c) You did listening to the teacher.
   (d) You was listening to the teacher.

Objective 6 : The student will be able to use "when" with past progressive and simple past tenses.

Instruction : Choose the items which complete the sentences below.

1. She was cooking dinner when ..... .
   (a) I will come
   (b) I come
   (c) You open the door.
   (d) You opened the door.

2. I was listening to the music when .....

(a) you go

(b) she came

(c) he will come

(d) he comes

Learning Task 2 : To describe location, to read and write brief notices, and prepositional phrases .

FORMATIVE II A

Objective 1 : The student will be able to recall the meaning of the new words in the lesson.

Instruction : Choose the correct words for the sentences below.

1. I can't study math, because I ..... it.
   (a) lettering
   (b) meet
   (c) drived
   (d) hate
2. I'm going to write a letter to my friend. She lives in a ..... .
   (a) graduate
   (b) inside
   (c) except
   (d) suburb

Objective 2 : The student will be able to use prepositions such as "on, at, in, by" in sentences.

Instruction : Choose the correct words for the sentences below.

1. The meeting is going to be ..... Wednesday.
   (a) on
   (b) above
   (c) at
   (d) in

2. I came to school ..... taxi, but I was to late.

   (a) below

   (b) hate

   (c) hall

   (d) by

Objective 3 : The student will be able to use the -ing forms of some words which are nouns.

Instruction : Choose the correct words for the sentences below.

1. The ..... of the movie was interesting, I liked it.

   (a) were

   (b) begining

   (c) went

   (d) changed

2. This ..... is about the kings of the world.

   (a) except

   (b) mistake

   (c) reading

   (d) boards

Objective 4 : The student will be able to use the new words of the lesson in sentences.

Instruction: Choose the correct sentences below.

1. Which one of the sentences uses the word dictionary correctly?

   (a) The art club goes to the dictionary every week.

   (b) If you don't know this word, look at the dictionary.

   (c) I'm going to dictionary the school.

   (d) It's a very dictionary driving.

2. Which one of the sentences uses the word out of correctly?

   (a) I'm out of to the art fair.

   (b) They went to school out of.

   (c) There isn't any out of sentence in this paper.

   (d) On Friday afternoon, the students run out of the school.

Learning Task 3 : To read advertisements, Future Tense with will, has/ have to and verb.

FORMATIVE III A

Objective 1 : The student will be able to recall he meaning of the new words in the lesson.

Instruction : Choose the correct words for the sentences below.

1. My family and I live in a very ..... house.
   (a) operator
   (b) another
   (c) bring
   (d) large
2. I didn't answer all of the questions on the ..... because some of them were very hard.
   (a) shop
   (b) typewriter
   (c) helper
   (d) application form

Objective 2 : The student will be able to use the new words of the lesson in sentences.

Instruction : Choose the correct sentences below.

1. Which one of the sentences uses the word hire correctly?
   (a) There are hire students in the class today.
   (b) I want to choose somebody hire boss.
   (c) The boss wants to hire a secretary.
   (d) His assistant is hiring the eye glasses.

2. Which one of the sentences uses the word appointment correctly?

   (a) Bob and his brother are appointment

   (b) These flowers are very appointment

   (c) There's some appointment to put into milk.

   (d) I have an appointment with my teacher, I can't come to you.

Objective 3 : The student will be able to recognize the future tense in a given context.

Instruction : Choose the correct form of the verbs to fill in the blanks in the sentences below.

1. The meeting ..... at 8 o'clock tomorrow.

   (a) began

   (b) will begin

   (c) were begining

   (d) was begin

2. I ..... her tomorrow morning.

   (a) will see

   (b) am see

   (c) was seeing

   (d) saw

Objective 4 : The student will be able to identify the negative form of the future tense.

Instruction : Choose the negative forms of the sentences below.

1. They will look for a new movie tonight.

   (a) They look for a new movie tonight.

   (b) They weren't looking for a new movie tonight.

   (c) They won't look for a new movie tonight.

   (d) They were looking for a new movie tonight.

2. She will buy a swimming dress.

   (a) She won't buy a swimming dress.

   (b) She wasn't buy a swimming dress.

   (c) She didn't buy a swimming dress.

   (d) She does not buy a swimming dress.

Objective 5 : The student will be able to identify the interrogative form of the future tense.

Instruction : Choose the question form of the sentence below.

1. She will look for a new flat.

   (a) Will she look a new flat?

   (b) Will she going to look for a new flat?

   (c) Was she looking for a new flat?

   (d) Is she looking for a new flat?

Objective 6 : The student will be able to identify the positive form of the future tense.

Instruction: Choose the positive form of the sentence below.

1. Will you help me to study this lesson?

   (a) You're helping me to study this lesson.

   (b) You will help me to study this lesson.

   (c) You help me to study this lesson.

   (d) You were helping me to study this lesson.

Learning Task 1 : To give and follow directions, Past Progressive and Simple Past Tenses.

FORMATIVE I B

Objective 1 : The student will be able to recall the meaning of the new words in the lesson.

Instruction : Choose the correct word below.

1. I didn't finish my work, because it was ..... .
   (a) boring
   (b) turn
   (c) living
   (d) recording
2. I can't ..... the answer to the question.
   (a) figure up
   (b) figure at
   (c) figure out
   (d) figure in

Objective 2 : The student will be able to use the new words of the lesson in sentences.

Instruction : Choose the correct sentences below.

1. Which one of the sentences uses the word boring correctly?
   (a) The teacher boring the homework to the students.
   (b) The teacher boring very hard assignments.
   (c) She is very boring to explain.
   (d) This is a boring book.

2. Which one of the sentences uses the word easy correctly?

   (a) It was a very easy lesson.

   (b) It easy to go.

   (c) I want to easy the student.

   (d) I want to go there easy.

Objective 3 : The student will be able to recognize the past progressive tense in a given context.

Instruction : Choose the correct words below.

1. My wife and I ..... about you the other day.

   (a) were talk

   (b) was talking

   (c) will talk

   (d) were talking

2. The children ..... basketball last year.

   (a) was playing

   (b) were playing

   (c) will playing

   (d) will play

Objective 4 : The student will be able to identify the positive form of the past progressive tense.

Instruction : Choose the positive form of the sentences below.

1. Were you studying English last year?

   (a) You was studying English last year.

   (b) You was study English last year.

   (c) You were studying English last year.

   (d) You studied English last year.

2. Was he watching a football game?

(a) He was watching a football game.

(b) He is watching a football game.

(c) He watched a football game.

(d) He did watch a football game.

Objective 5 : The student will be able to identify the negative and interrogative forms of the past progressive tense.

Instruction : Choose the negative form of the sentence below.

1. She was buying a very big car.

(a) She were not buying a very big car.

(b) She wasn't buying a very big car.

(c) She didn't buying a very big car.

(d) She didn't buy a very big car.

Instruction: Choose the question form of the sentence below.

1. They were looking for a new flat.

(a) Was they looking for a new flat?

(b) Didn't they looking for a new flat?

(c) Were they looking for a new flat?

(d) Did they looking for a new flat?

Objective 6 : The student will be able to use "when" with past progressive and simple past tenses.

Instruction : Choose the items which complete the sentences below.

1. I was opening the window when ..... .

(a) you came

(b) you are coming

(c) you come

(d) you go

2. He was studying Turkish when ..... .

(a) I was leaving his house.

(b) I left his house .

(c) I leave his house.

(d) I am leaving his house.

Learning Task 2 : To describe location, to read and write brief notices, and Prepositional Phrases.

FORMATIVE II B

Objective 1 : The student will be able to recall the meaning of the new words in the lesson.

Instruction : Choose the correct words for the sentences below.

1. What were they ..... at one o'clock ?
   (a) watch
   (b) doing
   (c) choosed
   (d) ate
2. The ..... library is open everyday except Sunday.
   (a) toward
   (b) about
   (c) drived
   (d) public

Objective 2 : The students will be able to use the new words of the lesson in sentences.

Instruction : Choose the correct sentences below.

1. Which one of the sentences uses the word mistake correctly?
   (a) I mistake carrots and math.
   (b) This is a very mistake lesson.
   (c) I mistake a letter to my aunt in Germany.
   (d) She made a mistake, because she didn't understand the lesson.

2. Which one of the sentences uses the word drive correctly?

   (a) He put the book on the shelf drive the desk.

   (b) I don't want to go by his car, because he drives too fast.

   (c) The Art Club make a drives.

   (c) They're going to have a meeting in our drive.

Objective 3 : The student will be able to use prepositions such as " on, at, in, by" in sentences.

Instruction : Choose the correct words for the sentences below.

1. I'm going to the Art Fair ..... the gym.

   (a) look

   (b) is

   (c) in

   (d) put

2. A window in an opening ..... a wall.

   (a) cage

   (b) in

   (c) out

   (d) us

Objective 4 : The student will be able to use the new words of the lesson in sentences.

Instruction : Choose the correct words for the sentences below.

1. I want to change the hour of our ..... .

   (a) look

   (b) ran

   (c) meeting

   (d) near

2. I'm going to the Art Fair to see his ..... .

   (a) drawing

   (b) went

   (c) on Wednesday

   (d) play basketball

Learning Task 3 : To read advertisements, Future Tense with will, has/have to and verb.

FORMATIVE III B

Objective 1 : The student will be able to recall the meaning of the new words in the lesson.

Instruction : Choose the correct words for the sentences below.

1. She ..... a very beatiful typewriter to the office.
   (a) intelligent
   (b) brought
   (c) help
   (d) clerk
2. My boss has a very intelligent ..... .
   (a) clerk
   (b) different
   (c) spell
   (d) fill out

Objective 2 : The student will be able to use the new words of the lesson in sentences.

Instruction : Choose the correct sentences below.

1. Which one of the sentences uses the word alike correctly?
   (a) I started alike after the lesson.
   (b) Do you write these letters for me, alike?
   (c) This camera is showing alike.
   (d) These flowers are different, they're not alike.

Objective 3 : The student will be able to recognize the future tense in a given context.

Instruction : Choose the correct forms of the verbs to fill in the blanks.

1. They ..... tomorrow, please wait them.
   (a) came
   (b) was coming
   (c) were coming
   (d) will come
2. They ..... at home tonight.
   (a) ateing
   (b) will eat
   (c) are ateing
   (d) eat

Objective 4 : The student will identify the negative form of the future tense.

Instruction : Choose the negative form of the below sentence

1. I will go there tomorrow morning.
   (a) I won't go there tomorrow morning.
   (b) I didn't go there tomorrow morning.
   (c) I wasn't go there tomorrow morning.
   (d) I went there tomorrow morning.
2. She will eat it.
   (a) She can't eat it.
   (b) She wasn't eat it.
   (c) She didn't eat it.
   (d) She won't eat it.

Objective 5 : The student will be able to identify the interrogative form of the future tense.

Instruction : Choose the question form of the sentence below.

1. You will speak English better next year.
   (a) Will you speaking English better next year?
   (b) Were you speaking English better next year?
   (c) Did you speak English better next year?
   (d) Will you speak English better next year?

Objective 6 : The student will be able to identify the positive form of the future tense.

Instruction : Choose the positive form of the sentence below.

1. Will you walk with me across the street?
   (a) You will going to walk with me across the street.
   (b) You're walking with me across the street.
   (c) You will walk with me across the street.
   (d) You were walking with me across the street.

SUMMATIVE TEST

	Learning Task	Objective	Answer Column
Instruction: Choose the correct word below.	I	IA	C
1. It's a very hard..... You need extra help. (a) learn (b) easy (c) assignment (d) melon			
Instruction: Choose the correct sentence below.	I	IIA	a
2. Which one of the sentences uses the word finish correctly? (a) I can't finish this work now, because I have no time. (b) This is a finish work. (c) I like to do finish work. (d) He finishes to the party tonight.			
Instruction: Choose the negative form of the sentence below.	I	IVA	a
3. They were looking for a new book. (a) They weren't looking for a new book. (b) They didn't looking for a new book. (c) They wasn't looking for a new book. (d) They were looking not for a new book.			
Instruction: Choose the item which completes the sentence below.	I	VIA	d
4. She was cooking dinner when ..... (a) I will come (b) I come (c) You open the door (d) You opened the door			

	Learning Task	Objective	Answer Column
Instruction: Choose the correct word below	I	IB	C
5. I can't ..... the answer to the question. (a) figure up (b) figure at (c) figure out (d) figure in			
Instruction: Choose the correct sentence below.	I	IIB	d
6. Which one of the sentences uses the word boring correctly? (a) The teacher boring the homework to the students. (b) The teacher boring very hard assignments. (c) She is very boring to explain. (d) This is a boring book.			
Instruction: Choose the correct word below.	I	IIIB	d
7. My wife and I ..... about you the other day. (a) were talk (b) was talking (c) will talk (d) were talking			
Instruction: Choose the negative of the sentence below.	I	IVB	b
8. She was buying a very big car. (a) She were not buying a very big car. (b) She wasn't buying a very big car. (c) She didn't buying a very big car. (d) She didn't buy a very big car			

	Learning Task	Objective	Answer Column
Instruction: Choose the question form of the sentence below.	I	IVB	C
9. They were looking for a new flat. (a) Was they looking for a new flat? (b) Didn't they looking for a new flat? (c) Were they looking for a new flat? (d) Did they looking for a new flat?			
Instruction: Choose the item which completes the sentence below.	I	VIB	a
10. I was opening the window when ..... (a) you came (b) you're coming (c) you come (d) you go			
Instruction: Choose the correct word for sentence below.	II	IA	d
11. I'm going to write a letter to my friend, the lives in a ..... . (a) graduate (b) inside (c) except (d) suburb			
Instruction: Choose the correct word for the sentence below.	II	IIA	a
12. The meeting is going to be ..... Wednesday. (a) on (b) above (c) at (d) in			

	Learning Task	Objective	Answer Column
Instruction: Choose the correct word for the sentence below.	II	IVA	b
13. The ..... of the movie was interesting, I liked it. (a) were (b) begining (c) went (d) changed			
Instruction: Choose the correct word for the sentence below.	II	IIIA	c
14. This ..... is about the kings of the world. (a) except (b) mistakes (c) reading (d) boards			
Instruction: Choose the correct word for the sentence below.	II	IB	b
15. What were they ..... at one o'clock? (a) watch (b) doing (c) choosed (d) ate			
Instruction: Choose the correct sentence below.	II	IVB	b
16. Which one of the sentences uses the word drive correctly? (a) He put the book on the shelf drive the desk. (b) I don't wan't to go by his car, because he drives too fast.			

	Learning Task	Objective	Answer Column
(c) The Art Club make a drives. (d) They're going to have a meeting in our drive.			
Instruction: Choose the correct word for the sentence below.	II	IIB	c
17. I'm going to the Art-Fair ....the gym. (a) look (b) is (c) in (d) put			
Instruction: Choose the correct word for the sentence below.	II	IIIB	c
18. I want to change the hour of our ..... (a) look (b) ran (c) meeting (d) near			
Instruction: Choose the correct word for the sentence below.	III	IA	d
19. My family and I live in a very ..... house. (a) operate (b) another (c) bring (d) large			
Instruction: Choose the correct sentence below.	III	IIA	c
20. Which one of the sentences uses the word hire correctly ?			

	Learning Task	Objective	Answer Column
(a) There're hire students in the class today. (b) I want to choose somebody hire boss. (c) The boss of our office wants to hire a secretary. (d) His assistant is hiring the eyeglasses.			
Instruction: Choose the correct form of the verb to will in the blanks.	III	IIIA	b
21. The meeting ..... at 8 o'clock tomorrow . (a) began (b) will begin (c) were begining (d) was begin			
Instruction: Choose the negative form of the sentences below.	III	IVA	a
22. She will buy a swimming dress. (a) She won't buy a swimming dress. (b) She wasn't buy a swimming dress. (c) She didn't buy a swimming dress. (d) She doesn't buy a swimming dress.			
Instruction: Choose the positive form of the sentence below.	III	VIA	b
23. Will you help me to study this lesson? (a) You're help me to study this lesson. (b) You will help me to study this lesson. (c) You help me to study this lesson. (d) You were helping me to study this lesson.			

	Learning Task	Objective	Answer Column
Instruction: Choose the correct word for the sentence below.	III	IB	a
24. My boss has a very intelligent ..... (a) clerk (b) different (c) spell (d) fill out			
Instruction: Choose the correct form of the verbs to fill in the blank.	III	IVB	d
25. They ..... tomorrow, please wait for them. (a) came (b) was coming (c) were coming (d) will come			
Instruction: Choose the negative form of the below sentence.	III	IVB	a
26. I will go there tomorrow morning. (a) I won't go there tomorrow morning. (b) I didn't go there tomorrow morning. (c) I wasn't go there tomorrow morning. (d) I went there tomorrow morning.			
Instruction: Choose the correct sentence below.	III	IIB	d
27. Which one of the sentences uses the word alike correctly? (a) I started alike after the lesson. (b) Do you write these letters for me, alike? (c) This camera is showing alike. (d) These flowers are different, they're not alike.			

	Learning Task	Objective	Answer Column
Instruction: Choose the negative form of the below sentences.	III	IVB	d
28. She will eat it. (a) She can't eat it. (b) She wasn't eat it. (c) She didn't eat it. (d) She won't eat it.			
Instruction: Choose the correct form of the verb to fill in the blank.	III	IIIB	b
29. They ..... at home tonight. (a) ateing (b) will eat (c) are ateing (d) eat			
Intruction: Choose the correct form of the verb to fill in the blank.	III	IIIA	a
30. I ..... her tomorrow morning. (a) will see (b) am see (c) was seeing (d) saw			

RAW DATA: STUDENT'S SCORES ON TESTS

STUDENT IN THE ML+CEB CLASS	PRE-TEST	FIA	FIB	FIIA	FIIB	FIIIA	FIIIB	SUMMATIV
1	96.6	100	100	100		100	100	96.6
2	96.6	91.6	100	87.5		100	100	96.6
3	96.6	91.6	100	100		100	100	100
4	93.3	100	100	100		100	100	100
5	96.6	100	100	100		100	100	100
6	93.3	100	91.6	100		100	100	100
7	96.6	83.3	91.6	100		100	100	100
8	96.6	100	100	100		100	100	100
9	100	91.6	100	100		100	100	100
10	96.6	91.6	91.6	100		100	100	96.6
11	96.6	100	100	100		100	90	96.6
12	96.6	100	100	100		100	100	100
13	96.6	100	91.6	100		100	100	100
14	93.3	100	100	100		100	100	96.6
15	96.6	100	91.6	100		100	100	100
16	96.6	100	100	100		100	100	100
17	96.6	100	91.6	100		100	100	100
18	100	100	100	87.5		100	100	100
19	96.6	100	100	100		100	100	100
20	96.6	100	91.6	87.5		80	100	96.6
21	90.0	100	100	100		100	100	100
22	96.6	100	100	100		100	100	100

RAW DATA: STUDENT'S SCORES ON TESTS

STUDENTS IN THE ML CLASS	PRE-TEST	FIA	FIB	FIIA	FIIB	FIIA	FIIIB	SUMMATIVE
1	96.6	100	83.3	100	100	100	100	96.6
2	90	100	83.3	75	87.5	90	100	96.6
3	93.3	91.6	91.6	100	87.5	100	80	96.6
4	93.3	91.6	91.6	100	100	100	90	100
5	90	91.6	75	100	100	90	100	93.3
6	96.6	100	91.6	100	100	90	90	100
7	96.6	100	91.6	100	100	100	100	100
8	96.6	100	100	100	87.5	100	100	96.6
9	93.3	91.6	83.3	100	100	100	100	100
10	96.6	100	91.6	100	100	100	100	96.6
11	86.6	100	91.6	100	100	90	100	96.6
12	93.3	100	91.6	100	100	80	100	93.3
13	80	100	91.6	100	100	100	100	93.3
14	93.3	100	91.6	100	87.5	100	90	96.6
15	93.3	100	91.6	100	100	100	100	96.6
16	96.6	100	91.6	100	100	100	100	96.6
17	93.3	100	100	100	100	100	100	96.6
18	83.3	100	91.6	87.5	100	90	100	90
19	86.6	83.3	83.3	87.5	100	80	80	90
20	93.3	91.6	100	100	100	90	100	86.6
21	96.6	91.6	100	100	87.5	90	100	93.3
22	93.3	100	100	100	100	90	100	96.6

RAW DATA: STUDENTS' SCORES ON TESTS

STUDENTS IN THE CEB CLASS	PRE-TEST	FIA	FIB	FIIA	FIIB	FIIIA	FIIIB	SUMMATI
1	96.6	100		100		100		93.3
2	93.3	91.6		100		100		90
3	93.3	100		100		100		90
4	96.6	100		100		90		100
5	90	100		100		100		96.6
6	90	91.6		87.5		80		90
7	86.6	83.3		87.5		80		93.3
8	96.6	100		100		90		93.3
9	96.6	100		100		100		96.6
10	96.6	91.6		87.5		90		86.6
11	93.3	100		100		100		83.3
12	96.6	100		87.5		100		90
13	93.3	91.6		100		100		86.6
14	83.3	91.6		100		100		90
15	93.3	100		100		100		90
16	96.6	100		100		100		96.6
17	93.3	100		87.5		100		93.3
18	90.0	100		100		80		96.6
19	90.0	91.6		87.5		100		86.6
20	90.0	100		100		80		86.6
21	93.3	100		100		100		96.6
22	96.6	100		100		100		96.6

RAW DATA: STUDENTS' SCORES ON TESTS

STUDENTS IN THE CONTROL CLASS	PRE-TEST	FIA	FIB	FIIA	FIIB	FIIA	FIIB	SUMMATIVE
1	90							90
2	83.3							86.6
3	90							93.3
4	90							86.6
5	93.3							86.6
6	83.3							86.6
7	93.3							90
8	96.6							93.3
9	90							93.3
10	80							83.3
11	83.3							86.6
12	96.6							93.3
13	86.6							93.3
14	93.3							93.3
15	90							86.6
16	90							90
17	93.3							86.6
18	93.3							86.6
19	93.3							90
20	90							93.3
21	90							93.3
22	80							83.3

REFERENCES

Afreşa, O. The Effects of Mastery Learning and Traditional Learning Methods on Achievement and Retention of Fifth Grade Turkish Primary School Students in Science. Unpublished master's thesis, Department of Education, Boğaziçi University, Turkey, 1983.

Airasion, P.W. Formative Evaluation Instruments: A Construction and Validation of Tests to Evaluate Learning Over Short Time Periods. Unpublished doctoral dissertation, University of Chicago, 1969.

Anderson, L,W. Time and School Learning. Unpublished doctoral dissertation,University of Chicago, 1973.

Arlin, M.N. Learning Rate and Learning Rate Variance Under Mastery Learning Conditions. Unpublished doctoral dissertation, University of Chicago, 1973.

Block, J.H. The Effects of Various Levels of Performance on Selected Cognitive, Affective, and Time Variables. Unpublished doctoral dissertation, University of Chicago, 1970.

Block, J.H.(ED). Mastery Learning: Theory and Practice. New York: Holt, Rinehart and Winston, 1971.

Block,J.H.(Ed). Schools, Society, and Mastery Learning. New York: Holt, Rinehart and Winston, 1974.

Bloom, B.S. Individual Differences in School from Education at Chicago , University of Chicago, Winter, 1971.

Bloom, B.S. Innocence in Education (Adapted from speech of Dean James, I. Doj College of Education, University of Rochester). University of Chicago, May 1972.

Bloom, B.S. Human Characteristics and School Learning .New York, McGraw-Hill Book Company, 1976.

Bloom, B.S. New Views of the Learner: Implications for Instruction and Curriculum. Educational Leadership. April, 1978.

Bracht, G.H. and Hopkins, K.D. Stability of Educational Achievement. In G.H.Bracht, K.D.Hopkins, and J.C.Stanley (Eds.) Perspectives in Educational and Psychological Measurement. Englewood Cliffs, N.J.: Prentice-Hall, 1972.

Carroll, J.B. A Model of School Learning. Teachers College Record , 1963, 64, 723-733.

Eğinlioğlu, U. The Effects of Mastery Learning and Improved Materials on English Achievement Levels for Ninth Grade Turkish Students at a Private High School. Unpublished master's thesis, Department of Education, Boğaziçi University, Turkey, 1985.

Glaser, R. Adapting the Elementary School Curriculum to Individual Performance. In Proceedings of the 1967 Invitational Conference on Testing Problems. Princeton: Educational Testing Service, 1968.

Harnischfeger, A. and Wiley, D.E. Explosion of Myth: Quantity of Schooling and Exposure to Instruction, Major Educational Vehicles. Educational Researcher,1974, 3, 7-12.

Hogwan, et al., The Mastery Learning Project in the Middle Schools: Korean Institute for Research in Behavioral Science, 1970.

Kersh, M,E.A Strategy for Mastery Learning in Fifth-Grade Arithmetic. Unpublished doctoral dissertation, University of Chicago, 1971.

Levin, T. The Effect of Content Prerequisite and Processoriented Experience on Application Ability in the Learning of Probability. Unpublished doctoral dissertation, University of Chicago, 1975.

Nwabueze,B.The Effects of Mastery Learning and Improved Teaching on Mathematics Achievement for Seventh Grade Turkish Students at a Private Secondary School. Unpublished master's thesis, Department of Education, Boğaziçi University, Turkey, 1984.

Özçelik,D.A. Student Involvement in the Learning Process. Unpublished doctoral dissertation, University of Chicago, 1974.

Payne, M.A.The Use of Data in Curricular Decisions. Unpublished doctoral dissertations, University of Chicago, 1963.

Peterson, C.et al. , English for a Changing World. Scott, Foresman Company, 1976.

Rosenshine, B., and Berliner, D.C. Academic Engaged Time. British Journal of Teacher Education, 1978, 4, 3-16.

Yıldıran, G. The Effects of Level of Cognitive Achievement on Selected Learning Criteria Under Mastery Learning and Normal Classroom Instruction. Unpublished doctoral dissertation, University of Chicago, December , 1977.