

THE EFFECTS OF MASTERY LEARNING AND IMPROVED
MATERIALS ON ENGLISH ACHIEVEMENT LEVELS FOR NINTH
GRADE TURKISH STUDENTS AT A PRIVATE HIG SCHOOL

by
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TABLE OF CONTENTS

	<u>PAGE</u>
ACKNOWLEDGEMENT	i
LIST OF TABLES	iv
LIST OF FIGURES	vi
LIST OF GRAPHS	vii
ABSTRACT	viii
CHAPTERS	
I INTRODUCTION	1
II MASTERY LEARNING THEORY AND METHOD	6
III SURVEY OF LITERATURE	12
IV METHODOLOGY: RESEARCH DESIGN AND CONCERNS OF THE STUDY	21
V RESULTS AND DISCUSSIONS	33
VI SUMMARY AND CONCLUSIONS	50
APPENDIX	
LIST OF REFERENCES	114

LIST OF TABLES

<u>TABLES</u>		<u>PAGE</u>
1	Comparison of the <u>Cumulative Grade Point Averages of Mastery Learning combined with Improved Materials, Mastery Learning, and Control Classes, using One-Way Analysis of Variance</u>	34
2	Comparison of the <u>Previous Year English Grades of Mastery Learning combined with Improved Materials, Mastery Learning, and Control Classes, using One-Way Analysis of Variance</u>	35
3	Number and Percentage of Students Reaching the 90% Criterion Level of Learning on Formative and Summative Tests in Each of the Three Classes (ML+IM, ML, and C)	36
4	Comparison of the Formative and Summative Means of the Mastery Learning combined with Improved Materials, Mastery Learning, and Control Classes	40
5	One-Way Analysis of Variance <u>on the Summative Test Scores for the Mastery Learning combined with Improved Materials, Mastery Learning, and Control Classes</u>	41
6	Comparison of the <u>Summative Test Scores of the Mastery Learning combined with Improved Materials and Control Classes, using Newman-Keuls Formula</u>	42
7	Comparison of the Means of the Mastery Learning combined with Improved Materials and Control Classes <u>on the Summative Test, Using t-tests for Independent Samples</u>	43
8	Comparison of the <u>Summative Test Scores, of the Mastery Learning and Control Classes, Using Newman-Keuls Formula</u>	45
9	Comparison of the Means of the Mastery Learning and Control Classes <u>on the Summative Test, Using t-tests for Independent Samples</u>	45

TABLES

PAGE

10	Comparison of the <u>Summative Test Scores</u> of the Mastery Learning combined with Improved Materials and Mastery Learning Classes, Using Newman-Keuls Formula	47
11	Comparison of the Means of the Mastery Learning combined with Improved Materials and Mastery Classes <u>on the</u> <u>Summative Test</u> , Using t-tests for Independent Samples.	48

LIST OF FIGURES

<u>FIGURES</u>		<u>PAGE</u>
1	The Model of Mastery Learning	8
2	The Design of the Study	23

LIST OF GRAPHS

<u>GRAPHS</u>	<u>PAGE</u>
1 The Graph of the Mean Performances of Each Class at the end of Each Learning Task	37
2 The Graph of the Mean Performances of Each Class on the Formative Tests, Their Parallels, and the Summative Test	38

A B S T R A C T

The aim of this study is to test whether or not the combined effect of Mastery Learning Method of Instruction in addition to the use of Improved Materials produces higher achievement levels than those obtained through Mastery Learning alone in relation to control classes. The study is carried out at a private highschool in Istanbul, including 9th grade Turkish students.

The hypotheses of this study are:

- HYPOTHESIS I: The achievement level of the class under Mastery Learning Method of Instruction combined with Improved Materials will be significantly higher than the control class.
- HYPOTHESIS II: The achievement level of the class under Mastery Learning Method of Instruction will be significantly higher than the control class.
- HYPOTHESIS III: The combined effect of Improved Materials in addition to Mastery Learning will be significantly higher than the single effect of Mastery Learning alone, as observed on the summative test scores.

These three hypotheses of the study are statistically tested, using a one-way analysis of variance, Newman-Keuls Formula, t-tests, and effect size analyses. The data obtained in this study show that:

1- The achievement level of the class under Mastery Learning Method of Instruction combined with Improved Materials is significantly higher than the control class at .01 level of significance.

2- The achievement level of the class under Mastery Learning Method of Instruction is significantly higher than the control class at .01 level of significance.

3- The combined effect of Improved Materials in addition to Mastery Learning is significantly higher than the single effect of Mastery Learning alone, as observed on the summative test scores approaching .05 level of significance.

In this study, while Mastery Learning alone leads to levels of achievement which are 1.08 standard deviations above the mean over the control class, the combined effect of Mastery Learning with Improved Materials lead to achievement levels which are 1.6 standard deviations above the mean over the control class. The combined effect of Mastery Learning and Improved Materials is significantly higher than the single effect of Mastery Learning, according to the results of the study.

Ö Z E T

Bu çalışmanın amacı, Tam Öğrenme Yöntemi ile birlikte Kullanılan Etkinleştirilmiş Materyalin, Tam Öğrenme Yönteminin sağladığı başarı düzeyinden daha fazlasını sağlayıp sağlamadığını sınamaktır. Çalışma, İstanbul'da Özel Tarhan Lisesinde yapılmış olup, 9.sınıf Türk öğrencilerini kapsamaktadır.

Bu çalışmanın denenceleri şunlardır:

Denence I: Tam Öğrenme Yönteminin, Etkinleştirilmiş Materyal ile birlikte uygulandığı sınıfın başarı düzeyi, geleneksel öğretimin uygulandığı sınıfın başarı düzeyinden önemli derecede daha yüksek olacaktır.

Denence II: Tam Öğrenme Yönteminin uygulandığı sınıfın başarı düzeyi, geleneksel öğretimin uygulandığı sınıfın başarı düzeyinden önemli derecede daha yüksek olacaktır.

Denence III: Erişi testi puanlarında gözlemlendiği gibi, Etkinleştirilmiş Materyal ile Tam Öğrenme Yönteminin birleşik etkisi, sadece Tam Öğrenme Yönteminin etkisinden önemli derecede daha yüksek olacaktır.

Bu üç denence, tek yönlü varyans analizi, Newman-Keuls

formülü, t-testleri ve etki oranı analizi ile sınanmıştır. Yapılan analizler sonucu, üç denence de desteklenmiştir.

Bu çalışmada elde edilen veriler aşağıdaki bulguları desteklemektedir:

1- Tam Öğrenme Yöntemi ile birlikte Etkinleştirilmiş Materyalin uygulandığı sınıfın başarı düzeyi, geleneksel öğretimin uygulandığı sınıfın başarı düzeyinden .01 önemlilik düzeyinde daha yüksektir.

2- Tam Öğrenme Yönteminin uygulandığı sınıfın başarı düzeyi, geleneksel öğretimin uygulandığı sınıfın başarı düzeyinden .01 önemlilik düzeyinde daha yüksektir.

3- Erişi testi puanlarında gözlendiği gibi, Etkinleştirilmiş Materyal ve Tam Öğrenme Yönteminin birleşik etkisi, sadece Tam Öğrenme Yönteminin etkisinden yaklaşık .05 önemlilik düzeyinde daha yüksektir.

Bu çalışmada, kontrol sınıfına kıyasla, Tam Öğrenme Yönteminin etkisi ortalama olarak 1.08 standart sapma daha yüksektir. Tam Öğrenme Yöntemi ile birlikte Kullanılan Etkinleştirilmiş Materyalin birleşik etkisinin ise, yine kontrol sınıfına kıyasla 1.6 standart sapmalık bir fark yarattığı görülmektedir.

CHAPTER 1

INTRODUCTION: STATEMENT OF THE PROBLEM

Up until a decade ago, most educators accepted the idea that human capacity for school learning differed greatly from one person to another. Later, educators have come to understand that under appropriate learning conditions, students differ in the rate at which they can learn; not in the level of achievement. More recently, it has been shown that individual differences in learning outcomes reach a vanishing point, including both level and rate of learning (Bloom, 1971, Anderson, 1973), as well as affective outcomes. Studies in which these ideas have been tested in actual school settings reveal that as many as 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 learning conditions (Bloom, 1972).

It has been shown by research that Mastery Learning, both a theory and a method of instruction, aims to bring all or almost all of the students to very high levels of learning. Research has further shown that under both quasi-laboratory and school conditions, studying under Mastery Learning Method of Instruction usually leads to levels of achievement which are about one standard deviation above the mean achievement levels in classes studying under traditional methods of instruction (Bloom, 1976).

Under Mastery Learning Method of Instruction, the variance between students is reduced. We are now in need of other interventions which when added to Mastery Learning raise achievement levels still further. Yıldırım states that, "according to Bloom, Improved Teaching is one way to raise the level of learning above those made possible by Mastery Learning. Another way of increasing student achievement is improving the instructional materials" (Yıldırım, 1985, p.9).

This study deals with the effect of Improved Materials and Mastery Learning on achievement levels of students. Improved Materials in this study include clear objectives for each learning task studied, a table of specifications relating the content to the objectives as well as formative and summative evaluation instruments derived directly from these objectives. The materials used in this study were developed for another master's project done at Boğaziçi University, Department of Education (Gürün, 1982) for an English textbook for foreigners, Kernel Lessons Intermediate (O'Neill, Kingsbury, Yeadon, 1974).

Gürün's project is designed to apply the Mastery Learning Strategy to Kernel Lessons Intermediate (1974) to be used for classroom instruction by English teachers. As Gürün states, "the project aims to make the work of both the teacher and the student more productive and rewarding by giving a new expression to the teaching experience and a new insight to the individualization of instruction and evaluation of the students" (Gürün, 1982, p.19).

Gürün (1982) implemented the Mastery Learning Methodology to the textbook. There are 25 units in this textbook. Each of the 25 units is accepted as a learning task, taking between 3 to 4 hours of instruction. For each learning task, instructional behavioural objectives starting from easier

cognitive behaviours, going to more complex behaviours are hierarchically formulated. In the table of specifications drawn for each learning task, the material is analyzed into its elements including knowledge of terms, knowledge of patterns and knowledge of principles. In addition, analysis is made in terms of expected student behaviours related to each element of the content, hierarchically related to the difficulty and complexity levels of the learning process. The levels of the learning process expected from the students are shown in columns, classified in terms of "knowledge of terms", "knowledge of patterns", "knowledge of principles", "ability to make transformations", and "ability to make applications". Formative tests composed of multiple choice items tapping each objective as well as their parallels to be given after correctives for students who have not reach the criterion level of learning are developed for each learning task. Gürün includes 12 to 20 items for each formative test, the administration of which takes 25 to 30 minutes.

Finally, a summative test to be administered at the completion of the course is developed, made up of 100-multiple choice items. This test is based on all of the units of the textbook. The items on the summative test are questions which are selected from the formative tests and their parallel forms. Gürün designed all of the above stated materials to be used in the teaching of Kernel Lessons Intermediate (1974) designed for foreigners learning English.

Usually when textbooks are written, the objectives of the learning tasks are not specified. Most often, teachers start teaching a learning task, because it is a chapter of the book, regardless of objectives which specify what kind of student behaviours should be developed through the study of a particular learning task. Secondly, evaluation instruments which are capable of giving both the teacher and the student

feedback about the levels of accomplishment are done in a random fashion with little regard to the content validity of these instruments.

This study uses Gürün's materials which include for each learning task, clear objectives, a table of specifications as well as evaluation instruments directly derived from these objectives with high content validity. These materials constitute what is called "Improved Materials" for the present research.

The main problem of this study is to test the effectiveness of Mastery Learning Method of Instruction combined with Improved Materials on student achievement. Whether or not the combined effect of Mastery Learning implemented in addition to the use of Improved Materials produces achievement levels higher than those obtained through Mastery Learning alone is the main issue of this project.

Three instructional methods are used for three different groups for 9th graders in this study:

1- Mastery Learning Method of Instruction with the combination of Improved Materials (ML+IM).

2- Mastery Learning condition (M) without Improved Materials.

3- The Control class (C), using traditional methods of instruction, without the use of systematic feedback and corrective procedures.

Three hypotheses are tested. These include:

HYPOTHESIS I: THE ACHIEVEMENT LEVEL OF THE CLASS UNDER MASTERY LEARNING METHOD OF INSTRUCTION COMBINED WITH IMPROVED MATERIALS WILL BE SIGNIFICANTLY HIGHER THAN THE CONTROL CLASS.

HYPOTHESIS II: THE ACHIEVEMENT LEVEL OF THE CLASS UNDER MASTERY LEARNING METHOD OF INSTRUCTION WILL BE SIGNIFICANTLY HIGHER THAN THE CONTROL CLASS.

HYPOTHESIS III: THE COMBINED EFFECT OF IMPROVED MATERIALS IN ADDITION TO MASTERY LEARNING WILL BE SIGNIFICANTLY HIGHER THAN THE SINGLE EFFECT OF MASTERY LEARNING ALONE, AS OBSERVED ON THE SUMMATIVE TEST SCORES.

In this study, it is expected that the Mastery Learning class without the Improved Materials will reach levels of learning about one standard deviation over the control class (Bloom, 1976) while the class under Mastery Learning Method of Instruction, when used in combination with Improved Materials is expected to approach to two standard deviations over the control class (Nwabueze, 1984, Yildiran, 1985).

The next chapter gives a brief information about Mastery Learning Theory and Method.

CHAPTER II

MASTERY LEARNING THEORY AND METHOD

It will be useful to describe the Mastery Learning Theory and Method before discussing the concerns and the design of this study.

Bloom was influenced by Carroll's model of school learning (1963) in developing his theory. According to Carroll, if the student is given the appropriate time that he/she needs, and spends the necessary time to learn the given material to some criterion level, the student will then reach the expected level. Carroll also states that if the ratio of the needed time and the time spent on a particular subject equals 1, then the student will reach the desired level of learning (Carroll, 1963).

Bloom interpreted Carroll's model in developing his theory. Bloom states that if the students are normally distributed, but given the appropriate learning time and appropriate Quality of Instruction according to the characteristics of each learner, then, most of the students will attain mastery on that particular subject (Bloom, 1976).

The basic idea underlying Mastery Learning developed by B.S.Bloom (1968) is that all students or almost all of them can learn to very high levels of learning any given

subject, if the Quality of Instruction and the time needed for that particular subject are appropriate for the learner. Research has shown that studying under Mastery Learning Method of Instruction usually produces a difference of about one standard deviation above the mean over the students studying under traditional methods of instruction (Bloom, 1976).

Bloom states that if the errors during the learning unit are corrected before they are compounded in later learning units, then almost all of the students will achieve mastery and will become similar in their learning outcomes and motivation for further learning. Further, the variation between the students will decrease. As a result, the students will need less additional time, help and correctives for the learning of further learning tasks (Bloom, 1978). Bloom also states that when the students have the necessary prerequisites for each new learning task as a result of Mastery Learning Method of Instruction, the students will gain confidence for each new task, since they have mastered the previous one. So, the students will develop more positive views towards learning and towards the self (Bloom, 1978).

Mastery Learning Theory, developed by B.S.Bloom in 1968, is applicable at every level of education, to every subject matter. Bloom states three independent variables in his model. These three variables are Cognitive Entry Behaviours, Affective Entry Characteristics and Quality of Instruction. These variables effect the level and type of achievement, the rate of learning, and affective outcomes, which are the dependent variables of the model. The variables of the model of school learning developed by B.S.Bloom are shown below.

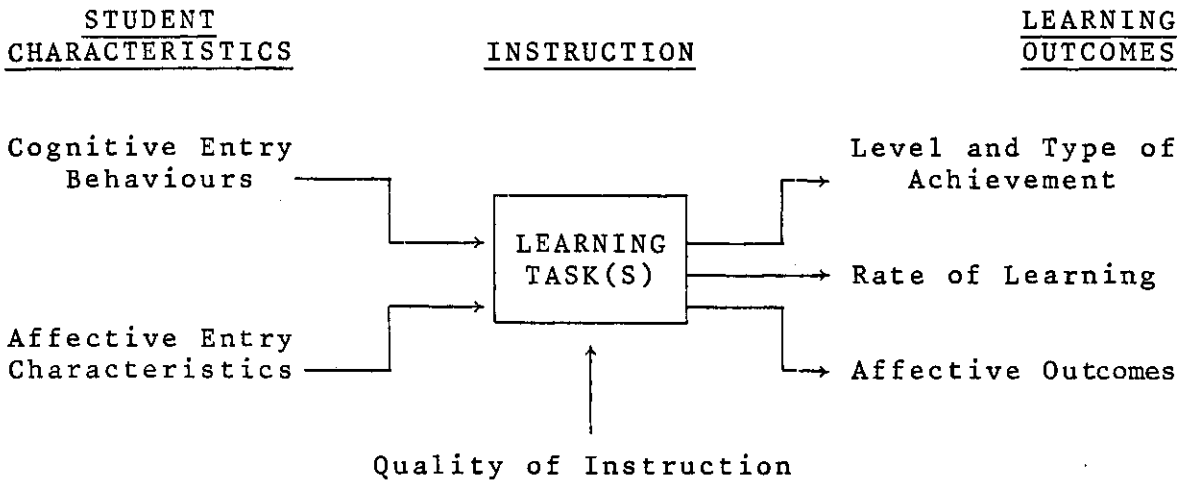


FIGURE 1: The Model of Mastery Learning (Bloom, 1976, p.11)

In order to understand the model, it will be useful to operationalize all of the variables. The independent variables in the model are the Student Characteristics and the Quality of Instruction. There are two types of Student Characteristics:

Cognitive Entry Behaviours are defined as the pre-requisites learned by the student for the learning task to be accomplished. About 50% of the variation in achievement can be accounted for by Cognitive Entry Behaviours.

Affective Entry Characteristics refer to the students' motivations, interests, and attitudes to learn a new learning task. Affective Entry Characteristics are based on the students' history of learning related to learning tasks, schools, and self-perceptions. About 25% of the variation in achievement can be accounted for by Affective Entry Characteristics.

Learning Task is a basic unit which consists of elements to be learned. It can be a chapter, a section or a unit, which is a part of a series of learning tasks. A

learning task can be analyzed, evaluated, taught, and learned over a period of time, usually 2 to 10 hours of instruction.

Quality of Instruction determines the efficiency of the learner to accomplish a learning task through the use of cues, participation, reinforcement, and above all, through the use of feedback and correctives.

Cues are used by the tutor to make clear what is to be learned, what the student is to do, and how he/she is to do it. About 14% of the variance in achievement is accounted for by the quality of cues.

Participation is the extent to which instruction gets the learner to be involved in the process of learning. It can be either overt or covert. Overt participation is the observable student involvement in the process of learning. Covert participation is the involvement of the learner related to thinking relevant thoughts about the learning task. About 20% of the variation in achievement can be accounted for by participation.

Reinforcement is created by the instructor and increases the probability of reoccurrence of the student behaviour preceding reinforcement. Positive or negative reinforcement may be used by the instructor at various stages in the learning process. About 6% of the variation in achievement can be accounted for by reinforcement.

Feedback procedures consist of brief formative tests given to the students at the end of each learning task, indicating what the student has learned, and what he/she still needs to learn to attain the criterion of mastery. Formative tests give information to the instructor about the students' performances in relation to the objectives. The

students who do not reach the pre-set criterion level are given the appropriate correctives about what they missed to learn. Correctives are the suggestions that each student should review in order to reach the pre-determined level of learning. After correcting the errors, a parallel form of the formative test is given to the students who did not reach the pre-set criterion level of achievement in the first formative test. Having corrected the errors, if there are still some students who do not reach the criterion level, a second parallel test is given to them. The central idea here is to bring all or almost all of the students to the pre-set criterion level of learning before moving to the next learning task. This procedure of feedback and correctives is followed until the final learning task is completed.

Quality of Instruction accounts for about 25% of the variation in achievement. Cognitive Entry Behaviours, Affective Entry Characteristics and Quality of Instruction together theoretically account for 90% of the variation in achievement (Bloom, 1976). Cognitive Entry Behaviours, Affective Entry Characteristics and Quality of Instruction effect the level and type of achievement, the rate of learning, and affective outcomes, which are the dependent variables of the model.

Level and Type of Achievement: When the Quality of Instruction, Cognitive Entry Behaviours, and Affective Entry Characteristics are altered according to the characteristics of the learners, and feedback and correctives are given to them, the variation between the students is decreased, and they became more similar in their achievement. As a result of Mastery procedures, about 80-85% of the students reach levels of learning, while only 15-20% of the students attain this level under non-mastery conditions.

Rate of Learning: Students learn the missing parts

and get ready for the next learning task as a result of Mastery Learning Method of Instruction, through the use of feedback and correctives given to them in prior tasks. The rate of learning increases, while the variance among the students in terms of rate of learning decreases.

Affective Outcomes: Through the use of Mastery Learning Method of Instruction and as a result of repeated successful experiences, students develop positive views towards learning and towards the self, and the motivation of the students for further learning increases.

The basic idea underlying Mastery Learning is that all students or almost all of them can learn any given subject to relatively high levels of learning. In this study, it is expected that where Mastery Learning is used in combination with the Improved Materials, achievement levels will be higher than when Mastery Learning is used alone.

The next chapter gives a brief survey of literature done on Mastery Learning.

CHAPTER III

SURVEY OF LITERATURE

The main issue of this project is to test whether or not the combined effect of Mastery Learning in addition to the use of Improved Materials produces higher achievement levels in comparison to control conditions than those obtained through Mastery Learning alone. The expectation of this study is that the Mastery Learning class, without the Improved Materials will reach levels of learning about one standard deviation over the control class, while the class under Mastery Learning Method of Instruction, when used in combination with Improved Materials will approach to about two standard deviations over the control class.

As Bloom (1976) states, the basic idea underlying Mastery Learning Method of Instruction is that almost all of the students can learn to very high levels of learning any subject if the Quality of Instruction and the time needed for that subject are appropriate for the characteristics of the learner. Research done for almost two decades by Kim (1968), Airasian (1969), and Kersh (1971) show that studying under Mastery Learning Method of Instruction leads to achievement levels which are about one standard deviation above the mean over the students studying under traditional methods of instruction. Research done by Block (1971, 1974), and by Peterson (1972) show that Mastery Learning procedures enable

four-fifth of the students to reach a level of achievement, while only one-fifth of the students under non-mastery conditions attain this level.

According to Bloom (1976), if all the learners have the necessary prerequisites for a new learning task, and if the Quality of Instruction is appropriate to their needs, then all the students will learn the task adequately. Bloom (1976) also states that if the students are given the appropriate learning time besides the appropriate Quality of Instruction according to the characteristics of each learner, most of the students will reach mastery on that particular subject. As Payne (1963), Bracht and Hopkins (1972) also state that if all the students entered a learning task with equal pre-requisites, their variation in achievement would be reduced.

Mayo and Longo (1966), Lee et al.(1971), Kersh (1971), Jones et al.(1975), and Pillet (1975) did several studies to compare the Mastery Learning and control groups on the summative test results. In these studies, Mastery Learning class and the control class were provided with similar conditions of group instruction, but the Mastery students were given additional time and help at the end of the formative tests given for each learning task. The two classes were given the same summative test. The findings of these studies indicate that the variance in achievement of the Mastery Learning group is reduced in contrast to the control group, as a result of Mastery procedures.

According to Bloom (1976) if the errors during a learning unit are corrected before compounding in later units, then almost all of the students will attain mastery. As a result, they will become more similar in their learning outcomes and their motivation for further learning increases. Furthermore, the variation between the students will decrease.

The students will need less additional time, help, and correctives for the learning of further learning tasks. In addition, as a result of Mastery Learning Method of Instruction, since the students mastered the previous tasks, they will gain confidence for each new task. Thus, the students will develop more positive views towards learning and towards the self.

Feedback and correctives are the most important part of Quality of Instruction which also includes cues, participation and reinforcement as the other subvariables. In the studies done by Block (1971, 1974) the Mastery Learning and control classes taught by the same instructor, are compared with respect to achievement outcomes at the end of the course. The use of feedback and corrective procedures is the major difference between the two classes. The feedback procedures consist of brief formative tests given at the end of each learning task, which indicate what the student has learned, and what he/she still needs to learn to attain mastery of the learning task. The correctives are the suggestions given to each student in terms of what he/she should review in the original instructional material. In his study, Block found that in the Mastery Learning class, the average student attained up to 90% of the possible score on the formative test for each learning task, while only 50% of the possible score was attained by the average student in the control class.

In the studies done at the University of Chicago by Block (1970), Arlin (1973), Anderson (1973), Binor (1974), Levin (1975), and Pillet (1975), the effects of Quality of Instruction on the learning level of students is observed. A formative test was given to Mastery and control groups after the original learning for each learning task. The results of the formative tests were the basis for corrective procedures. Cues, reinforcement, and participation were also provided to

the students. A second form of the formative test was given to the students who could not reach the criterion level (usually 85% level of learning). Additional time, help, and correctives were given to those students, and a third form of the formative test was given to them. Majority of the students in the Mastery group reached the pre-set criterion level before going on to the next learning task, as a result of Mastery procedures. The control group received no systematic corrective instruction after taking each formative test. The major difference in Quality of Instruction in these studies was that the Mastery students were given feedback and correctives after the learning task, while the control class were not given systematic feedback and correctives. As a result of feedback and corrective procedures given to the Mastery group at the end of three learning tasks, the difference between Mastery and control classes is increased, favouring the Mastery class, while at the beginning, the two classes were approximately equal.

According to Bloom (1976), academic self-concept is the student's perception of himself/herself in relation to the other learners' achievement in his/her class. A study done by Kifer (1973), shows that the academic self-concept is influenced by the number of years in which the students have been judged by the schools. This is especially true for the extreme students. Kifer found that school achievement affects academic self-concept strongly. Academic self-concept accounts for about 25% of the variation in school achievement after the elementary school period.

Studies done by Block (1970), Arlin (1973), Anderson (1973), Özçelik (1974), and Levin (1975) show that the Mastery group increases in interest in the subject over short periods of time, while the non-mastery group remains the same or decreases in interest in the subject. The two groups diverge

in terms of affect toward the subject, while one experiences successful achievement, the other group remains the same or decreases in achievement. These studies also show that high achievement increases positive affect, which in turn influences further high achievement, while low achievement decreases positive affect, which in turn depresses further achievement.

Educational researchers recently have given increased attention to time variables that are related to school learning. It is known that there are differences between the individuals in learning. It is also known by research that when learning time is held constant on any task, the variation between the learners in achievement will vary markedly. According to Carroll (1963), time is an important concept. Carroll states that if the student is given the appropriate time he/she needs, and if he/she spends the necessary time to learn the given material to a pre-set criterion level, the student will reach the expected level. Carroll also states that the student will reach the desired level of learning if the ratio of the time needed and the time spent on a particular subject equals 1.

Carroll (1963), Bloom (1976), Harnischfeger and Wiley (1976), Rosenshine and Berliner (1978) came to the conclusion that time is an important determinant in the degree of learning. Husen (1972), Sanderson (1976), Berliner (1979), and Smith (1979) also state that if adequate learning time is not provided or if the students do not spend a sufficient amount of time in learning, the degree of learning will be lower than expected.

Students differ in the rate of learning in school-related tasks. Block (1971) estimates that the slowest 10% of the students may need 5 to 6 times as much time to learn as

the fastest 10%. The same finding appears in Glaser (1968), and Atkinson (1968). According to Bloom (1976), Quality of Instruction can have significant effects on the amount of time needed for learning. Several studies done by Block (1971), Arlin (1973), and Anderson (1976) show that when slower students are given extra time and further instruction on early units, the variance of time needed for learning among the students will decrease.

From the fact of increased achievement of the Mastery students in comparison to the control students, it could be pointed out that Mastery students were using the learning time more effectively, and also they were spending higher proportion of time-on-task. In the Anderson's study (1973), the students' use of time was studied. Anderson found that at the beginning, the Mastery and control classes were on task about the same percent of time. Their achievement on the first learning task was approximately equal. On the second learning task, they started to differ, and on the third learning task the difference in achievement and the percentage of the time-on-task is increased, favouring the Mastery students.

Studies done by Anderson (1973), and Özçelik (1974) show that if the students give more time and attention to the learning tasks, then the learning will become greater. Furthermore, the degree of involvement is affected by the Quality of Instruction and the entering of the students into the learning tasks with appropriate entry characteristics.

Block (1970), and Arlin (1973) compared the Mastery and non-mastery groups on the students' learning rate, reaching the same criterion level on their final task. They found that the non-mastery students needed more than twice as long to reach the criterion as did the Mastery students on the

last learning task. Studies done by Block (1970), Anderson (1973), Arlin (1973), and Özçelik (1974) indicate that the effectiveness in learning can be increased or decreased by positive or negative changes in Entry Characteristics (Cognitive Entry Behaviours and Affective Entry Characteristics). The Quality of Instruction is a major causal factor in producing these changes.

Yıldıran (1977) tested the effect of high levels on achievement on other important learning criteria. It was found that level of achievement affects retention, transfer and the use of higher mental processes. The study indicates that retention, transfer, higher and lower mentally processes, and affective outcomes are affected by the level of learning, not as was thought by the rate of learning, aptitude, IQ, or time-related effort. Yıldıran also states that if the students learn the given material adequately as a result of Mastery Learning Method of Instruction, then they will be successful on other learning criteria.

Research done for almost two decades indicate that Mastery Learning shows a sizable effect on achievement levels. We are now in need of other interventions which when added to Mastery Learning Method of Instruction, raise achievement levels still further. There are only two studies done in Turkey for this purpose. A study done by 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. Improved Teaching of the study was defined as the training of the teacher teaching the Mastery class for three months on both the theory and method of Mastery Learning, as well as its implementation in the classroom. Afreşa found that most of the students (96.87%) under Mastery Learning Method of Instruction, used in combination with Improved Teaching, reached high achievement levels

on the summative test, and also scored highly on retention measures, in comparison to the students (5.88%) in the control class. Comparing the mean of the Mastery group with the mean of the control group, Afreşa also found that the level of learning clearly influences retention.

Bloom states that Improved Teaching in addition to the use of Mastery Learning Method of Instruction will have an additive effect on the student achievement. The study done by Nwabueze (1984) tested if the effects of Mastery Learning in addition to Improved Teaching will have higher effects on achievement in comparison to the effect of Mastery Learning alone. In Nwabueze's study, teaching was improved by giving the teacher feedback in terms of his/her interactions with different groups of students. Nwabueze implemented his study into four classes which were Mastery Learning combined with Improved Teaching class, Mastery Learning class, Improved Teaching class, and the control class. He found that the class under Mastery Learning Method of Instruction combined with Improved Teaching was not only higher than the control class, but also significantly higher than the Mastery and the Improved Teaching classes. In addition, the effects of Improved Teaching and Mastery Learning on student achievement were additive.

As the rate of growth of literature in education has increased significantly, it has become recognized that methods for statistical integration of the findings of studies are needed. Meta-analysis is one technique which has been developed to fulfill this need. Meta-analysis, developed by Glass (1977), is based on the concept of effect size. Effect size is defined as the difference between the mean of the experimental group, and the mean of the control group, divided by the standard deviation of the control group. This procedure

results in a measure of the difference between the two groups expressed in a common metric (Slavin, 1984, p.6). Effect sizes are also expressed in the present research.

The following chapter will give the research design as well as the hypotheses of this study.

CHAPTER IV

METHODOLOGY

In this section, the research design of the study will be presented first. This will be followed by a section dealing with the hypotheses and their operationalizations.

The main problem is to test the effectiveness of Mastery Learning Method of Instruction and Improved Materials on student achievement. Whether or not the combined effect of Mastery Learning implemented in addition to the use of Improved Materials produces achievement levels higher than those obtained through Mastery Learning alone in comparison to control conditions, is the main issue of this project.

Research Design

Subjects of the Study

The sample of this study was chosen from Özel Tarhan Lisesi; a private high school in Istanbul. Özel Tarhan Lisesi is a co-educational school with a majority of the students coming from upper and upper-middle class families. There are three sections; A, B, C, at each grade of the lycee' school.

87 female and male 9th grade students randomly

distributed in three sections of 9th grade constituted the sample of the study. All of the three sections of this grade level were included in the study. There were 31 students in Mastery Learning and Improved Materials (ML + IM) section, 26 students in Mastery Learning (ML) section, and 30 students in the control (C) group. All of the sections were taught by a different teacher.

Subject Area

The subject area of the study was 9th grade English. The textbook which was used was Kernel Lessons Intermediate (O'Neill, Kingsbury, Yeadon, 1974). This book includes 25 learning units. 3 of these learning units are used in this study. These learning units are:

- 1- Present Continuous Tense
- 2- Simple Past Tense
- 3- Mass and Unit (concepts of much, many, how much, and how many)

Materials Used

As Improved Materials, Gürün's project (1982) including clear behavioural objectives for each learning task, a table of specifications for each task, three formative tests, their parallels, and the summative test are used. The third parallel forms of each formative test was not included in Gürün's study, and was developed by the present researcher. In addition, 13 of the 30 summative test items were developed by the present researcher.

Design of the Study

In this study, the major independent variables are

Mastery Learning (ML), and Improved Materials (IM). There were one Mastery class combined with Improved Materials (9th grade, section A), one Mastery class, without the use of Improved Materials (9th grade, section B), and one control class without the use of Mastery and Improved Materials (9th grade, section C) for comparison purposes. The model of the design is shown in figure 2.

Mastery Learning with Improved Materials	Mastery Learning	Control
------------------------------------------------------	---------------------	---------

Figure 2: The Design of the Study

The section under Improved Materials in addition to Mastery Learning Method of Instruction was section A. This section used Improved Materials of Gürün (1982) in addition to the implementation of Mastery Learning Method of Instruction (see page 22 for these Improved Materials). There were three learning tasks. The criterion level was set at 90 % level of learning. 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 could not reach the criterion level of achievement, through going over objectives they did not get in the unit. After this feedback and correctives, a parallel form of the formative test was administered to them. Additional feedback and correctives were given to the students who still could not reach the pre-set criterion level of 90 % achievement on the task, followed by a second parallel of the formative test. These formative tests took about 25 to 30 minutes, consisting of 14 to 16 items. In addition to Mastery Learning Method of Instruction, Improved Materials were used in this class (Gürün, 1982).

In the ML section (section B), only Mastery Learning was implemented in the same way as was done in ML + IM section. The instruction was without the use of Improved Materials. The teacher developed her own objectives for each learning task.

The control class was section C, and was taught without Mastery Learning and Improved Materials. Section C was taught with traditional methods of instruction.

All of the classes were taught by different teachers, and started the first learning task on the same day. All of the students, in each of the three classes took the formative test which was given at the end of each learning task. To these students who could not reach the criterion level on the formative tests in the Mastery classes, additional time, help, and correctives were given, and a parallel form of the formative test was administered. Correctives and help were again given to those students who still could not reach the criterion level on the first parallel test; and a second parallel test was given to them. At the end of all the three learning tasks, a summative test was administered to all of the students on the same day.

Preparation for the Study

The subjects of this study were purposely chosen from Özel Tarhan Lisesi, because it was the only school which was using Kernel Lessons Intermediate (1974) in Istanbul. At the same time, this school has three different classes in the same grade level for the three instructional methods.

The content of the study and the purpose of it were first explained to the director of the school. The director asked the 9th grade teachers to volunteer in the study. The

class teachers were told which instructional methods they were going to use, by the researcher. The class teacher of 9th grade section A, accepted his class to be involved in the study as a Mastery Learning and Improved Materials class (ML + IM). The class teacher of 9th grade section B, accepted her class to be involved in the study as a Mastery Learning class (ML). The third teacher, the teacher of section C, accepted her class to be involved in the study as a control class (C).

Training the Experimental Teachers

A week before the introduction of the instructional methods into classes, the researcher had three meetings with the three teachers. In these meetings, the purpose of the study, and the content of it, as well as what was to be expected from the teachers were again explained. The teachers were instructed on how and what they would do when the study started. The objectives of the three learning tasks in addition to information about the table of specifications for each learning task derived from Gürün's study (1982) were given to the class teacher of 9th grade section A, as the Improved Materials. This class was used in the study as a Mastery Learning and Improved Materials class (ML + IM). The class teacher of 9th grade section B, was asked to prepare her objectives by herself for the three learning tasks. This was the teacher who accepted her class to be involved in the study as a Mastery Learning class (ML). The third class, section C, was the control class, and was not given any other information.

Procedures

The study started on the 8th day of October, 1984 and ended 4th of December, 1984. Each learning task took an

average of eight hours of instruction. At the end of each learning task, a formative test was given to all of the students in each of the three classes. Feedback and correctives, and a parallel test were administered to the students in the two Mastery classes who could not reach the criterion level of achievement on the first formative test. Feedback and correctives were given to those students who still could not reach the pre-set criterion level of achievement, and a second parallel test was administered to those students. The parallel forms of the formative tests were corrected by the researcher, before moving on the next learning task. A summative test comprised of 30 items, was given to all of the students at the end of the three learning tasks, on the 4th of December, 1984, at the same class period. The total study was completed in 8 weeks.

Data Collection and Analysis

Initial Measures: The total grade point averages of each student under all instructional conditions as well as students' academic performances in English for the previous year were obtained from the school records. One-way analysis of variance (ANOVA) was used to investigate the differences among the three classes in terms of their G.P.A.'s and English grades for the previous year.

Process Measures: A formative test was given to the students at the end of each of the three learning tasks. For the Mastery Learning combined with Improved Materials and Mastery Learning sections, parallel forms of the formative tests were administered after correctives for students who could not reach the 90% level of achievement. If students could not reach this level after the first parallel, correctives were again given, followed by a second parallel form of the formative test.

Final Measures: A summative test was administered to all of the students at the completion of the three learning tasks. The calculation of each groups' mean performances were obtained. One-way analysis of variance (ANOVA) was used to test the effects of Mastery Learning combined with Improved Materials and Mastery Learning Method of Instruction on the summative test scores. Newman-Keuls formula was also used to compare each group with the others, on the summative test scores.

Besides a one-way analysis of variance and Newman - Keuls statistical methods, t-tests were used to see the effects of Mastery Learning combined with Improved Materials and Mastery Learning on the summative test scores. In addition, effect size analyses were done comparing the difference of the treatment groups in relation to the control.

Concerns of the Study

In this study, the researcher is concerned not only with the effects of Mastery Learning on achievement levels of 9th grade Turkish students at a private lyceé, but also with the combined effects of Improved Materials in addition to Mastery Learning, on achievement. The hypotheses, their variables, and their definitions are stated in this section.

It has been shown by research that Mastery Learning Method of Instruction brings most of the students to very high levels of achievement. According to Bloom; "about 75% of students under Mastery Learning strategies reach levels of achievement attained by the top 20% of students under control conditions" (Bloom, 1971, p.1). As Nwabueze states "when compared to traditional methods of instruction, Mastery Learning used alone produces an achievement distribution where

the average is one standard deviation above the mean in the control class and where the variance among students is less than the control class" (Nwabueze, 1984, p.10). According to Bloom, there are still other interventions which when added to Mastery Learning raise achievement levels even more than Mastery Learning produces alone. Improved Teaching is one way to raise the level of learning even more than Mastery Learning produces alone. Improving the instructional materials is another way of increasing student achievement. Improved Materials include clear objectives for each learning task studied, a table of specifications for each task, as well as formative and summative evaluation instruments derived directly from these objectives (Gürün, 1982). It is expected that even higher achievement levels are obtained when Mastery Learning is used with the combination of Improved Materials.

The hypotheses of the study can be stated as:

HYPOTHESIS I: THE ACHIEVEMENT LEVEL OF THE CLASS UNDER MASTERY LEARNING METHOD OF INSTRUCTION COMBINED WITH IMPROVED MATERIALS WILL BE SIGNIFICANTLY HIGHER THAN THE CONTROL CLASS.

Variables and Their Operational Definitions

The independent variables in this hypothesis are Improved Materials, Mastery Learning Method of Instruction. By Improved Materials as an independent variable, reference is made to clear objectives for each learning task studied, a table of specifications relating the content to the objectives, as well as formative and summative evaluation instruments derived directly from these objectives.

The subvariables of the Mastery Learning Method of

Instruction used in this study are cues, reinforcement, participation, feedback and correctives. The ways that these were used in the study are as follows:

Cues: Cues refer to giving students information about what is to be learned and how the student is to do it. Three learning tasks were included in the study. The objectives for each of the three learning tasks as well as the table of specifications for each learning task were given to the class teacher of the Mastery Learning and Improved Materials (see Appendix, pages 61,62 for these objectives). The Mastery Learning class teacher did not receive these objectives. Instead, the teacher was asked to develop her own objectives for each learning task. Since the Mastery Learning combined with Improved Materials class teacher had the objectives for each learning task as well as the table of specifications, he clearly informed the students about what they were to learn and what they were to do at each step of the learning unit.

Reinforcement: The students were intensively involved in the learning process. The reinforcement for learning was the high grades that the students received through the new type of instructional method. Both the ML and ML + IM classes usually reached high performance levels on the formative tests. Also, the correctives and feedback given to the students, when and where needed were assumed to have reinforced the students positively.

Participation: The participation of the students was highly encouraged by asking questions and getting responses from them in the learning process, in the ML and ML + IM classes.

Feedback and Correctives: A formative test was given to all of the students at the end of each learning task. This

provided information for the teacher as to which of the objectives are accomplished for each learner. Feedback and correctives were then given to the Mastery students who did not reach the criterion level of achievement in the ML and ML + IM classes. A parallel form of the formative test was given to these students. Feedback and correctives were again given to the Mastery students in the two classes using Mastery Learning who still did not reach the pre-set criterion level of achievement on the first parallel form test. A second parallel test was administered to them after correctives. The pre-set criterion level was 90 % level of achievement.

In the control class, traditional methods of instruction were implemented. At the end of each of the three learning tasks, this class was given the formative tests. In contrast to the Mastery classes, feedback and corrective procedures were not systematically applied to the control class. The parallel forms of the formative tests were not given to these students.

Dependent Variables: In this hypothesis, the dependent variable was the summative test scores tapping achievement in English, Chapter 2, 3 and 4 of the Kernel Lessons Intermediate (1974) textbook, dealing with Present Continuous Tense, Simple Past Tense, and Mass and Unit (concepts of much, many, how much, and how many). The achievement levels for all classes were measured by a summative test administered at the end of the three learning tasks. This test consisted of 30 questions. 30 minutes were given to answer the questions in all classes. The criterion was set at 90 % level of learning. This meant answering 27 out of 30 questions correctly (see Appendix pp.104-110 for the summative test items).

Controlled Variables: The controlled variables were the previous year English grades of the groups, and the

cumulative grade point averages of the students. These measures were obtained from the school files for each student. Using one-way analysis of variance, comparisons showed that there were no significant differences among the groups as far as their previous performances and English grades were concerned.

HYPOTHESIS II: THE ACHIEVEMENT LEVEL OF THE CLASS UNDER MASTERY LEARNING METHOD OF INSTRUCTION WILL BE SIGNIFICANTLY HIGHER THAN THE CONTROL CLASS

Variables and Their Operational Definitions

The independent variable in this hypothesis is; Mastery Learning Method of Instruction which was applied to Mastery class. Traditional Method of Instruction were used in the control class. Cues, reinforcement, participation, feedback and correctives, defined on page 29 were the main subvariables of the Mastery Learning Method of Instruction. The subvariables were used in the same way as stated in the first hypothesis, only with one exception. In the first hypothesis, the objectives, and the table of specifications for each learning task were given to the class teacher of Mastery Learning combined with Improved Materials, while in this hypothesis, the teacher of Mastery Learning class was asked to prepare her own objectives for each learning task. No objectives were given to the teacher of the control class.

Dependent and controlled variables were the same as stated in the first hypothesis (see p.30).

HYPOTHESIS III: THE COMBINED EFFECT OF IMPROVED MATERIALS IN ADDITION TO MASTERY LEARNING METHOD OF INSTRUCTION WILL BE SIGNIFICANTLY HIGHER THAN THE SINGLE EFFECT OF MASTERY LEARNING ALONE, AS OBSERVED ON THE SUMMATIVE TEST SCORES

Variables and Their Operational Definitions

In this hypothesis, Improved Materials and Mastery Learning are independent variables. On the other hand, level of achievement as measured by the summative test is the dependent variable. The English grades of students obtained from the previous year, and their grade point averages were the controlled variables. The level of achievement was measured by the same summative test given at the end of the three learning tasks.

These three hypotheses were statistically tested by one-way analysis of variance (ANOVA), Newman-Keuls formula, t-tests, and effect size analyses.

CHAPTER V

RESULTS AND DISCUSSIONS

Research done for over a decade in the United States, Turkey and elsewhere (Bloom, 1976, Yildiran, 1977, Afreşa, 1983, Nwabueze, 1984) show that Mastery Learning Method of Instruction produces achievement levels that are generally one standard deviation over the classes under conventional methods of instruction. Bloom states that there may be other interventions which when added to Mastery Learning produces achievement levels which are even higher than those produced by Mastery Learning alone. The aim of this study is to test whether Mastery Learning when used in combination with Improved Materials yield higher levels of learning in comparison to control conditions than what Mastery Learning produces alone.

This study is focused on three hypotheses. The first hypothesis is that the achievement level of the class under Mastery Learning Method of Instruction combined with Improved Materials will be significantly higher than the control class. The second hypothesis is that the achievement level of the class under Mastery Learning Method of Instruction will be significantly higher than the control class. The third hypothesis is that the combined effect of Improved Materials in addition to Mastery Learning will be significantly higher than the single effect of Mastery Learning alone, as observed on the summative test scores.

The stated hypotheses are tested under three learning conditions. One class studied under the combined effects of Mastery Learning and Improved Materials. Another class studied under Mastery Learning conditions alone. The third class studied under traditional methods of instruction. There were 31 students in the class which studied under the combined effects of Mastery Learning and Improved Materials, 26 students in the class which studied under Mastery Learning conditions alone, and 30 students in the class which studied under traditional methods of instruction.

Results of the Data Analyses Prior to Instruction

To test the three hypotheses, several data analyses techniques were used. Although the students were randomly distributed into the three sections of 9th grade, these groups were statistically compared with each other to investigate if there were significant differences in terms of their cumulative grade point averages (G.P.A.'s), and their previous year English grades. These comparisons are shown in the tables given below. One-way analysis of variance (ANOVA) is used for these comparisons. The comparison of the G.P.A.'s of the students in all classes is shown in Table 1.

TABLE 1- Comparison of the Cumulative Grade Point Averages of Mastery Learning combined with Improved Materials (ML+IM), Mastery Learning (ML), and control classes (C), using One-Way Analysis of Variance.

S O U R C E	DF	MS	F	Significance Level
G.P.A.'s SUM OF SQR.	2	1.98	1.36	N.S.
ERROR	84	1.46	-	-

Table 1 shows that there are no significant differences among the three groups in terms of their cumulative grade point averages.

Further analyses were done using the English grades for the previous year. It is possible that the groups differ in terms of their English grades, although there are no significant differences among the three classes in terms of their G.P.A.'s. For this reason, the comparison of the English grades for the previous year using one-way analysis of variance was done for the three groups in the study. Table 2 shows these comparisons.

TABLE 2- Comparison of the Previous Year English Grades of Mastery Learning combined with Improved Materials, Mastery Learning and Control Classes, using One-Way Analysis of Variance.

S O U R C E	DF	MS	F	Significance Level
ENGLISH GRADES SUM OF SQR.	2	6.02	1.40	N.S.
ERROR	84	4.28	-	-

Table 2 shows that there are no significant differences among the classes in terms of their English Grades for the previous year.

As demonstrated in tables 1 and 2, all three classes are similar in terms of their general G.P.A.'s, and their English Grades for the previous year. According to the results of these analyses, the classes are no different from each other at the beginning of the study.

Analysis of Effectiveness of Instruction

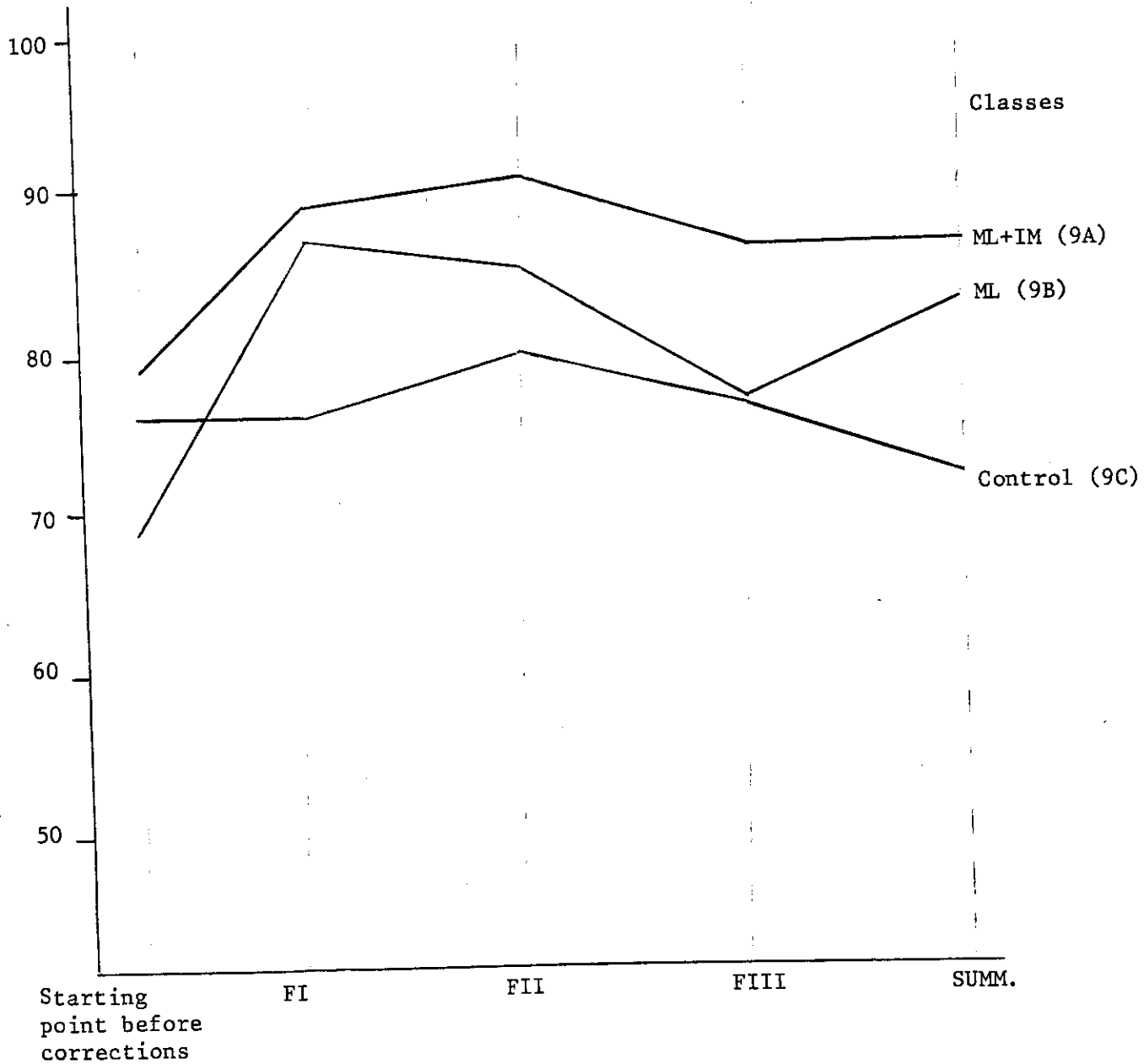
The criterion level was set at 90% achievement level of learning for the two Mastery classes (ML+IM and ML). The number of students who reached this criterion level of achievement on each of the three formative tests as well as the summative test are shown below. The percentage of students reaching the criterion level in each class is reported. This comparison is shown in Table 3.

TABLE 3- Number and Percentage of Students Reaching the 90% Criterion Level of Learning on Formative and Summative Tests in Each of the Three Classes (ML+IM, ML and C)

Type of Test Formative/Summative	ML + IM	A	ML	B	Control	C
FT 1	$\frac{28}{31}$	90.3%	$\frac{20}{26}$	76.9%	$\frac{17}{30}$	56.6%
FT 2	$\frac{29}{31}$	93.5%	$\frac{18}{26}$	69.2%	$\frac{14}{30}$	46.6%
FT 3	$\frac{28}{31}$	90.3%	$\frac{17}{26}$	65.4%	$\frac{13}{30}$	43.3%
SUMMATIVE	$\frac{23}{31}$	74%	$\frac{13}{26}$	50%	$\frac{1}{30}$	3.3%

As seen from Table 3 which shows the number and percentage of students who reached the criterion level on the formative (FT) and summative (SUMMATIVE) tests, the Mastery Learning combined with Improved Materials class reached the highest percentage on all measures followed by the Mastery Learning class. The control class showed the expected drops on each sequence. On the summative test, in the Mastery Learning combined with Improved Materials group, 74% of the students reached the 90% criterion level of learning followed by 50% in the Mastery class. Only 3.3% of the students reached the 90% level on the summative test in the control class.

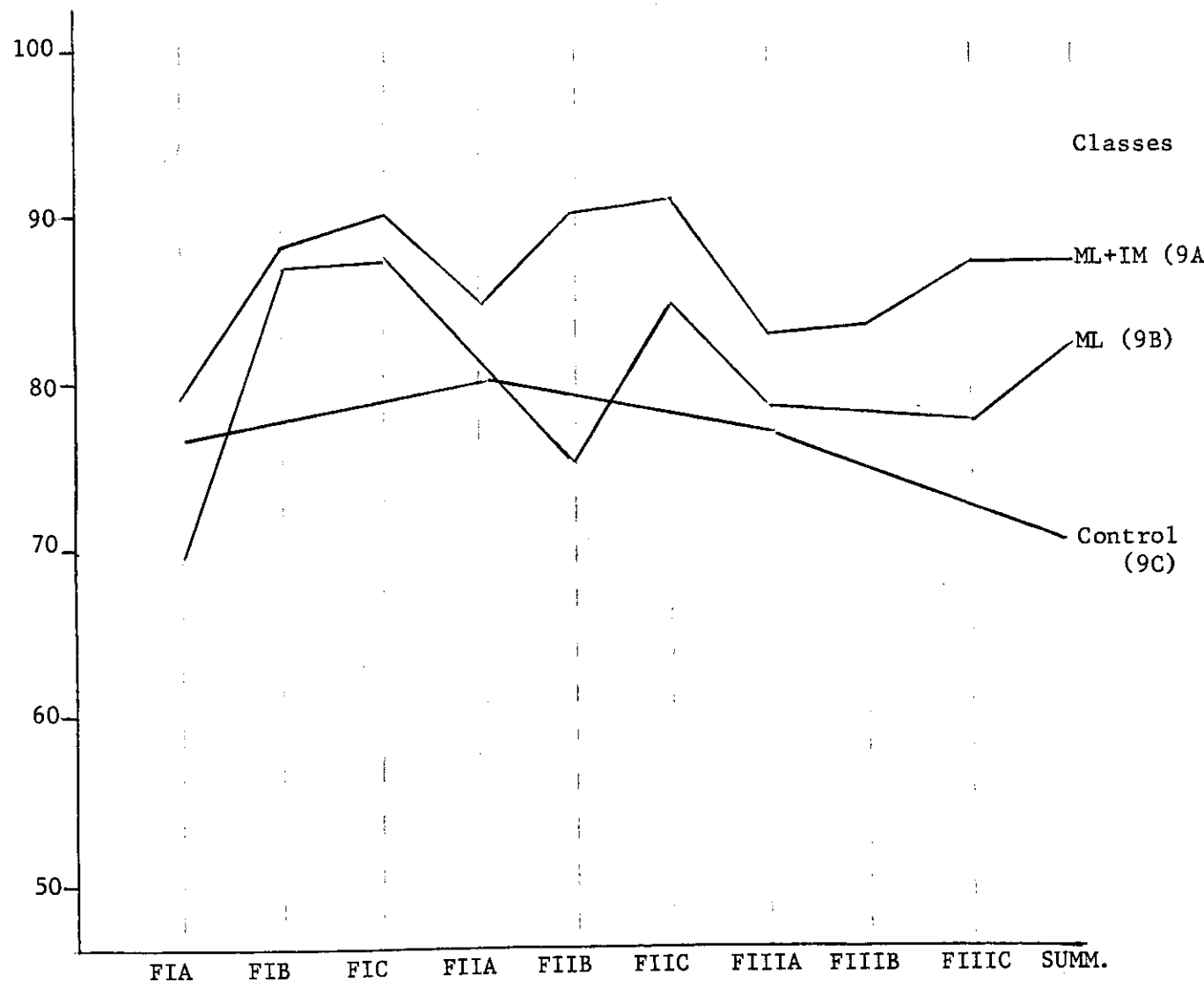
The mean performances of each group were plotted on a graph to show the difference of the groups as a result of Mastery Learning Method of Instruction combined with Improved Materials at the end of each task followed by a formative test as well as the summative test. This is shown in Graph 1.



GRAPH 1: The Graph of the Mean Performances of Each Class at the End of Each Learning Task

Graph 1 shows that the three groups were almost similar in the first formative test in achievement before correctives. It is also shown how the three groups started to differ and became quite dissimilar in achievement on the summative test, favouring the Mastery Learning combined with Improved Materials class, followed by the Mastery class.

Graph 2 shows a more detailed plotting of the mean performances on the formative tests and their parallels given to the Mastery classes after correctives, followed by the comparisons on the summative test scores.



GRAPH 2: The Graph of the Mean Performances of Each Class on the Formative Tests Their Parallels and the Summative Test

Again as seen from the graph 2, the differences among the classes favour the treatment groups, the Mastery Learning combined with Improved Materials having the highest and the control class having the lowest test scores.

Table 4 shows the raw scores obtained for each formative test and its parallels for each group.

Table 4 shows the same pattern of achievement as Graph 2, with the Mastery Learning combined with Improved Materials group scoring highest, followed by the Masterp group, and the control group scoring the lowest.

The Analyses Done On Each Hypothesis

This section includes the analyses done to test each of the three hypothesis of the study.

The first hypothesis of this study is:

HYPOTHESIS I: THE ACHIEVEMENT LEVEL OF THE CLASS UNDER MASTERY LEARNING METHOD OF INSTRUCTION COMBINED WITH IMPROVED MATERIALS WILL BE SIGNIFICANTLY HIGHER THAN THE CONTROL CLASS.

To test this hypothesis, a one-way analysis of variance, Newman-Keuls, t-tests and effect size 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 treatment. Table 5 shows the one-way analysis of variance done on the summative test scores of the three classes (ML+IM, ML and C).

TABLE 5- One-Way Analysis of Variance on the Summative Test Scores for the Mastery Learning combined with Improved Materials, Mastery Learning and Control Classes.

S O U R C E	DF	MS	F	Significance Level
TREATMENT SUM OF SQR.	2	181.26	20.40	$F_{\alpha=.001}^{7.32}$ S.D. $P<.001$
ERROR	84	8.88	-	-

Results show that there is a significant difference among the three classes on the summative test scores, at $\alpha=.001$ significance level.

The findings are again compared by using the Newman-Keuls formula to check if there was a significant difference between the Mastery Learning combined with Improved Materials class and the control class. Table 6 shows this analysis.

TABLE 6- Comparison of the Summative Test Scores of the Mastery Learning combined with Improved Materials and Control Classes, using Newman-Keuls Formula

	DF	MS _{error}	Calculated q	Significance Level
ML + IM Control	84	8.88	8.88	$q_{r\alpha=.01}$ 4.28 S.D.

As seen from table 6, there is a significant difference at $\alpha=.01$ level between the Mastery Learning used in combination with Improved Materials class and control class, in favour of the Mastery Learning combined with Improved Materials class.

Newman-Keuls Formula is the appropriate formula to use after analysis of variance showing sizable treatment effects because it is a rigorous technique which reduces possible alpha errors. When this method was used to compare the Mastery Learning combined with Improved Materials class with the control class, it was found that the difference is significant at the $\alpha=.01$ level.

Since t-tests have been used for comparison purposes for other research using the Mastery Learning Method of Instruction, to facilitate comparisons, the same technique is used here as well. Though more sensitive to differences and hence, more capable of increasing the probability of alpha

errors resulting in significant differences as a statistical technique, it is still used here as a source of additional evidence for comparing two instructional methods which are conceptually and in practice totally independent from one another.

Table 7 gives this t-test analysis for independent samples on the summative test.

TABLE 7- Comparison of the Means of the Mastery Learning Combined with Improved Materials and Control Classes on the Summative Test, using t-tests for Independent Samples

	ML+IM A	Control C	t value	Significance Level
POSSIBLE POINTS	30	30	9.00	$\alpha = .001$ $t_{59} = 3.460$ S.D.
MEAN	26.23	21.43		
STANDARD DEVIATION	2.68	3.01		
NUMBER	31	30		

As can be seen in table 7, there is a significant difference at $\alpha=.001$ level between the mean performances of Mastery Learning combined with Improved Materials and control groups, favouring the Mastery Learning combined with Improved Materials group. The mean performance of Mastery Learning combined with Improved Materials class is significantly higher than the mean performance of the control class. Data presented in tables 5, 6 and 7 provide clear evidence that the Mastery Learning Method of Instruction used in combination with Improved Materials produces higher levels of learning in comparison to traditional methods.

When effect size analysis(1) is done on the ratio of the difference between the means of Mastery Learning combined with Improved Materials and control classes in relation to the standard deviation of the control class (Glass, 1977), a difference of 1.6 standard deviations is found between these two classes $\frac{26.23-21.43}{3.01} = 1.6$.

The result of this analysis also confirms the first hypothesis. There is a difference of over 1.5 standard deviations (1.6) between the Mastery Learning combined with Improved Materials and the control classes. This difference is not due to initial differences as seen from tables 1 and 2 on pp.34-35, but due to the effect of Mastery Learning Method of Instruction used in combination with Improved Materials. Hence, the first hypothesis is strongly confirmed.

The second hypothesis of the study deals with the achievement levels of the Mastery Learning and control classes.

HYPOTHESIS II: THE ACHIEVEMENT LEVEL OF THE CLASS
UNDER MASTERY LEARNING METHOD OF
INSTRUCTION WILL BE SIGNIFICANTLY HIGHER
THAN THE CONTROL CLASS

As was seen in the analysis of the first hypothesis, the one-way analysis of variance showed sizable treatment effects among the three classes (see Table 5, p. 40).

$$(1) \frac{ML+IM\bar{x}-C\bar{x}}{C_s}$$

ML+IM: Mastery Learning combined with Improved
Material

C : Control Class

\bar{x} : Mean

S : Standard deviation.

Further, Newman-Keuls formula was used to see if there was a significant difference between the Mastery Learning and control classes. Table 8 shows this analysis.

TABLE 8- Comparison of the Summative Test Scores of the Mastery Learning and Control Classes, using the Newman-Keuls Formula.

	DF	MS _{error}	Calculated q	Significance Level
ML, Control	84	8.88	5.77	$q_r \alpha = .01$ 3.76 S.D.

The results show that there is a significant difference on the summative test scores, at $\alpha = .01$ level between the Mastery Learning and control classes.

Further, with the same rationale indicated for the first hypothesis, t-tests are also used here to compare the means of the Mastery Learning Method with the control conditions. Table 9 shows this analysis.

TABLE 9- Comparison of the Means of the Mastery Learning and Control Classes on the Summative Test, using t-tests for Independent Samples.

	ML	B	Control C	t value	Significance Level
POSSIBLE POINTS	30		30	4.62	$\alpha = .001$ $t_{54} = 3.460$ S.D.
MEAN	24.69		21.43		
STANDARD DEVIATION	3.27		3.01		
NUMBER	26		30		

As can be read from this table, the mean scores of the students under Mastery Learning Method of Instruction is significantly higher than the mean scores of the control group of students on the summative test, at $\alpha = .001$ level.

The evidence obtained as seen in tables 8 and 9 indicate that Mastery Learning Method of Instruction increases learning outcomes significantly in comparison to control conditions.

When effect size analysis comparing the ratio of the difference between the means of the Mastery Learning class and the control class to the standard deviation of the control class is used (Glass, 1977), a difference of 1.08 standard deviations is obtained for these two classes(2). $\frac{24.69-21.43}{3.01} = 1.08$. This difference is the same as obtained by other researchers (Bloom, 1976, Nwabueze, 1984).

A difference of over one standard deviation (1.08) between the mean scores of the Mastery Learning and control classes, favouring the Mastery Learning class clearly shows that the achievement level of the class under Mastery Learning Method of Instruction is significantly higher than the control class. Results of the ANOVA, Newman-Keuls, t-tests and effect size analyses all provide evidence in support of hypothesis 2. In light of this evidence, hypothesis 2 is clearly confirmed.

The third hypothesis deals with the combined effects of Mastery Learning and Improved Materials and its relation to Mastery Learning alone. Mastery Learning usually leads to achievement levels which are about one standard deviation above the mean over the students studying under traditional

$$(2) \frac{ML\bar{x} - C\bar{x}}{C_S}$$

ML: Mastery Learning Method of Instruction
C: Control class.
 \bar{x} : mean
S: Standard deviation.

methods of instruction. Mastery Learning combined with Improved Materials is expected to raise the level to about two standard deviations. The previous hypothesis showed a difference of 1.6 standard deviations in this study. The third hypothesis of the study is:

HYPOTHESIS III: THE COMBINED EFFECT OF IMPROVED MATERIALS IN ADDITION TO MASTERY LEARNING WILL BE SIGNIFICANTLY HIGHER THAN THE SINGLE EFFECT OF MASTERY LEARNING ALONE, AS OBSERVED ON THE SUMMATIVE TEST SCORES.

This hypothesis is first tested by using a one-way analysis of variance as was done in the first and second hypotheses, to check if there was a significant difference due to treatment. Since this was the case as seen in table 5, for further analyses the Newman-Keuls Formula is again used to evaluate the difference between the Mastery Learning combined with Improved Materials and Mastery classes. Table 10 shows these comparisons.

TABLE 10- Comparison of the Summative Test Scores of the Mastery Learning combined with Improved Materials and Mastery Learning Classes, using Newman-Keuls Formula

	DF	MS _{error}	Calculated q	Significance Level
ML+IM, ML	84	8.88	2.74	$q_{r_{\alpha=.05}}$ 2.83 approaching significance

The findings of Newman-Keuls Formula show that the difference between the Mastery Learning combined with Improved Materials and Mastery Learning classes approaches significance at the .05 level.

t-tests are used to compare the means of the Mastery Learning Method of Instruction used in combination with Improved Materials with Mastery Learning used alone. Table 11 shows this analysis.

TABLE 11- Comparison of the Means of the Mastery Learning Combined with Improved Materials and Mastery Classes on the Summative Test, using t-tests for Independent Samples

	ML+IM A	ML B	t value	Significance Level
POSSIBLE POINTS	30	30	2.47	$\alpha = .02$
MEAN	26.23	24.69		$t_{55} = 2.390$
STANDARD DEVIATION	2.68	3.27		S.D.
NUMBER	31	26		

As seen from table 11, the class under the combined effects of Mastery Learning and Improved Materials has a mean performance significantly higher than the Mastery Learning class at $\alpha = .02$ level of significance.

Since t-tests are more sensitive to differences, the level of significance is higher here than was the case for Newman-Keuls formula although there as well the difference approached significance at the $\alpha = .05$ level.

When effect size analysis is used to compare the difference between the means of the two classes (ML+IM and ML) to the standard deviation of the Mastery Learning Class, a difference of about half a standard deviation is observed(3).

$$(3) \frac{ML+IM\bar{x}-ML\bar{x}}{ML_s}$$

ML+IM: Mastery Learning combined with Improved Materials.
 ML : Mastery Learning Class
 \bar{x} : Mean
 S : Standard Deviation.

$\frac{26.23-24.69}{3.27} = .47$. Results of the three out of the four analyses provide support for the third hypothesis.

The study clearly shows that the combined effect of Mastery Learning Method of Instruction combined with Improved Materials produces achievement levels which are still above those produced by Mastery Learning alone.

The following section will include a summary of the research and a brief interpretation of the results.

CHAPTER VI

SUMMARY AND CONCLUSIONS

This chapter includes the summary of the problem, the methodology, and the results sections. The limitations and implications of the study are also stated in this section.

The Problem

The purpose of this study was to test whether Mastery Learning when used in combination with Improved Materials would yield higher levels of learning than what Mastery Learning produces alone in comparison to traditional methods of teaching. According to Bloom, Improved Materials when used with the combination of Mastery Learning Method of Instruction raises levels of learning to two standard deviations above the mean over the control classes, while the class under Mastery Learning Method of Instruction without the Improved Materials raises the level to one standard deviation over the mean of the control class. In this study, the main concern is on the combined effects of Mastery Learning and Improved Materials on students' learning levels.

Three independent learning methods were tested in this study: Mastery Learning combined with Improved Materials, Mastery Learning used alone, and traditional methods of instruction. The highest gains in learning were expected from

the students using the combination of Mastery Learning and Improved Materials Method, while the least gains in learning were expected from the control group in which the traditional method of instruction was used.

Methodology

The study was done at Özel Tarhan Lisesi; a private co-educational high school in Istanbul. The total study was completed in 8 weeks. There were 87 male and female students involved in the study, and it was implemented in three 9th grade classes, studying English as a foreign language. There were 31 students in the Mastery Learning combined with Improved Materials section, 26 students in the Mastery Learning section, and 30 students in the control group. All of the sections were taught by a different teacher.

There were three learning tasks in the study. Each learning task took an average of eight hours to be taught. The criterion level was set at 90 % level of learning. The researcher had three meetings with the experimental teachers where the Mastery procedures were explained to them. The objectives of the three learning tasks as well as the table of specifications were given to the class teacher who accepted to be involved in the study as a Mastery Learning combined with Improved Materials class (section A). The class teacher who accepted to be involved in the study as a Mastery Learning class, prepared her own objectives (section B). Section C was the control class, and was taught with traditional methods of instruction.

The objectives, a table of specifications for each learning task, the formative tests given at the end of each learning unit, and their parallel forms were taken from a master's project done at Boğaziçi University, Department of

Education (Gürün, 1982), for an English textbook, for foreigners Kernel Lessons Intermediate (O'Neill, Kingsbury, Yeadon, 1974), which was used as Improved Materials for the study. The second parallel forms of the formative tests were prepared by the present researcher.

At the end of the three learning tasks, a summative test was given to all of the students during the same class period. This test consisting of 30 questions, took 30 minutes. 17 of the questions out of 30, were taken from Gürün's study (1982), while 13 of them were prepared by this researcher.

Hypotheses and Results

The hypotheses of the study generally test the effects of Mastery Learning used in combination with Improved Materials and Mastery Learning used alone in comparison to control conditions. While Mastery Learning used alone produces levels of learning which are generally one standard deviation over the control classes, it is expected that the combined effect of Mastery Learning used in combination with Improved Materials would raise achievement levels still further to about two standard deviations over control conditions.

There were three hypotheses in the study. Several statistical techniques were used to test the three hypotheses, comparing the effects of the three instructional methods (ML + IM: Section A, ML: Section B; Control: Section C). Comparisons of the groups using one-way analysis of variance showed that these three classes were similar in terms of their cumulative grade point averages (G.P.A.), and their previous year English grades.

In this study, the criterion level was set at 90% level

of achievement. As a result of using Mastery procedures combined with Improved Materials in the Mastery Learning and Improved Materials group, 74% of the students reached the 90% criterion level of learning, followed by 50% in the Mastery learning class on the summative test. Only 3.3% of the students in the control group reached this level on the summative test.

There were three hypotheses tested in the study. The first hypothesis of the study was:

HYPOTHESIS 1: THE ACHIEVEMENT LEVEL OF THE CLASS UNDER MASTERY LEARNING METHOD OF INSTRUCTION COMBINED WITH IMPROVED MATERIALS WILL BE SIGNIFICANTLY HIGHER THAN THE CONTROL CLASS

While Mastery Learning usually leads to achievement levels which are about one standard deviation above the mean over the students studying under traditional methods of instruction, it is expected that Mastery Learning combined with Improved Materials raises the level to about two standard deviations. As a result of Mastery procedures combined with Improved Materials, 74% of the students reached the 90% level of achievement. Only 3.3% of the students in the control class reached this pre-set criterion level on the summative test. The first hypothesis was first tested by using a one-way analysis of variance, comparing the Mastery Learning combined with Improved Materials, Mastery Learning, and control classes to check if there were significant differences among the three classes due to treatment on the summative test. It was found that there was a significant difference in achievement at $\alpha = .001$ significance level. The findings of one-way analysis of variance were further investigated in terms of comparing each group with the other two, by using the Newman - Keuls formula to check if there was a significant difference

between the Mastery Learning combined with Improved Materials class, and the control class. A significant difference was found at $\alpha = .01$ level between the Mastery Learning combined with Improved Materials and control classes, favouring the Mastery Learning and Improved Materials class. t-tests were also used to compare the Mastery Learning combined with Improved Materials and control classes, and a significant difference in achievement on the summative test at $\alpha = .001$ level was found, in favour of the Mastery combined with Improved Materials class. An effect size analysis was done in terms of the ratio of the difference between the means of the treatment and control groups to the standard deviation of the control group. This analysis showed a difference of 1.6 standard deviations between the Mastery Learning combined with Improved Materials class and the control class.

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

The second hypothesis of the study dealt with the achievement levels of the Mastery Learning and control classes. The second hypothesis of the study can be stated as:

HYPOTHESIS II: THE ACHIEVEMENT LEVEL OF THE CLASS UNDER MASTERY LEARNING METHOD OF INSTRUCTION WILL BE SIGNIFICANTLY HIGHER THAN THE CONTROL CLASS

As a result of Mastery procedures in the Mastery Learning group, 50% of the students reached the 90% criterion level of achievement on the summative test, while only 3.3% of the students reached this criterion level in the control class. Since one-way analysis of variance done on the first hypothesis, showed sizable treatment effects among the three classes on the summative test scores, Newman-Keuls formula was used to see if there was a significant difference between

the Mastery Learning and control classes. A significant difference was found at $\alpha = .01$ level, favouring the Mastery class. Further, t-tests were also used to compare the groups' mean scores on the summative test. The Mastery class scored significantly higher than the control class at $\alpha = .001$ level. The effect size analysis of Mastery Learning and control classes revealed a difference of 1.08 standard deviations between these two classes, favouring the Mastery Learning class. Thus, in the light of the above evidence, the second hypothesis of the study is also confirmed.

The third hypothesis dealt with the combined effects of Mastery Learning and Improved Materials, and its relation to Mastery Learning alone. The third hypothesis of the study can be stated as:

HYPOTHESIS III: THE COMBINED EFFECT OF IMPROVED MATERIALS IN ADDITION TO MASTERY LEARNING WILL BE SIGNIFICANTLY HIGHER THAN THE SINGLE EFFECT OF MASTERY LEARNING ALONE, AS OBSERVED ON THE SUMMATIVE TEST SCORES

As a result of Mastery Learning procedures combined with Improved Materials, 74% of the students in the Mastery Learning combined with Improved Materials class reached the 90% criterion level of achievement on the summative test, followed by 50% in the Mastery Learning class. Since the three classes were compared with each other on the summative test scores by using one-way analysis of variance as was done in the previous hypotheses, showing sizable treatment effects among the three classes, Newman-Keuls formula was used to evaluate the difference between the Mastery Learning combined with Improved Materials and Mastery classes. A difference approaching the .05 alpha level was found, favouring the Mastery Learning combined with Improved Materials class. t -

tests were also used to compare these two classes in terms of the summative test scores. It was found that the class under the combined effects of Mastery Learning and Improved Materials had a mean performance significantly higher than the Mastery Learning class at $\alpha = .02$ level. The effect size analysis showed a difference of about 1/2 a standard deviation (.47) between these two classes. These results generally support the third hypothesis of the study.

The data obtained in this study clearly show that:

1- The achievement level of the class under Mastery Learning Method of Instruction combined with Improved Materials is significantly higher than the control class at .01 level of significance.

2- The achievement level of the class under Mastery Learning Method of Instruction is significantly higher than the control class at .01 level of significance.

3- The combined effect of Improved Materials in addition to Mastery Learning approaches significance at the .05 level in comparison to the single effect of Mastery Learning alone, as observed on the summative test scores.

Limitations of the Study and Suggestions for Further Research

This study was carried out in a private high school in Istanbul. The language of instruction was not English, and most of the teachers were Turkish. In this study, materials produced as a result of a master's project done at Boğaziçi University, Department of Education (Gürün, 1982), for an English textbook, for foreigners Kernel Lessons Intermediate (O'Neill, Kingsbury, Yeadon, 1974) was used as Improved Materials. The reason for choosing this school was

that it was the only school in Istanbul that uses this text-book.

There were three sections of students at 9th grade level, taught by different teachers. The teachers were assigned to teaching strategies on availability basis. One of the teachers initially refused to prepare the essential objectives at the beginning of the study. Later, however, by the help of the director and other teachers in the school, she accepted to prepare the objectives.

The researcher had three meetings with the teachers of the experimental classes a week before the introduction of the three instructional methods. She explained the purpose and content of the study as well as what was to be expected from the teachers. It is suggested that there should be more time given to the training of the teachers using the Mastery Learning Method of Instruction.

One major limitation of the study was the lack of a condition which just used Improved Materials without Mastery Learning conditions. This would have made it possible to test if the effect of Mastery Learning used in combination with the Improved Materials was additive to Mastery Learning used alone.

However, in general, the researcher was capable of following all of the procedures carefully.

Conclusions and Implications

The aim of the study was to investigate if other interventions added to the effect of Mastery Learning Method of Instruction produces levels of learning which are even

higher than those produced by Mastery Learning alone.

Research done for almost two decades clearly show that Mastery Learning has a sizable effect on achievement levels. We are in need of other interventions which when added to Mastery Learning Method of Instruction, raises achievement levels still further. Improving instructional materials may be one such intervention. This study shows clearly that the effect of Mastery Learning Method of Instruction used in combination with Improved Materials, raises achievement levels even further than what Mastery Learning does alone. Mastery Learning generally produces a difference of about one standard deviation over control conditions, while two interventions used in combination with one another, raise the difference to over 1.5 standard deviations, in comparison to control conditions (1.6 standard deviations in this study).

The researcher witnessed the desirability of the interventions while carrying out the study. The participating teachers generally were very impressed with the new methods they were using and were reinforced by the results of these methods. Similarly, the students enjoyed the project and wanted to continue taking part in it.

Since Improved Materials have a sizable effect on achievement levels of students beyond those observed by Mastery Learning alone, and since producing textbooks with Improved Materials will not raise the cost of books considerably, this intervention becomes quite desirable.

As a result, with the combination of Mastery Learning procedures combined with Improved Materials, the achievement levels of students will be higher than those produced by Mastery Learning alone.

If our primary concern is helping our children learn

better, then we must first help their teachers. It is our hope that aspects of this study will in the future be seen as relevant to any form of education, whether in schools or elsewhere in the society.

A P P E N D I X

This section includes the learning units and the objectives of each of the three learning tasks. The section also includes the formative tests, their parallels which were given only to Mastery students, (the correct choice is in parantheses) and the summative test given to all of the students at the same class period. Answers to each question are presented in the answer column.

The Learning Unit

The learning units of the study were Chapters 2,3 and 4 of the textbook, Kernel Lessons Intermediate, by Robert O'Neill, Roy Kingsbury and Tony Yeadon, published by Longman Group Limited 1974, dealing with Present Continuous Tense, Simple Past Tense, and Mass and Unit.

Learning Task I: PRESENT CONTINUOUS TENSE

Objectives:

1. The students will be able to recall the meaning of the new words and patterns in the unit.
2. The students will be able to use the new words and patterns in sentences correctly.
3. The students will be able to identify the positive, negative and the interrogative counterparts of the given sentences in present continuous tense.
4. The students will be able to distinguish the different uses of the present continuous tense with respect to the intended time span.
5. The students will be able to identify the verbs of perception, emotion and thought which are not used in the present continuous tense.
6. The students will be able to differentiate between the present simple and the present continuous tense.
7. The students will be able to use the new patterns in the unit in different situations.

Learning Task II. SIMPLE PAST TENSE

Objectives:

1. The students will be able to recall the meaning of new words and patterns in the unit.
2. The students will be able to distinguish between regular and irregular verbs in the past tense.
3. The students will be able to identify the positive, negative and interrogative counterparts of the given

sentences in the past tense.

4. The students will be able to use the simple past tense statements with time adverbs such as yesterday, last week, this afternoon.
5. The students will be able to recall the past form of the verb TO BE.
6. The students will be able to restate the given sentences using too or so as connectives.
7. The students will be able to combine two negative sentences using either or neither.
8. The students will be able to identify the basic word order in simple statements.

Learning Task III: MASS AND UNIT

Objectives:

1. The students will be able to recall the meaning of the new words and patterns in the unit.
2. The students will be able to differentiate between mass and count nouns.
3. The students will be able to use much and many with mass and unit nouns correctly.
4. The students will be able to ask questions with how many and how much in relation to given situations.
5. The students will be able to differentiate between the modal auxiliaries must and have to.
6. The students will be able to use the Past, Present and Future forms of have to in sentences.
7. The students will be able to use the correct phrasal verbs that will be appropriate to the meaning of the given statements.

Learning Task I: PRESENT CONTINUOUS TENSE

FORMATIVE IA

Objective I: The students will be able to recall the meaning of the new words and patterns in the unit.

Instruction: Choose the words or patterns that best replace the underlined words or phrases in the following sentences.

1- I am having a good time at the party.

- (a) enjoy
- b) belong to
- c) spend
- d) take

2- I always have a shower after the football game.

- a) give
- b) possess
- (c) take
- d) enjoy.

Instruction: Choose the sentence that best expresses the meaning of the following sentences.

3- She is looking for her purse.

- (a) She is searching for her purse.
- b) She is watching her purse.
- c) She is after her purse.
- d) None of the above.

Objective II: The students will be able to use the new words and patterns in sentences correctly.

Instruction : Choose the correct word to complete the meaning of the sentences below.

1- Ayşe is the television.

- a) looking
- b) seeing
- (c) watching
- d) listening

2- What is your girl friend?

- a) as
- (b) like
- c) worth
- d) look

Objective III: The students will be able to identify the positive, negative and the interrogative counterparts of the given sentences in present continuous tense.

Instruction : Choose the negative form of the given statement below.

1- I am watching television now.

- a) Am I not watching now?
- b) I am watching not now.
- (c) I am not watching now.
- d) I is not watching now.

Instruction: Choose the question form of the following statements below.

2- They are waiting for the bus.

- a) Aren't they waiting for the bus?
- b) They aren't waiting for the bus.
- c) Are they wait for the bus?
- (d) Are they waiting for the bus?

Objective IV: The students will be able to distinguish the different uses of the present continuous tense with respect to the intended time span.

Instruction : Choose the best alternative that denotes the time of the following sentences.

1- She is reading her paper now.

- (a) an action happening now.
- b) an action in the near future.
- c) an action happening about this time.
- d) an action frequently repeated.

2- The AS cinema is showing a Western this week.

- (a) an action happening now
- b) an action happening about this time
- c) an action frequently repeated
- d) an action in the near future.

Objective V: The students will be able to identify the verbs of perception, emotion and thought which are not used in the present continuous tense.

Instruction: Choose the verbs which are not used in the continuous form.

- 1- a) look
- b) watch

- c) stare
- (d) see

- 2- (a) desire
- b) ask
 - c) answer
 - d) push.

Objective VI: The students will be able to differentiate between the present simple and the present continuous tense.

Instruction : Choose the correct present form of the verbs to complete the following sentences.

1- I detective stories.

- a) liking
- b) am liking
- c) likes
- (d) like

2- What is he at the moment?

- a) do
- b) did
- (c) doing
- d) does

Objective VII: The students will be able to use the new patterns in the unit in different situations.

Instruction : Select the statements that can replace the blanks in the following dialogues.

1- Lady - A ticket for Pendik, please

Clerk - Pendik train has just left.

Lady -

Clerk - At half past six.

- a) In about half an hour
- b) How often do the trains run to Pendik?
- c) From which platform does the train leave?
- (d) When is the next train to Pendik?

2- Ayşe - I have two tickets for the theatre.

Ali - When does it start?

Ayşe - It is about to start.

Ali -

- a) We still have time.
- b) Traffic is very slow at this time.
- c) You are very slow in getting ready.
- (d) Why don't you get ready then?

Learning Task II: SIMPLE PAST TENSE

FORMATIVE IIA

Objective I: The students will be able to recall the meaning of new words and patterns in the unit.

Instruction: Choose the words which complete the sentences below.

- 1- The teacher scolded me because I the answers to her questions.
- (a) did not know
 - b) did know
 - c) did knew
 - d) did not knew.

Instruction: Choose the correct alternative that completes the following sentences.

- 2- When she said, "Would you bring me a cup of tea?" she:
- a) is giving an order
 - (b) is making a request
 - c) is asking a question
 - d) is making a suggestion

Objective II: The students will be able to distinguish between regular and irregular verbs in the past tense.

Instruction : Choose the correct form of the verbs which completes the meaning of the sentences below.

- 1- He a speech at the opening of the university.

- a) make
- b) is make
- (c) made
- d) maked

2- Ayşe and Ali to visit us last night.

- a) come
- (b) came
- c) are come
- d) comed.

Objective III: The students will be able to identify the positive, negative and interrogative counterparts of the given sentences in the past tense.

Instruction : Choose the negative form of the sentence below.

1- I heard the news on the radio.

- a) Did I heard the news on the radio?
- b) I did hear the news on the radio.
- c) I heard not the news on the radio.
- (d) I didn't hear the news on the radio.

Instruction: Choose the positive form of the sentences below.

2- Didn't he see you on the campus yesterday?

- (a) He saw me on the campus yesterday.
- b) He saw me not on the campus yesterday.
- c) He didn't see me on the campus yesterday.
- d) He did see me on the campus yesterday.

Objective IV: The students will be able to use the simple past statements with time adverbs such as yesterday, last week, this afternoon.

Instruction: Choose the right time adverbs to fill in the blanks.

1- I sent the sheets to the laundry

- a) everyday
- b) many times
- c) recently
- (d) yesterday

2- I finished writing my examination

- (a) two hours ago
- b) recently
- c) already
- d) lately.

Objective V: The student will be able to recall the past form of the verb TO BE.

Instruction: Choose the correct form of the verb TO BE to fill in the blanks.

1- She late this morning. She missed the train.

- a) is
- b) be
- c) were
- (d) was

2- Ayşe in school yesterday.

- (a) was
- b) is
- c) am
- d) were

Objective VI: The students will be able to restate the given sentences using too or so as connectives.

Instruction: Choose the most meaningful combination for the following sentences.

1- I speak English. He speaks English.

- a) I speak English, my friend too.
- (b) I speak English, my friend does too.
- c) I speak English, also my friend.
- d) I speak English nor is my friend.

Instruction: Choose the alternative that completes the following statement correctly.

2- She is making good progress.....

- a) her brother too.
- b) also her brother.
- (c) her brother is too.
- d) nor is her brother.

Objective VII: The students will be able to combine two negative sentences using neither or either.

Instruction : Choose the correct combined form of the following statements.

1- I don't speak French. My friend doesn't speak French.

- a) I don't speak French nor is my friend.
- (b) I don't speak French, my friend doesn't either.
- c) I don't speak French either my friend does.
- d) I don't speak French, my friend doesn't too.

2- I don't smoke. My husband doesn't smoke.

- a) I don't smoke nor my husband is.
- b) I don't smoke, my husband doesn't too.
- (c) I don't smoke, neither does my husband.
- d) I don't smoke, either does my husband.

Objective III: The students will be able to identify the basic word order in simple statements.

Instruction : Choose the alternative arranged in the right order.

1- Games/yesterday/played/in their room/children.

- a) Yesterday games children played in their room.
- b) Children yesterday in their room games played.
- (c) Children played games in their room yesterday.
- d) Games played children in their room yesterday.

Instruction: Choose the correctly arranged sentences.

2- On/a/film/cowboy/I/watched/T.V.

1 2 3 4 5 6 7

- a) 2 4 5 6 7 1 3
- (b) 5 6 2 4 3 1 7
- c) 7 1 2 3 4 5 6
- d) 6 7 2 3 1 5 4

Learning Task III: MASS AND UNIT

FORMATIVE IIIA

Objective I: The students will be able to recall the meaning of the new words and patterns in the unit.

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

1- There isn't time for me to finish my homework.

- a) too
- (b) enough
- c) quite
- d) almost

2- When he won the race, he got the ... prize.

- (a) first
- b) one
- c) anyone
- d) other

Objective II: The students will be able to differentiate between mass and count nouns.

Instruction : Choose the correct word to fill in the blanks in the sentences below.

1- How much do you eat every day?

- (a) bread
- b) vegetables
- c) fruits
- d) tomatoes

2- There are quite a lot of in Turkey.

- a) chalk
- (b) minerals
- c) chromium
- d) sugar

Objective III: The students will be able to use much and many with mass and unit nouns correctly.

Instruction : Choose the correct word to fill in the blanks in the following sentences.

1- There are not large factories in this town.

- a) almost
- (b) many
- c) some
- d) much

2- I don't have time to talk with you.

- a) other
- b) many
- c) most
- (d) much

Objective IV: The students will be able to ask questions with how many and how much in relation to given situations.

Instruction : Choose the question that can be asked in relation to the given situations below.

1- Mehmet goes to horse races and loses money every time he bets on a horse. His friend wants to know the amount of money he lost this time.

- a) How much money did you lost at the race?
- b) How long ago did you go to the race?
- (c) How much money did you lose at the race?
- d) How often do you go to the race?

2- The factory has a number of engineers and the boss wants to know the number of engineers in the factory.

- a) How often do we employ engineers?
- b) How long these engineers have been working in the factory?
- c) How much do we pay them?
- (d) How many engineers are there in the factory?

Objective V: The students will be able to differentiate between the modal auxiliaries must and have to.

Instruction: Choose the correct word to fill in the blanks in the sentences below.

1- That little boy is ill. He play in the garden today.

- (a) must not
- b) had to not
- c) need not
- d) is not

2- Smooking is prohibited here. You put out your cigarette.

- a) had to
- b) need to
- (c) must
- d) must be

Objective VI: The students will be able to use the Past, Present and Future forms of have to in sentences.

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

1- She visit her grandmother before she went to school in the morning.

- a) has
- (b) had to
- c) will have to
- d) doesn't have to.

2- I am going to the party on Saturday so I buy that silk dress.

- a) had to
- b) don't have to
- (c) will have to
- d) has to

Objective VII: The students will be able to use the correct phrasal verbs that will be appropriate to the meaning of the given statements.

Instruction : Choose the correct word or words to fill in the blanks in the following statements.

1- You have to taking too many pills; they'll do more harm than good.

- a) give in
- b) give away
- (c) give up
- d) give way.

2- The students have to ... early in order to be at school on time.

- a) get down
- b) get on
- c) get over
- (d) get up

Learning Task I: PRESENT CONTINUOUS TENSE

FORMATIVE IB

Objective I: The students will be able to recall the meaning of the new words and patterns in the unit.

Instruction: Choose the words or patterns that best replace the underlined words or phrases in the following sentences.

1- She always has her breakfast early in the morning.

- a) takes
- (b) eats
- c) possesses
- d) finishes

Instruction: Choose the sentence that best expresses the meaning of the following sentences.

2- What is the weather like?

- a) What do we know about the weather?
- (b) How is the weather?
- c) What sort of weather is it?
- d) What can we know about the weather?

Objective II: The students will be able to use the new words and patterns in sentences correctly.

Instruction: Choose the correct word to complete the meaning of the sentences below.

1- Pinar is the radio.

- a) watching to
- b) hearing to
- (c) listening to
- d) whispering to

2- How much do these bananas?

- a) worth
- (b) cost
- c) worthy
- d) price

Objective III: The students will be able to identify the positive, negative and interrogative counterparts of the given sentences in present continuous tense.

Instruction : Choose the positive forms of the sentences below.

1- Is she studying English?

- (a) She is studying English.
- b) She are studying English.
- c) She is going to study English.
- d) She studies English.

2- Isn't he having a good time at the party?

- (a) He isn't having a good time at the party.
- b) Is he having a good time at the party?
- c) He is having a good time at the party.
- d) He is having not a good time at the party.

Objective IV: The students will be able to distinguish the different uses of the present continuous tense with respect to the intended time span.

Instruction : Choose the best alternative that denotes the time of the following sentences.

1- She is always going away for weekends.

- a) an action happening about this time
- b) an action happening now
- (c) an action frequently repeated
- d) an action in the near future.

2- The whole school is going on a picnic this weekend.

- (a) an action in the near future.
- b) an action happening now
- c) an action happening about this time
- d) an action frequently repeated.

Objective V: The students will be able to identify the verbs of perception, emotion and thought which are not used in the present continuous tense.

Instruction: Choose the verbs which are not used in the continuous form.

1- (a) understand

- b) grasp
- c) hold
- d) take

2- a) move

- (b) belong
- c) run
- d) go

Objective VI: The students will be able to differentiate between the present simple and the present continuous tenses.

Instruction : Choose the correct present form of the verbs to complete the following sentences.

1- What ... at the Konak cinema this week?

- a) shows
- (b) is showing
- c) showed
- d) is shown

2- It is sunny today. The sun

- (a) is shining
- b) shines
- c) shone
- d) shoned

Objective VII: The students will be able to use the new patterns in the unit in different situations.

Instruction : Select the statements that can replace the blanks in the following dialogues.

1- Customer -

Grocer - 50 Liras a kilo

Customer - Aren't they quite expensive for this time of the year?

Grocer - But they are choice apples.

- a) I want a kilo of apple.
- b) Why are you waiting for?

(c) How much do the apples cost?

d) Do you always sell them at this price?

2- Fatos - Who are you writing to?

Meral - To my uncle.

Fatos -

Meral - No, only when he writes to me.

(a) Do you often write to him?

b) Why are you writing to him?

c) Do you want me to post it for you?

d) How often do you write to him?

Learning Task II: SIMPLE PAST TENSE

FORMATIVE IIB

Objective I: The students will be able to recall the meaning of new words and patterns in the unit.

Instruction: Choose the words which complete the sentences below.

1- The secretary was to the office. She was fired.

a) early

b) there

(c) late

d) in

Instruction: Choose the correct alternative that completes the following sentences.

2- When he said "Why don't we get married next month?" he was:

- a) asking a question
- b) showing surprise
- (c) making a suggestion
- d) giving an order.

Objective II: The students will be able to distinguish between regular and irregular verbs in the past tense.

Instruction : Choose the correct form of the verbs which completes the meaning of the sentences below.

1- The newspaper said the landlord his tenant during the fight.

- (a) killed
- b) kill
- c) killen
- d) kills

2- I stayed home last night and letters to my friends.

- (a) wrote
- b) written
- c) writed
- d) writing.

Objective III: The students will be able to identify the positive, negative and interrogative counterparts of the given sentences in the past tense.

Instruction : Choose the positive form of the sentences below.

1- When did you last see him?

- a) I see him everyday.
- (b) I saw him last month.
- c) I am seeing him now.
- d) I have seen him recently.

Instruction: Choose the question form of the following sentence.

2- Mehmet worked very hard last semester.

- a) Worked he hard last semester.
- b) Is he worked hard last semester?
- c) Did he worked hard last semester?
- (d) Did he work hard last semester?

Objective IV: The students will be able to use the simple past statements with time adverbs such as yesterday, last week, this afternoon.

Instruction : Choose the right time adverbs to fill in the blanks.

1- I saw your brother at school ...

- a) every week
- b) nowadays
- (c) in the morning
- d) lately

2- The man drank a lot of wine at the party ...

- a) already
- b) last night
- c) nowadays
- (d) lately

Objective V: The students will be able to recall the past form of the verb TO BE.

Instruction: Choose the correct form of the verb TO BE to fill in the blanks.

1- They back from Europe last Monday.

- a) is
- b) are
- (c) were
- d) was

2- Ömer missed the boat and he late to work this morning.

- a) is
- (b) was
- c) is not
- d) was not

Objective VI: The students will be able to restate the given sentences using too or so as connectives.

Instruction: Choose the most meaningful combination for the following sentences.

1- I saw the accident. He saw the accident.

- (a) I saw the accident, so did he.
- b) I saw the accident, also my friend.
- c) I saw the accident, my friend too.
- d) I saw the accident either did my friend.

Instruction: Choose the alternative that completes the following statement correctly.

2- She likes icecream...

- (a) so do I.
- b) I too.
- c) also I.
- d) 'I don't either.

Objective VII: The students will be able to combine two negative sentences using neither or either.

Instruction : Choose the correct combined form of the following statements.

1- I do not know to drive. My friend doesn't know to drive.

- a) I don't know to drive nor is my friend.
- b) I don't know to drive, either does my friend.
- (c) I don't know to drive, neither does my friend.
- d) I don't know to drive, neither my friend does.

2- I am not happy. My mother is not happy.

- a) I am not happy, my mother is too.
- b) I am not happy, neither my mother is.
- c) I am not happy, nor my mother.
- (d) I am not happy, my mother isn't either.

Objective VIII: The students will be able to identify the basic word order in simple statements.

Instruction : Choose the alternative arranged in the right order.

1- The little/boy/his lunch/this morning/ate/in the kitchen.

- a) Ate the little boy his lunch in the kitchen this morning.
- (b) The little boy ate his lunch in the kitchen this morning.

- c) The kitchen ate the little boy his lunch this morning.
- d) Little boy this morning ate in the kitchen his lunch.

Instruction: Choose the correctly arranged sentences.

2- Often/helps/he/father/his
1 2 3 4 5

- a) 2 4 3 1 5
- b) 3 4 1 5 2
- (c) 3 1 2 5 4
- d) 5 2 4 3 1

Learning Task III: MASS AND UNIT

FORMATIVE IIIB

Objective I: The students will be able to recall the meaning of the new words and patterns in the unit.

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

1- He earns 300 Liras

- a) on a week
- b) in a week
- (c) a week
- d) at a week

2- This is his factory

- a) himself
- b) him
- c) ownself
- (d) own

Objective II: The students will be able to differentiate between mass and count nouns.

Instruction : Choose the correct word to fill in the blanks in the sentences below.

1- There is some to finish that letter.

- a) hours
- b) minutes
- (c) time
- d) seconds

2- There are many in the plate.

- a) chocolate
- b) food
- c) bread
- (d) pieces of chocolate.

Objective III: The students will be able to use much and many with mass and unit nouns correctly.

Instruction : Choose the correct word to fill in the blanks in the following sentences.

1- There is not milk in the bottle for the baby to drink.

- a) some
- b) many
- (c) much
- d) most

2- He makes spelling mistakes in his composition.

- a) a little

- (b) many
- c) any
- d) another

Objective IV: The students will be able to ask questions with how many and how much in relation to given situations.

Instruction: Choose the question that can be asked in relation to the given situations below.

1- Mete likes to read and he buys several books every month. His friend wants to know the number of books he bought this month.

- a) How often do you go to the bookstore?
- (b) How many books did you buy this month?
- c) How much do you spend on books?
- d) How long ago did you buy books?

2- Mrs.Gürün is making a cake. She forgets the amount of butter she has to put in the mix and asks her friend.

- (a) How much butter do I need to put in the mix?
- b) What did I put in the cake?
- c) How long did I mix the ingredients?
- d) How often did I make a cake?

Objective V: The students will be able to differentiate between the modal auxiliaries must and have to.

Instruction: Choose the correct word to fill in the blanks in the sentences below.

1- You watch the traffic lights when you cross the street.

- a) do
- (b) must
- c) need not to
- d) dare to

2- According to the school rules you slacks to the classes

- a) need not wear
- b) have to wear
- c) may wear
- (d) must not wear

Objective VI: The students will be able to use the Past, Present and Future forms of have to in sentences.

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

1- He work very hard to pass his exams last semester.

- (a) had to
- b) will have to
- c) has to
- d) hasn't to

2- They want to buy a new flat so they save a lot of money

- a) will had to
- b) has to
- c) had to
- (d) have to

Objective VII: The students will be able to use the correct: phrasal verbs that will be appropriate to the

meaning of the given statements.

Instruction : Choose the correct word or words to fill in the blanks in the following statements.

1- The nurse the babies in the nursery.

- (a) looks after
- b) looks away
- c) looks forward
- d) looks back

2- Everybody stared at the woman, who just the hotel with a small dog.

- (a) walked in
- b) walked after
- c) walked away
- d) walked over.

Learning Task I: PRESENT CONTINUOUS TENSE

FORMATIVE IC

Objective I: The students will be able to recall the meaning of the new words and patterns in the unit.

Instruction: Choose the words or patterns that best replace the underlined words or phrases in the following sentence

1- I always have a cup of coffee after dinner.

- (a) drink
- b) take
- c) possess
- d) enjoy

Instruction: Choose the sentence that best expresses the meaning of the following sentence.

2- What's her dress like?

- a) What sort of dress is it?
- b) What can be know about the dress?
- c) What do we know about the dress?
- (d) How is the dress?

Objective II: The students will be able to use the new words and patterns in sentences correctly.

Instruction : Choose the correct word to complete the meaning of the sentence below.

1- He is his English book.

- a) hearing to
- b) listening to
- (c) reading
- d) whispering to

2- Traffic is very at this time.

- a) going
- (b) slow
- c) running
- d) hurry

Objective III: The students will be able to identify the positive, negative and the interrogative counterparts of the given sentences in present continuous tense.

Instruction : Choose the negative form of the given statement below.

1- She is reading a book now.

- a) She reads a book now.
- b) She isn't going to read a book now.
- (c) She isn't reading a book now.
- d) Isn't she reading a book now?

Instruction: Choose the question form of the following statement below.

2- They are having a good time at the party.

- (a) Are they having a good time at the party?
- b) Aren't they having a good time at the party?
- c) They aren't having a good time at the party.
- d) Are they have a good time at the party?

Objective IV: The students will be able to distinguish the different uses of the present continuous tense with respect to the intended time span.

Instruction : Choose the best alternative that denotes the time of the following sentences.

1- She is listening to the radio now.

- a) an action in the near future.
- (b) an action happening now
- c) an action frequently repeated
- d) an action happening about this time.

2- He always eats a candy after dinner every night.

- a) an action happening now
- b) an action happening about this time
- (c) an action frequently repeated
- d) an action in the near future

Objective V: The students will be able to identify the verbs of perception, emotion and thought which are not used in the present continuous tense.

Instruction: Choose the verbs which are not used in the continuous form.

- 1- a) look
b) stare
c) go
(d) understand.

- 2- a) push
(b) belong
c) ask
d) hold.

Objective VI: The students will be able to differentiate between the present simple and the present continuous tenses.

Instruction : Choose the correct present form of the verbs to complete the following sentences.

1- That red book to me.

- (a) belongs
b) belonging
c) is belongin
d) belong

2- He is television now.

- a) watch
b) watches
c) watched
(d) watching

Objective VII: The students will be able to use the new patterns in the unit in different situations.

Instruction : Select the statements that can replace the blanks in the following dialogues.

1- Bob - What are you doing?

John - I am studying math.

Bob -

John - No, only when I have math exams.

a) Why are you studying math?

b) How often do you study math?

(c) Do you always study hard?

d) Why don't you study history?

2- Mary - What are you doing this morning?

Bob - I'm reading the newspaper.

Mary -

Bob - No, only when there's enough time to read.

(a) Do you always read your paper in the mornings?

b) Do you always have your breakfast at 8 o'clock?

c) Why don't you have a cup of coffee at 8 o'clock?

d) Why don't you go to school? It's 8 o'clock.

Learning Task II: SIMPLE PAST TENSE

FORMATIVE IIC

Objective I: The students will be able to recall the meaning of new words and patterns in the unit.

Instruction: Choose the words which complete the sentences below.

1- I had to take a taxi, because I enough time.

- a) did have to
- b) did had
- (c) didn't have
- d) didn't having.

Instruction: Choose the correct alternative that completes the following sentence.

2- When he said "fetch me a glass of water", he:

- (a) is giving an order
- b) is making a request
- c) is asking a question
- d) is making a suggestion.

Objective II: The students will be able to distinguish between regular and irregular verbs in the past tense.

Instruction: Choose the correct form of the verbs which completes the meaning of the sentences below.

1- Bob and Tom their parents last month.

- a) are visit
- b) visit
- c) visiten
- (d) visited

2- The teacher for a few seconds before answering the question.

- a) thinked
- b) thinking
- (c) thought
- d) is thinks

Objective III: The students will be able to identify the positive, negative and interrogative counter-parts of the given sentences in the past tense.

Instruction : Choose the negative form of the sentence below.

1- I wrote a letter to my friend last night.

- a) Did I wrote a letter to my friend last night?
- b) I wrote not a letter to my friend last night.
- c) I did write a letter to my friend last night.
- (d) I didn't write a letter to my friend last night.

Instruction: Choose the positive form of the sentence below.

2- Didn't she tell you to come at 8 o'clock?

- (a) She told me to come at 8 o'clock
- b) She told me not come to at 8 o'clock.
- c) She didn't tell me to come at 8 o'clock.
- d) She did tell me to come at 8 o'clock.

Objective IV: The students will be able to use the simple past tense statements with time adverbs such as yesterday, last week, this afternoon.

Instruction : Choose the right time adverbs to fill in the blanks.

1- I saw him in the park ...

- a) everyday
- (b) yesterday
- c) many times
- d) nowadays.

2- I visited my parents ...

- a) everyday
- b) nowadays
- (c) in the morning
- d) every week

Objective V: The students will be able to recall the past form of the verb TO BE.

Instruction: Choose the correct form of the verb TO BE to fill in the blanks.

1- He late to the office this morning.

- a) were
- b) are
- c) am
- (d) was

2- John and Mary at home last night.

- a) am
- (b) were
- c) was
- d) does

Objective VI: The students will be able to restate the given sentences using too or so as connectives.

Instruction : Choose the most meaningful combination for the following sentence.

1- I studied hard. She studied hard.

- (a) I studied hard, so did he.
- b) I studied hard, also my friend.

- c) I studied hard, either did my friend.
- d) I studied hard, my friend too.

Instruction: Choose the alternative that completes the following statement correctly.

2- She needs help

- a) I too.
- b) also I.
- (c) so do I.
- d) I don't either.

Objective VII: The students will be able to combine two negative sentences using either or neither.

Instruction : Choose the correct combined form of the following statements.

1- I don't like acting. My friend doesn't like acting.

- (a) I don't like acting, my friend doesn't like either.
- b) I don't like acting, nor is my friend.
- c) I don't like acting, either my friend does.
- d) I don't like acting, my friend doesn't too.

2- I don't want an icecream. Billy doesn't want an icecream.

- a) I don't want an icecream, either does Billy.
- b) I don't want an icecream, nor is Billy.
- c) I don't want an icecream, neither Billy does.
- (d) I don't want an icecream, neither does Billy.

Objective VIII: The students will be able to identify the basic word order in simple statements.

Instruction : Choose the alternative arranged in the right order.

1- on T.V./last night/watched/a football match/the children.

- a) Last night a football match the children watched on TV
- (b) The children watched a football match on TV last night
- c) Children last night a football match on TV watched
- d) A football match watched the children last night on TV

Instruction: Choose the correctly arranged sentence.

2- Visited/a/group/of/tourists/our/city/two/years/ago.
1 2 3 4 5 6 7 8 9 10

- (a) 2 3 4 5 1 6 7 8 9 10
- b) 4 3 1 2 6 9 7 8 10 5
- c) 1 2 3 4 5 6 7 8 9 10
- d) 2 4 6 8 10 1 3 5 7 9

Learning Task III: MASS AND UNIT

FORMATIVE IIIC

Objective I: The students will be able to recall the meaning of the new words and patterns in the unit.

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

1- Mehmet works 40 hours

- a) on a week
- (b) a week
- c) at a week
- d) in a week

2- He doesn't have money for his vacation.

- a) too

- b) quite
- (c) enough
- d) almost

Objective II: The students will be able to differentiate between mass and count nouns.

Instruction: Choose the correct word to fill in the blanks in the sentences below.

1- How much have you got?

- a) cigarettes
- b) pieces of chocolate
- c) tomatoes
- (d) time

2- How many did John have?

- (a) hours
- b) wine
- c) bread
- d) time

Objective III: The students will be able to use much and many with mass and unit nouns correctly.

Instruction : Choose the correct word to fill in the blanks in the following sentences.

1- In the fifteenth century people believed that the world was flat.

- a) much
- b) a little
- (c) many
- d) quite

2- I don't have work to do this morning.

- a) many
- (b) much
- c) a few
- d) almost.

Objective IV: The students will be able to ask questions with how many and how much in relation to given situations.

Instruction : Choose the question that can be asked in relation to the given situations below.

1- Mehmet likes traveling and he travels many places every year. His friend wants to know the number of places he saw this year.

- (a) How many places did you see this year?
- b) How often do you travel?
- c) How much time do you spend for traveling?
- d) How long ago did you see İstanbul?

2- Ayşe likes to study mathematics and she always gets good grades. Her friend wants to know the amount of time she spends a day on mathematics.

- a) How long ago do you study math?
- b) How many time do you study math?
- c) What did you study last night?
- (d) How many hours do you study mathematics everyday?

Objective V: The students will be able to differentiate between the modal auxiliaries must and have to.

Instruction: Choose the correct word to fill in the blanks in the sentences below.

1- You say you want to pass. Then you try harder.

- a) need not
- b) dare to
- (c) must
- d) do not

2- You pick the flowers in the park.

- a) must be
- (b) must not
- c) had to
- d) need not to

Objective VI: The students will be able to use the Past,
Present and Future forms of have to in sentences.

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

1- Do we read many books in this course?

- a) will have to
- b) had to
- c) haven't to
- (d) have to

2- I study hard for my examination last night.

- a) have to
- b) will have to
- (c) had to
- d) haven't to

Objective VII- The students will be able to use the correct
phrasal verbs that will be appropriate to the
meaning of the given statements.

Instruction : Choose the correct word or words to fill in
the blanks in the following statements.

1- She her shoes and waded in water, then she put them
on again.

- (a) took off
- b) took up
- c) took over
- d) took on.

2- He the letter you had lost when he cleaned out his
desk.

- a) came apart
- b) came around
- c) came by
- (d) came across

SUMMATIVE TEST

Instruction: Choose the word or pattern that best replace the underlined words or phrases in the following sentence

1. I am having a good time at the party.

- a) enjoy
- b) belong to
- c) spend
- d) take

Instruction: Choose the sentence that best expresses the meaning of the following sentence

2- What is the weather like?

- a) What do we know about the weather?
- b) How is the weather?
- c) What sort of weather is it?
- d) What can we know about the weather?

Instruction: Choose the correct word to complete the meaning of the sentence below

3- How much do these bananas?

- a) worth
- b) worthy
- c) cost
- d) price

Instruction: Choose the positive form of the sentence below

4- Is she studying English?

- a) She is studying English.
- b) She are studying English
- c) She is going to study English
- d) She studies English

Instruction: Choose the question form of the following statement below

Learning Task	Objective	Answer Column
I	IA	a
I	IB	b
I	IIB	C
I	IIIB	a
I	IIIA	d

Learning Task	Objective	Answer Column
<p>5- They are waiting for the bus</p> <p>a) Aren't they waiting for the bus? b) They aren't waiting for the bus? c) Are they wait for the bus? d) Are they waiting for the bus?</p> <p><u>Instruction:</u> Choose the best alternative that denotes the time of the following sentence.</p>		
<p>6- She is reading her paper now</p> <p>a) an action happening now b) an action in the near future c) an action happening about this time d) an action frequently repeated</p> <p><u>Instruction:</u> Choose the verb which is not used in the continuous form</p>		
<p>7- a) look b) stare c) see d) watch</p> <p><u>Instruction:</u> Choose the correct present form of the verbs to complete the following sentence.</p>		
<p>8- What at the Knoak cinema this week?</p> <p>a) shows b) is showing c) showed d) is shown</p> <p><u>Instruction:</u> Select the statements that can replace the blanks in the following dialogues.</p>		
<p>9- Lady - A ticket for Pendik, please. Clerk - Pendik train has just left. Lady - Clerk - At half past six.</p>		

	Learning Task	Objective	Answer Column
<p>a) In about half an hour. b) How often do the trains run to Pendik? c) From which platform does the train leave? d) When is the next train to Pendik?</p>			
<p>10- Ayşe - I have two tickets for the theater.</p> <p>Ali - When does it start? Ayşe - It is about to start. Ali -</p> <p>a) We still have time. b) Traffic is very slow at this time. c) Why don't you get ready then? d) You are very slow in getting ready.</p>	I	VIIA	c
<p><u>Instruction:</u> Choose the words which complete the sentence below.</p>	II	IA	a
<p>11- The teacher scolded me because I the answers to her questions.</p> <p>a) did not know b) did know c) did knew d) did not knew</p>			
<p><u>Instruction:</u> Choose the correct alternative that completes the following sentence.</p>	II	IA	b
<p>12- When she said "would you bring me a cup of tea?" she:</p> <p>a) is giving an order b) is making a request c) is asking a question d) is making a suggestion</p>			
<p><u>Instruction:</u> Choose the correct form of the verbs which completes the meaning of the sentences below.</p>	II	IIA	c
<p>13- He a speech at the opening of the university.</p>			

- a) make
- b) is make
- c) made
- d) maked

14- The newspaper said the landlord ... his tenant during the fight

- a) killed
- b) kill
- c) killen
- d) kills

Instruction: Choose the question form of the following sentence

15- Mehmet worked very hard last semester.

- a) Worked he hard last semester?
- b) Is he worked hard last semester?
- c) Did he worked hard last semester?
- d) Did he work hard last semester?

Instruction: Choose the correct form of the verb TO BE to fill in the blank

16- Ömer missed the boat and he late to work this morning.

- a) is
- b) was
- c) is not
- d) was not

Instruction: Choose the most meaningful combination for the following sentences

17- I saw the accident. He saw the accident.

- a) I saw the accident, so did he.
- b) I saw the accident, also my friend.
- c) I saw the accident, my friend too.
- d) I saw the accident, either did my friend.

Learning Task	Objective	Answer Column
II	IIB	a
II	IIIB	d
II	VB	b
II	VIB	a

	Learning Task	Objective	Answer Column
18- I studied hard. She studied hard. a) I studied hard, also my friend. b) I studied hard, either did my friend. c) I studied hard, so did she. d) I studied hard, my friend too.	II	VIC	c
<u>Instruction:</u> Choose the correct combined from of the following statement	II	VIIB	d
19- I do not know to drive. My friend doesn't know to drive. a) I don't know to drive, nor is my friend. b) I don't know to drive, either does my friend. c) I don't know to drive, neither my friend does. d) I don't know to drive, neither does my friend.			
<u>Instruction:</u> Choose the alternative arranged in the right order.	II	VIIIA	c
20- Games/yesterday/played/in their room/ children a) Yesterday games children played in their room. b) Children yesterday in their room games played c) Children played games in their room yesterday. d) Games played children in their room yesterday.			
<u>Instruction:</u> Choose the correct words to fill in the blank	III	IB	a
21- He earns 300 Liras a) a week b) on a week c) in a week d) at a week.			

	Learning Task	Objective	Answer Column
<p><u>Instruction:</u> Choose the correct word to fill in the blanks in the sentences below</p> <p>22- How much do you eat everyday?</p> <p>a) vegetables b) bread c) fruits d) tomatoes</p>	III	IIA	b
<p>23- There are many in the plate</p> <p>a) chocolate b) food c) bread d) pieces of chocolate</p>	III	IIB	d
<p><u>Instruction:</u> Choose the correct word to fill in the blank in the following sentence</p> <p>24- In the fifteenth century ... people believed that the world was flat.</p> <p>a) much b) a little c) many d) quite</p>	III	IIIC	c
<p><u>Instruction:</u> Choose the question that can be asked in relation to the given situations below</p> <p>25- The factory has a number of engineers and the boss wants to know the number of engineers in the factory.</p> <p>a) How often do we employ engineers? b) How long these engineers have been working in the factory? c) How much do we pay them? d) How many engineers are there in the factory?</p>	III	IVA	d
<p>26- Ayse likes to study mathematics and she always gets good grades. Her friend wants to know the amount of time she spends a day on mathematics.</p>	III	IVC	a

	Learning Task	Objective	Answer Column
<p>a) How many hours do you study mathematics everyday?</p> <p>b) How long ago do you study math?</p> <p>c) How many time do you study math?</p> <p>d) What did you study last night?</p> <p><u>Instruction:</u> Choose the correct word to fill in the blank in the sentence below</p> <p>27- You watch the traffic lights when you cross the street.</p> <p>a) do</p> <p>b) must</p> <p>c) need not to</p> <p>d) dare to</p> <p><u>Instruction:</u> Choose the correct form of the verb to fill in the blank in the sentence below.</p> <p>28- I am going to the party on Saturday, so I buy that silk dress</p> <p>a) had to</p> <p>b) don't have to</p> <p>c) will have to</p> <p>d) has to</p> <p><u>Instruction:</u> Choose the correct word or words to fill in the blanks in the following statements.</p> <p>29- You have to taking too many pills, they'll do more harm than good.</p> <p>a) give up</p> <p>b) give in</p> <p>c) give away</p> <p>d) give way</p> <p>30- The nurse the babies in the nursey</p> <p>a) looks away</p> <p>b) looks forward</p> <p>c) looks back</p> <p>d) looks after</p>	<p>III</p> <p>III</p> <p>III</p> <p>III</p>	<p>VB</p> <p>VIA</p> <p>VIIA</p> <p>VIIB</p>	<p>b</p> <p>c</p> <p>a</p> <p>d</p>

RAW DATA: STUDENTS' SCORES ON TESTS

STUDENTS IN THE ML+IM CLASS	FIA	FIB	FIC	FIIA	FIIB	FIIC	FIIIA	FIIBB	FIIIC	SUMM.
1	14	14	14	13	14	14	12	12	12	29
2	9	13	13	11	14	14	9	11	9	28
3	13	13	13	14	14	14	14	14	14	27
4	12	14	14	15	15	15	12	12	12	28
5	10	8	9	11	14	14	6	9	8	28
6	12	12	12	12	14	14	14	14	14	27
7	12	13	13	15	15	15	13	13	13	28
8	12	13	13	14	14	14	12	12	12	23
9	11	13	13	13	14	14	11	12	12	23
10	13	13	13	16	16	16	14	14	14	29
11	13	13	13	13	14	14	13	13	13	28
12	11	12	12	12	15	15	11	8	10	22
13	13	13	13	15	15	15	12	12	12	28
14	11	12	12	11	14	14	14	14	14	27
15	12	12	12	15	15	15	12	12	12	27
16	11	13	13	13	16	16	13	13	13	23
17	9	13	13	10	11	12	12	12	12	27
18	12	12	12	16	16	16	13	13	13	27
19	13	13	13	15	15	15	12	12	12	29
20	13	13	13	13	15	15	14	14	14	27
21	13	13	13	12	14	14	9	10	12	23
22	12	11	11	13	14	14	10	12	12	26
23	11	9	9	9	12	13	6	7	12	17
24	13	13	13	16	16	16	11	9	12	28
25	11	12	12	14	14	14	7	11	13	27
26	12	12	12	14	14	14	13	13	13	27
27	13	13	13	13	14	14	13	13	13	27
28	12	13	13	16	16	16	13	13	13	27
29	14	14	14	13	14	14	10	8	12	22
30	12	13	13	16	16	16	11	7	12	27
31	12	10	13	14	14	14	12	12	12	27

RAW DATA: STUDENTS' SCORES ON TESTS

STUDENTS IN THE ML CLASS	FIA	FIB	FIC	FIIA	FIIB	FIIC	FIIIA	FIIIB	FIIIC	SUMM.
1	10	13	13	15	15	15	12	12	12	27
2	10	12	12	11	9	12	12	12	12	27
3	11	13	13	14	14	14	12	12	12	27
4	12	12	12	15	15	15	13	13	13	26
5	11	14	14	15	15	15	13	13	13	27
6	11	14	14	15	15	15	13	13	13	25
7	11	13	13	15	15	15	12	12	12	27
8	10	10	8	9	8	11	10	8	8	19
9	12	13	13	12	9	12	9	11	11	24
10	11	14	14	15	15	15	9	12	12	27
11	10	14	14	15	15	15	12	12	12	27
12	11	13	13	12	7	10	11	11	11	24
13	12	10	11	13	12	15	12	12	12	24
14	11	14	14	13	9	11	13	13	13	20
15	7	7	8	13	9	13	7	8	8	18
16	12	13	13	15	15	15	12	12	12	27
17	12	14	14	15	15	15	13	13	13	27
18	12	12	12	14	14	14	12	12	12	28
19	11	12	12	14	14	14	13	13	13	27
20	9	13	13	13	10	14	10	7	6	26
21	10	14	14	13	10	15	10	10	9	27
22	7	10	8	10	12	15	9	6	6	22
23	10	10	11	12	10	12	9	6	9	23
24	8	8	10	7	8	9	4	9	5	17
25	10	12	12	14	14	14	12	12	12	28
26	9	12	12	11	11	14	12	12	12	21

RAW DATA: STUDENTS' SCORES ON TESTS

STUDENTS IN THE Control CLASS	FIA	FIIA	FIIIA	SUMM.
1	13	15	11	23
2	14	15	8	18
3	9	10	8	15
4	10	11	14	21
5	13	14	13	18
6	13	13	12	22
7	11	15	14	23
8	13	13	9	19
9	13	15	14	25
10	13	16	10	22
11	10	14	10	24
12	9	9	10	20
13	13	14	12	23
14	13	14	11	20
15	13	13	12	25
16	13	15	12	24
17	9	11	9	25
18	13	11	11	22
19	13	14	12	20
20	13	15	12	21
21	13	15	8	21
22	9	9	14	18
23	8	10	12	22
24	13	13	9	28
25	9	11	13	15
26	13	13	8	23
27	10	13	8	17
28	10	14	8	23
29	9	10	11	23
30	8	9	7	23

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