Elementary School Teachers' Implementation of Diffrentiated Curriculum in Mixed Ability Classes

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ABSTRACT

The purpose of this study is to investigate the elementary school teachers' implementation of differentiated curriculum in mixed ability classes in Nicosia in the Turkish Republic of Northern Cyprus (TRNC). Quantitative data were collected from nineteen public and three private elementary schools to investigate the extent that differentiated curriculum is used in elementary grades. A total of 395 teachers participated in the study. For the pilot study 96 teachers participated and for the actual study data were collected from 299 teachers.

The scale for measuring differentiated curriculum prepared by Susan Hallam and Judith Ireson`s (2005) was translated into the teachers` native language, Turkish. The instrument prepared by the researcher comprises two sections with a total of 32 items; the first section consists of four items to elicit demographic features of the teachers (gender, school type, years of experience and grade level) and the second section is a Scale for Measuring Implementation of Differentiated Curriculum (SMIDC) which measures the participants' implementation of differentiated curriculum in mixed ability classes, and it consists of twenty eight statements which can be responded on a five-point Likert type scale.

The data obtained from the SMIDC scale were analyzed by using the Statistics Package for Social Sciences (SPSS) program. Analysis of the data included the elementary school teachers' implementation of differentiated curriculum and how

this implementation differed in terms of teachers` gender, school location, grade level, years of experience, and type of school (private or public). The findings revealed that elementary school teachers in the Nicosia district have positive views on the implementation of differentiated curriculum in mixed ability classes. Most of the teachers are aware of differentiated curriculum and they are implementing it in mixed ability classes. With regard to the differences between the implementation of differentiated curriculum and teachers` gender, school location, type of school, grade level, and years of experience, the findings show that there is a significant difference between the teachers` implementation of differentiated curriculum and the grade level they teach. However, it was found that there is no significant difference between the teachers' implementation of differentiated curriculum and teachers` gender, school location, school type, and years of experience.

ÖZ

Bu çalışmanın amacı farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda ilkokul öğretmenlerinin öğrencilerin düzeylerine göre müfredatın kulanımında farklılık yaratıp yaratmadıklarını araştırmaktir. Bu amaca ulaşabilmek için Kuzey Kıbrıs Türk Cumhuriyeti, Lefkoşa bölgesine bağlı ondokuz devlet ve de üç özel okuldan veri toplanmıştır. Bu çalışmaya, pilot çalışmaya 96 ve gerçek çalışmaya 299 olmak üzere toplam 395 öğretmen katılmıştır.

Veri toplamada nicel bir araştırma yöntemi kullanılmıştır. Susan Hallam ve Judith Ireson (2005) tarafından hazırlanan anket öğretmenlerin anadili olan Türkçe'ye çevrilmiştir. Araştırmada kullanılan anket toplam 32 soru içeren iki bölümden oluşmaktadır. İlk bölüm öğretmenlerin cinsiyet, okul çeşidi, mesleki kıdem ve ders vermekte olduğu sınıfı içeren dört sorudan oluşmaktadır. İkinci bölüm, farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda ilkokul öğretmenlerinin öğrencilerin düzeylerine göre müfredatın kulanımında farklılık yaratıp yaratmadıklarını ortaya çıkarmak için düzenlenmiş 28 sorudan oluşmaktadır.

Bu araştırmadan elde edilen veriler istatistiksel analiz yapan SPSS programı yardımı ile analiz edilmiştir. Bu bilgilerin analizi farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda ilkokul öğretmenlerinin öğrencilerin düzeylerine göre müfredatın kulanımında farklılık yaratıp yaratmadıklarını ve cinsiyet, okulun bulunduğu bölge, okul çeşidi, ders vermekte olduğu sınıf ve mesleki kıdem farklarına göre öğretmenlerin müfredatın kulanımında yaratıkları farklılıkların arasındaki değişiklikleri içermektedir. Bu çalışma sonucunda, Lefkoşa bölgesine bağlı bütün

devlet okulları ve özel okullardaki öğretmenlerin çoğunun, öğrencilerin düzeylerine göre müfredatın kulanımında farklılık yaratma konusunda hemfikir oldukları ve müfredatın kullanımında farklılık yaratmaya çalıştıkları tespit edilmiştir. Bu çalışmanın sonucunda, ders verilen sınıf ve cinsiyet faktörlerine göre farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda görev yapan ilkokul öğretmenlerinin öğrencilerin düzeylerine göre müfredatın kulanımında farklılık yaratıp yaratmadıkları incelendiğinde, aralarında farklılıklar olduğu görülmüştür. Ancak, okulun bulunduğu bölge, okul çeşidi ve mesleki kıdem faktörlerine bakıldığında, müfredatın kulanımında yaratılan farklılık ile bu faktörler arasında farklılık olmadığı görülmüştür.

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To my beloved husband Salahi

Thanks for your endless help, encouragement and patience...

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Chapter 1

INTRODUCTION

According to Tomlinson (2001), differentiating instruction means "shaking up what goes on in the classroom so that students have multiple options for taking in information, making sense of ideas, and expressing what they learn" (p.1). In this chapter, the background and the context of the study are described in detail followed by the problem statement, purpose of the study and the research questions. And finally, the significance and the limitations of the study are presented.

1.1Background of the Study

According to Tomlinson (2001), in mixed ability classes teachers are like a director of an orchestra and students are like different musicians that play different instruments. "There is a need to polish the performance of each individual musician so that the work of the whole is of quality" (Tomlinson, 2001, p.19). As a director of an orchestra teachers need to work on the performance of each student so that they achieve success individually. Tomlinson (2001) stated that in mixed ability classes teacher as a director of an orchestra that directs students to produce music not produce the music himself/herself. In other words teachers just guide the students to learn and then produce something on their own. As each human being is a unique creature, every educator has their own concept of curriculum. Even though these concepts belong to the teachers, teachers should take into consideration the needs of their students and according to these needs they should design their curriculum.

Young (1999) states that in the past, curriculum symbolized only an idea of knowledge and learning. So, it is completely concerned with conveying existing knowledge. Furthermore, Young asserts that, in the past a higher degree of value was given to the subject knowledge than it is given today. It was supposed that a hierarchy and limit existed between the school and everyday knowledge outside the school. Therefore, in the past it was a little problematic to transfer the school knowledge to everyday life, in other words, it was difficult to transfer the knowledge that was learned in school to the life outside the school.

Young (1999) also states that curriculum of the future symbolizes a concept of knowledge that can be used wherever you want on the world and this curriculum makes learners feel that they can manage to cope with the problems of life. In contrast to the curriculum in the past, this curriculum aims to focus on not only the transmission of the existing knowledge but also the creation of new knowledge. Thus, because the knowledge of this curriculum is relevant and applicable, learners will be able to solve their everyday life problems with the help of the knowledge they get from school.

Franks & Howard (1974) suggested that the curriculum of the future supports both linear and non-linear approaches to learning. It will also be student-centered in order to make students be aware of their entire being. Furthermore, curriculum will be flexible so that students will be able to make their own choices rather than to be forced to work for a single and common goal. Students will be bombarded with choices in this curriculum. With the help of this curriculum learners will learn how to be selective.

Today there are two basic questions that are asked about curriculum. Walker (1990, as cited in Terwel, 2005) has also mentioned about these two questions in his book. Should schools offer a common curriculum to all students at the same age or should they offer different curricula to different categories of students? As Simon (1985, as cited in McGarvey, Marriott, Morgan and Abbott, 1997), claimed differentiated curriculum means different curricula for different students. Hence, differentiated curriculum solves all the learning problems that occur in the classrooms. Differentiated curriculum is a curriculum that refers to a teaching which considers individual differences and needs of all students in the classroom. So, it is a curriculum that includes some adaptations and variations that are done by the teacher during instruction. According to McGarvey, et al., differentiated curriculum is a kind of curriculum that offers opportunities for development of all students of different abilities. According to Bell and Pearson (1992, as cited in McGarvey et al., 1997), differentiated curriculum is a curriculum that builds the lesson on the students' experiences because the students learn easily if they can relate the topic to their experiences, interests, background knowledge, and so on.

1.2 Context of the Study

Cyprus, an island located in the east of the Mediterranean Sea, has been divided into two parts as North and South since 1974. The North of the island is called the Turkish Republic of Northern Cyprus (TRNC) and Nicosia is the capital city of the TRNC. The research has been held in public and private primary schools located in rural and urban areas of Nicosia (more detailed information about the schools will be provided in Chapter 3). There are three phases in the educational system of the Turkish Republic of Northern Cyprus which are called Compulsory Basic Education, Secondary Education and Higher Education. Pre-school education (ages 3-6),

primary school education (ages 6-11, grades 1 to 5), and middle school education (ages 11-13, grades 6 to 8) are included in Compulsory Basic Education. High school education (ages 14-18) lasts four years starting from grade 9 which is a preparatory grade for the three year high school education. The last phase of the Educational system is Higher Education. High school diploma and success in a specific university entrance examination are required to get accepted to a university (www.mebnet.net). These universities are also under the supervision of the Ministry of National Education, Youth and Sport.

Common curricula are designed by the Ministry of National Education, Youth and Sports to be implemented in the same manner in all elementary schools and the teachers are urged to follow these curricula as they are prescribed by the Ministry. The researcher couldn't find any research study related to curriculum differentiation within mixed ability classes. It is known that students are randomly assigned to classes and this creates heterogeneous groups to be taught as a whole group and for instruction to be more effective, differentiated curriculum approach must be used in these mixed ability classes.

1.3 Problem Statement

As it was mentioned in Hallam and Ireson`s (2005) study many schools all around the world have mixed and structured ability classes. However, in TRNC, there are only heterogeneous classes in elementary schools. According to Skehan (1998, as cited in Millroad, 2002), a heterogeneous class consists of both successful and less successful learners and this situation is a real challenge for the teachers. In order to respond to the needs of all the students, teachers should provide a variety of curriculum during instruction. This can be done only with the differentiation of the

curriculum. As Tomlinson (1999, 2001) mentioned, the main aim of the differentiation is to aid teachers to notice the necessity of variability in instruction. So, in the TRNC elementary school teachers need to have knowledge about curriculum differentiation to solve learning problems that occur in their classes.

After a review of literature, the researcher could not find any studies in this area that has been conducted in the TRNC. For this reason, this study investigates the elementary school teachers' implementation of differentiated curriculum approach within the mixed ability classes. As a result of this study, it was planned to find out whether or not the teachers differentiate the curriculum in the elementary schools to inform related people, so that they may take necessary precautions to enhance learning of the elementary school students.

1.4 Purpose of the Study

The present study will focus on the elementary school teachers' implementation and awareness of differentiated curriculum in mixed ability classes and it tries to find out the differences in the teachers' implementation and awareness of differentiated curriculum with respect to their gender, school location, type of school (private or public), grade level and years of experience.

1.5 Research Questions

According to the purpose stated above the following research questions were set for the study:

1- How do elementary school teachers implement the curriculum in mixed ability classes?

2- How do the teachers' implementation of differentiated curriculum differ with respect to

a. gender
b. school location
c. type of school
d. grade level, and
e. years of experience?

1.6 Significance of the Study

This study can be considered as significant because although many studies related to the curriculum differentiation have been conducted in many countries, none were found in the TRNC. Thus, this study seeks to fill the void in the existing literature. In addition, it is very important to make the elementary school teachers to realize the significance and necessity of curriculum differentiation in mixed ability classes. This research can also help the related people to be informed about the importance of differentiating curriculum in heterogeneous classes to improve learning and to have a better educational system in the TRNC.

1.7 Limitations of the Study

The following limitation exists in this study. This study is restricted to elementary schools located in Nicosia, Turkish Republic of Northern Cyprus. Since the study was carried out in the Nicosia district only, generalizations cannot be made to all the elementary schools in the TRNC. Hence, further investigation of elementary schools in all the other districts in the TRNC is necessary to generalize the results of the study to all the elementary schools in the TRNC.

Chapter 2

LITERATURE REVIEW

The purpose of this chapter is to review the literature related to differentiated curriculum and how elementary school teachers implement differentiated curriculum in mixed ability classes. The chapter begins with the definition of the curriculum and continues by the history of the curriculum, differentiated curriculum and differentiated instruction. The following sections examine the principles and misperceptions of differentiated instruction. It is followed by teachers` role, what, how and why the teachers differentiate and strategies of differentiating content, process and product. Last two sections present learning environments and the students` position in a mixed ability class.

2.1 Definition of Curriculum

According to Ellis (2004) and Koo Hok-chun (2002), the word curriculum comes from the Latin word “currere” which means “a course to be run”. Different scholars give different definitions for curriculum by relying on whether they consider curriculum as a plan, an educational program, a learning experience, an actual occurrence, effects and so on. In reality, it is easier to explain what curriculum is rather than to define it. There are a lot of specialists that have their own explanations about what the curriculum is or ought to be. However, curriculum can be defined in two ways which are prescriptive and descriptive. Prescriptive definitions tell us what ought to happen. This type of curriculum is not in the form of a plan. However,

teachers eventually decide whether they will follow the prescription or not. In reality, the developers offer, but the teachers organize.

"Curriculum is a continuous reconstruction, moving from the child's present experience out into that represented by the organized bodies of truth that we call studies… the various studies… are themselves experience- they are that of the race" (Dewey, 1902, p. 11-12). In addition, "Curriculum is the entire range of experiences, both directed and undirected, concerned in unfolding the abilities of the individuals" (Bobbitt, 1918, p.43, as cited in Glatthorn, 2005). "Curriculum is a succession of experiences and enterprises having a maximum lifelikeness for the learner… giving the learner that development most helpful in meeting and controlling life situations" (Rugg, 1927, p.192, as cited in Glatthorn, 2005). Caswell and Campbell (1935) stated that all the things that the student experience with the help of the teacher is called curriculum (as cited in Glatthorn, 2005). The definition of Tyler (1957) is very similar with Caswell and Campbell. According to Tyler (1957), all the experiences planned by the school is called curriculum. "A curriculum usually contains a statement of aims and of specific objectives; it indicates some selections and organization of content; it either implies or manifests certain patterns of learning and teaching… Finally, it includes a program of evaluation of the outcomes" (Taba, 1962, p.11). "Curriculum is a sequence of content units arranged in such a way that the learning of each unit may be accomplished as a single act, provided the capabilities described by specified prior units (in the sequence) have already been mastered by the learner" (Gagne, 1967, p.23). Kliebard (1998) claimed that " what we call the American curriculum is actually an assemblage of competing doctrines and practices" (p.21). "The word curriculum means output of the curriculum

development process that is intended for use in planning instruction" (Schiro, 1978, p.28). According to Wiles (2009), there are three main definitions of the curriculum. First, he claimed that some people defines curriculum as a series of documents such as books. Second, many people describes curriculum as a set of school experiences and lastly, Wiles identified that "curriculum is drawn from outcomes or results" (p.2).

According to Hopkins (1941, as cited in Coonor & White, 1942), you can reach a good life by only experiencing it, so the curriculum is made of these experiences required to live in the school. He believes that curriculum is selected by teachers, parents and children. Smith, Stanley and Shores (1957, as cited in Stirling, 1997) claim that curriculum is "a sequence of potential experiences is set up in the school for the purpose of disciplining children and youth in group ways of thinking and acting" (p.3). According to Brimfield (1992), curriculum is a study of learning and making this learning take place. Eisner (1985) states that curriculum can be considered as planned events. Tanner and Tanner (1975) support that curriculum is all instructional experiences which are designed by teachers to help learners develop. Grundy (1987) considers curriculum as a way of designing human practices. Young (1999) refers curriculum as a way of asking questions about how ideas, knowledge and learning are connected to educational purposes and also according to him curriculum is a way of asking questions about society and what kind of a citizen the society wants the young people to turn into. According to Alpren and Baron (1973), curriculum is a planned material for future learning.

Although a lot of definitions of curriculum have appeared in the literature, most of the specialists and writers defined it as Ralph Tyler did. According to Tyler (1949), curriculum is a learning process which is designed and applied by the schools both in the classes and also outside. In other words, everywhere.

To sum up, there are only three main definitions of curriculum in the literature. According to Beauchamp (1957), the first one considers the curriculum as what the children experience in school. The second one refers curriculum as social needs for education and the last one refers curriculum as the psychological changes occur in people because of the school activities.

2.2 History of curriculum

According to Young (1999), in the past, curriculum symbolized only an idea of knowledge and learning. So, it is completely concerned with conveying existing knowledge. Also, in the past a higher degree of value was given to the subject knowledge than it is given today. It was supposed that a hierarchy and limit existed between the school and everyday knowledge outside the school. Therefore, in the past it was a little problematic to transfer the school knowledge to everyday life, that is to say, it was difficult to transfer the knowledge that was learned in the school to life outside the school.

Furthermore, Young (1999) explains curriculum of future as an idea of knowledge that can be used wherever you want on the world. He also mentioned that this curriculum makes learners feel that they can perform in the world. In contrast to the past, this curriculum aims to focus on not only the new knowledge but also conveying the new knowledge to the existing knowledge. Thus, because of the

knowledge of the future curriculum is relevant and applicable, learners will be able to solve their everyday life problems with the help of school knowledge.

Franks and Howard (1974) suggest that the curriculum of the future supports both linear and non-linear approaches to learning. It will also be student-centered in order to make students be aware of their entire being. Furthermore, curriculum should be adaptable so that students can be able to make their own choices rather than forcing everyone to work for a single, common goal. Students will have variety of choices in this curriculum. With the help of this curriculum, learners will learn how to be selective.

2.3 Differentiated Curriculum

Today there are two basic questions that are asked about curriculum. Walker (1990, as cited in Terwel, 2005) has also mentioned these two questions in his book. Should schools offer a common curriculum to all students at the same age or should they offer different curricula to different categories of students? Simon (1985, as cited in McGarvey, Marriott, Morgan and Abbott, 1997), described differentiated curriculum as different curricula for different students. Hence, differentiated curriculum solves all the learning problems that occur in classrooms. Differentiated curriculum is a curriculum that refers to a teaching which considers individual differences and needs of all the students in the classroom. So, it is a curriculum that includes some adaptations and variations that are done by the teacher during the instruction. According to McGarvey et al. (1997), differentiated curriculum is a kind of curriculum that offers equal opportunities for development of all students of different ability. According to Bell and Pearson (1992), differentiated curriculum is a curriculum that conveys the lesson to the students experiences so that students learn

easily by relating the new knowledge to their experiences, interests, background knowledge and so on.

2.4 Differentiated Instruction

As it is known a curriculum consists of instructions and in order to differentiate the curriculum, instructions should be differentiated first. “What we share in common makes us human. How we differ makes us individuals” (Tomlinson, 2001, p.1). Therefore, in the mixed ability classrooms, there are always a variety of students and every good teacher differentiates her instruction according to her students` characteristics, learning styles, interests and so on. Although some of the teachers are not able to define what differentiated curriculum or instruction is, they apply it in their lessons without knowing what it is. (Strickland, 2004). Tomlinson (1999 and 2001) mentioned that the main aim of differentiated instruction is to aid teachers to notice the necessity of variability in instruction. For this reason, differentiation of instruction is a teaching and learning philosophy that takes into consideration the multiplicity of the students. This teaching and learning philosophy is very flexible, because background knowledge, readiness, language, preferences in learning and interests of the students are different. In other words, differentiated instruction is a way of teaching which supports the learning process when the teacher considers the variance in the students’ level of readiness, interests and learning profiles (Tomlinson, 2001). According to the researchers at the National Center on Accessing the General Curriculum, differentiated instruction is a process of teaching and learning for students of a mixed ability class. As Tomlinson (1999) explained, “Differentiated instruction isn’t a strategy. It`s a way of thinking about all you do when you teach and all that the kids do when they learn” (p.96). The aim is to enable each student to develop and raise individual success by modifying the curriculum

according to their needs, not expecting the students to modify themselves for the curriculum (Hall, 2002; Tomlinson and Cooper, 2006).

To sum up, Tomlinson (1999, 2001, and 2005) stated that differentiated instruction is proactive. It accepts that learners differ in terms of their needs. It is also qualitative which gives importance to the nature of the assignment. Differentiated instruction is both student centered which enables learners to be active participants in learning, and organic which means teachers and students learn together. It is also rooted in assessment. Assessment is the most important thing for the teacher who is aware of the needs of the students, because assessment helps to get more information about readiness, interests and the learning profile of the students in order to decide how to adapt the instruction to cover the needs of the students. Differentiated instruction provides variety in content, process and product stages of the lesson. Finally, it is flexible in grouping also (Tomlinson and Allan, 2000).

2.5 Principles to Guide Differentiation of Instruction

" A mistake we often make in education is to plan the curriculum materials very carefully, arrange all the instruction materials wall to wall, open the doors of the school, and then find to our dismay that they`ve sent us the wrong kids" (Eisenhart, 2007, p.8). Usually, teachers of a mixed ability class feel as Eistenhart (2007) described. Indeed, Tomlinson (2004 and 1999) mentioned that there is no one size that fits all. But some of the teachers are not aware of these learner differences. All students want to go to the same way. However, because of their differences, they have to take different roads. And teachers need to be their assistants on these rough roads. According to Vygotsky (1978), students can`t learn alone and for their Zone of Proximal Development (ZPD), they need teachers to scaffold and support them to get

ready. According to Tomlinson (1999), there is more than one principle that guides differentiation of instruction.

First, the curriculum must be high quality and high quality means before designing it is necessary to do a needs and interest assessment in order to have a useful and appropriate instruction (Tomlinson, 1999; Tomlinson& Strickland, 1995). According to Tomlinson (1999, 2001 and 2004), a high quality instruction clearly focuses on the basic disciplines, successfully engages students, is enjoyable and satisfying, provides choices for everyone, allows for meaningful collaboration, focuses on products, connects to students` lives, is fresh and surprising, is real, coherent and challenging to the student, allows students to use what they learn in interesting ways and involves the students to set goals and to assess progress.

Second principle is about teaching essentials. Clarity is very important for students for having progress. Students learn easily and quickly if the new knowledge is meaningful and interesting. Thus, the teacher decides what is essential and helps less able students to focus on essentials rather than get lost in meaningless facts. On the other hand, the teacher helps more able students to progress through complexity rather than repeating the existing knowledge (Tomlinson, 1999).

The third principle is about student differences which is the main reason for curriculum differentiation. As a human being we are all different. So it is very usual to have students who differ in ability, knowledge, skills, interests, experiences and so on. The teacher helps all students by accepting them as individuals and meeting their needs (Tomlinson, 1999; Glatthorn, 1994).

The fourth principle is about assessment. According to Tomlinson (1999), in differentiated classrooms, "assessment is ongoing and diagnostic" (p.10). Ongoing assessment includes pre-assessment which is done before the learning begins, while-assessment which is done during the instruction and post-assessment which is done at the end of the experience. Ongoing assessment is very important in order to differentiate the curriculum/instruction effectively. Teachers can get information about students` readiness, interests and learning profiles with the help of ongoing assessment. According to differentiated curriculum, assessment doesn't mean only a mechanic formal test which is done at the end of each unit to see who got the new knowledge and who didn't. It can be done both in formal and informal ways such as discussions, homework assignments and portfolio entries. Teachers can gather information about students by diagnostic skill tests, formal chapter pre-tests, readymade interest inventories, learning style questionnaires and so on. Also it can be done by observing the students. Another way of gathering information is asking directly to the students or to their parents for the information (Strickland, 2004; Tomlinson, 1999, 2001 and 2004; Tomlinson& Strickland, 1995).

The fifth principle is about modifying the stages of the lesson. Teachers need to do some modifications in the curriculum to meet the needs of all the students**.** There are three main elements that need modification according to the students` readiness, interests and learning profiles. These three elements are content, process and product. Content stage is related with the input of the lesson that is to say it is the new topics that are introduced and what the teacher wants the students to learn at the end of the lesson. Access to the content is very important, so variety of methods are used to support instructional content such as observing, reading, listening and doing.

According to Tomlinson and Strickland (1995), process often means activities. In the process stage, students make their own sense of the content with the help of the variety of methods used by the teacher such as writing, speaking and drawing. In this stage flexible grouping is essential. Product stage is where students show how much they have learned and again in this stage students need a variety of activities to demonstrate their understanding. It is better to do it during the instruction of a section to understand what the students have learned rather than doing it at the end of each section. Also assessment must be done in an informal way not with a formal test (Theisen, 2002; Hall, 2002; Tomlinson& Strickland, 2005; Tomlinson, 2001, 1999 and 1995; Bosch, 2001). According to The United Nations Educational Scientific and Cultural Organization (2004), observation is the best way to assess students in a mixed ability class. According to Tomlinson (1999), modification must be done only if it is needed and if it increases the willingness of the students.

The sixth principle is about respectful tasks. Students want to feel respected. So, activities of instruction must be respectful, that is to say, neither too easy nor too difficult. The teacher can respect the students by being aware of their learning differences. So, the teacher tries to understand what each student needs to learn and offer them appropriate tasks. Students are not expected to work with activities that are developmentally inappropriate, too challenging, not connected with their lives and different form their life experiences. In addition, respectful activity is something that provides equal opportunities for everyone. With the help of respectful activities not only the advanced ones but all students are expected to achieve the goals of the lesson and proceed as quickly as possible. (Tomlinson, 1999, 2001 and 2004; Tomlinson and Stickland, 1995).

The seventh principle is about teacher and student collaboration in learning. In differentiated curriculum, teacher is the leader of the classroom but he/she is very close to the learners. The teacher is like an assistant. She observes the students all the time and provides support whenever it is needed. In other words, differentiated curriculum is student centered (Tomlinson, 1999).

The eighth principle is about grouping. Flexible grouping is very important while grouping the students for instruction. In a class that differentiated curriculum is used all kinds of grouping take place. The solution for effective grouping is to be aware of the characteristics of the students. While grouping students, the teacher must be very careful about students' feelings. Students need to see themselves as learners with a variety of strengths and weaknesses that can make meaningful contributions in the classroom, not as learners who are always in the low or high groups. Students are grouped according to different parameters. One day they can be grouped according to their reading levels, another day they may be grouped according to their interests. Another time they may be put in a heterogeneous group through variety of ways of working (Tomlinson, 1999, 2001and 2004; Tomlinson and Strickland, 1995).

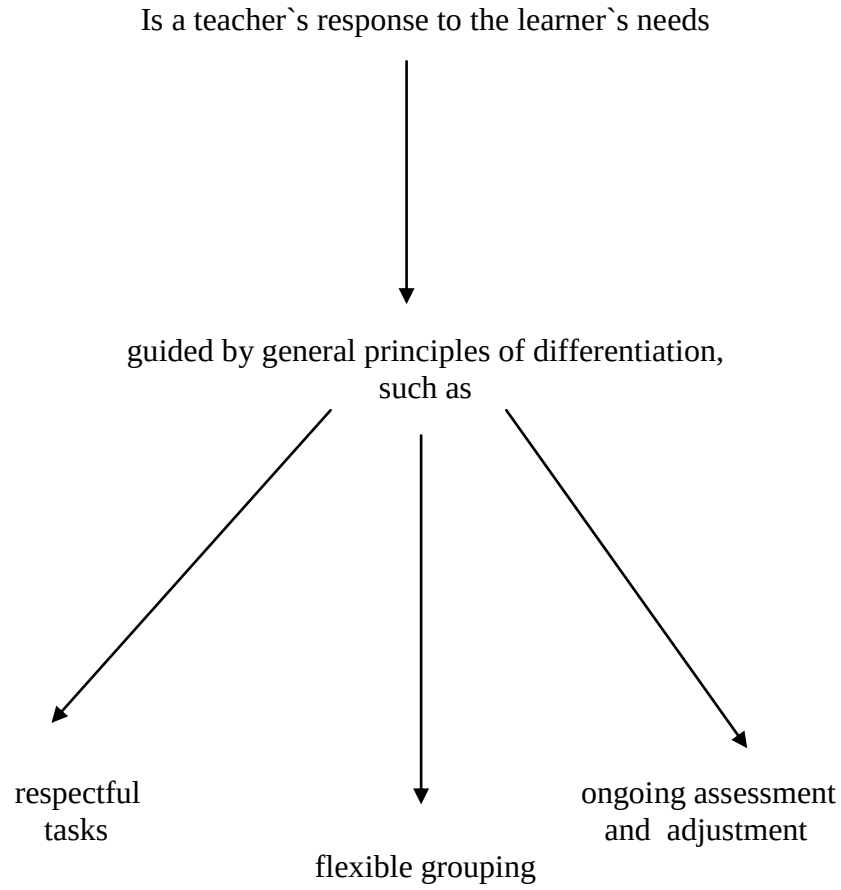

Figure 2.1 summary of differentiation of instruction. (Tomlinson, 1999, p.15)

2.6 Misperceptions of Differentiated Instruction

According to Tomlinson (1999, 2001) and Tomlinson and Allan (2000), there are some misconceptions of differentiated curriculum. First, differentiated instruction is proactive not individualized. Teachers notice different needs of different students and plan a variety of ways of expressing learning but not planning different things for each learner because it is very demanding for the teachers.

Second, it is not chaotic. Students are not free to do whatever they want. Teacher observes and directs the activities simultaneously. The classroom doesn't have an undisciplined atmosphere; it includes purposeful progress and student talking.

Third, it is another way of homogeneous grouping. It is not separating the class into less able, average and more able. In other words, it doesn't mean putting all high students in one group together all the time. It is flexible in grouping and it groups students according to the nature of the tasks not according to their weaknesses and strengths. It is a blend of whole class, group and individual instruction.

Fourth, it is not quantitative. It gives importance to the nature of the assignments rather than the quantity of the assignments.

Finally, differentiation isn't something that the teacher does when only there is some extra time and it doesn't have a special recipe .

2.7 Teachers` Role

Tomlinson (2001) asserts that:

> There is no recipe for differentiation. Teachers construct differentiated classrooms in varying ways depending on their own personalities, the nature of the subject and grade level they teach, and the learning profiles of their students. These teachers have at least two things in common, however: a conviction that students differ in their learning needs and a belief that classrooms in which students are active learners, decision makers, and problem solvers are more natural and effective than those in which students are passive recipients of information (p.27).

In order to be a successful teacher in using differentiated instruction/curriculum,
the starting point of the teacher is not the curriculum guide, it is his/her students. Teachers implementing differentiated curriculum know who they teach. They are

aware of learner differences so they are ready to get all the students into the lesson through a variety of instruction and with some modifications. These teachers also know what they teach and how they teach. They use a variety of methods and activities to make students discover the content of the curriculum. Also during the learning and teaching process teachers use a variety of content to make all the students comprehend the information and ideas, and provide a variety of opportunities to make students show and prove what they have learnt. In other words, these teachers offer a variety of opportunities during the content, process and product stages of a lesson (Tomlinson, 1995, 1999 and 2001; Tomlinson& Strickland, 2005). As a teacher in a mixed ability class, modifying the curriculum by offering alternatives during the stages of the lesson is very important because it makes all the learners feel secure and ready for learning. So these teachers have a very active and sometimes very demanding role in this progress. In this situation, with the help of differentiated instruction, there is more access to learning by more students (Tomlinson, 1999 and 2001). According to Tomlinson (2001), teachers of differentiated curriculum describe themselves as "organizers of leaning opportunities" (p.16), because they design their lessons in terms of students` interests, learning profiles (students differ in how they learn and interact with new knowledge) and readiness (students don't progress at the same rate). According to Tomlinson (1999), "In differentiated classrooms, teachers ensure that a student competes against himself as he grows and develops more than he competes against other students" (p.2). As it was mentioned before, every student has their own map of road that they follow to make progress. Teachers of differentiated curriculum know that each student has his/her own way of learning. These teachers are coaches of their classes and they believe that being successful as a student means following hard

work. Thus, they give students some work which is a little difficult for their level and provide help whenever it is needed. In other words, these teachers support Vygotsky`s (1978) Theory of Zone of Proximal Development (ZPD) and scaffolding to help students get ready. In addition, these teachers use time effectively and flexibly. They, like art artists, shape the curriculum to address the needs of all the students. They don't have standards in teaching; they use alternatives because they accept learners as individuals. According to Tomlinson (2001) "Differentiation doesn't suggest that a teacher can be all things to all individuals all the time. It does, however, mandate that a teacher create a reasonable range of approaches to learning much of the time, so that most students find learning a fit much of the time"(p. 17).

Millroad (2002) carried out a qualitative study about the teachers` perceptions of mixed ability classes and learning profiles of the students in Russia. Teachers were interviewed and the results of the study showed that although teachers were aware of the necessity of individualizing the task, they did not use a certain strategy to deal with these heterogeneous classes and they taught the whole class. In addition, teachers mentioned that unsuccessful learners had poor communicative skills. On the other hand, students were asked to assess themselves with a designed self assessment chart. It was discovered that unsuccessful learners described themselves as listeners and writers rather than readers and communicators. Also it was found out that they preferred analyzing rather than memorizing. However, it was discovered that successful learners described themselves as readers, speakers, communicators and analyzers rather than listeners and writers.

Tomlinson (1995) carried out a qualitative case study to understand middle school teachers' implementation of differentiated instruction in mixed ability classes

(heterogeneous classes) in Midland. It was discovered that the teachers of Midland described differentiated instruction as individualization or tailoring. According to Shulman (1987), the definition of the differentiated instruction is individualization and tailoring too. However, Tomlinson (2001) describes curriculum as proactive rather than individualized. The results also showed that these teachers think that differentiated instruction is reactive rather than proactive. Also, they don`t do any modifications in content, process and product. In other words they use a single lesson for all students.

The study of Renick (1996) tried to find out if the first year educators use the knowledge of differentiated teaching strategies in their classrooms. And it was found that although the teachers received education about differentiated instruction, they weren`t ready to meet the needs of all the students.

McGarvey, Marriott, Morgan and Abbott (1997) conducted a research about experiences of teachers in Northern Ireland in primary schools and they found out that teachers were trying to use differentiated instruction. However, they struggled with lots of difficulties because they didn’t have proper knowledge on differentiation.

Manson (1999) carried out a study with teachers in California and Kansas on how the teacher education programs prepare teachers for working in mixed ability classes. According to Manson (1999) and Tomlinson (1999), most of the teacher education programs don’t prepare tomorrow`s teachers to deal with the increasing variety of students, in other words, to meet the needs of diverse learners.

McGarvey, Marriott, Morgan and Abbott (1998) held a study regarding the experience of Northern Ireland primary teachers about the approaches to differentiation in the core subjects. They proved that the needs of all students may not always be met because teachers considered differentiation impossible. Thus, they mentioned that they could only make provision for a small number of groups.

2.8 Differentiating: What, How, Why

According to Tomlinson (1999, 2001), there are three questions that need to be answered when you have a mixed ability class.

2.8.1 What does a teacher differentiate?

The whole thing that the educators teach is curriculum and they differentiate it during instruction. As it was mentioned before, the teacher modifies the elements of instruction (content, process, and product) according to the needs of their students (Tomlinson, 1999, 2001; Tomlinson and Strickland, 2005).

The figure 2.2 was designed by Tomlinson (1999) to summarize the differentiation through content, process and product.

2.8.2 How does a teacher differentiate?

Teachers differentiate instruction according to readiness, interests and learning profiles of students. Readiness of students is related with their understanding. The level of readiness is different for more able and less able students. More able students are quicker and they need more complex activities to be ready while less able students need some guidance, more opportunities and more structured activities. The aim of differentiation of readiness is to help learners zone of proximal development (ZPD) by giving them a little too difficult work and then provide them support to succeed. Interest of students is related to a specific topic that students are interested

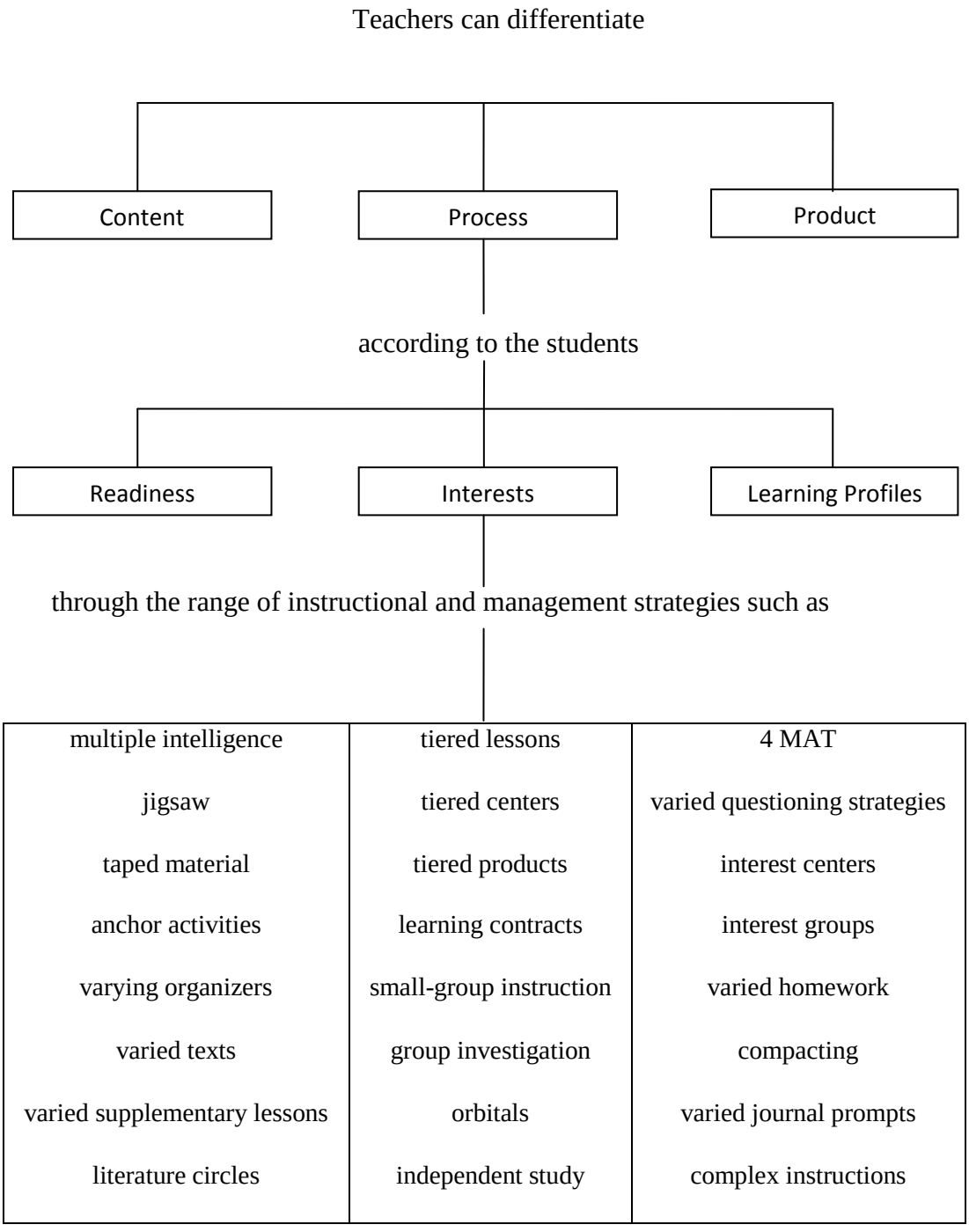

Figure 2.2 summary of differentiation through content, process and product.

(Tomlinson, 1999, p.15).

in and curious to learn more about it. The aim of differentiation of curriculum is to make students find a relation between the taught knowledge and their interests. Thus, meaningful learning takes place. Learning profile is related to the way students learn. Gender, culture, experiences, learning styles and intelligence etc. form the learning profile of the students. The aim of the learning profile differentiation is to help students to discover how they learn best. Howard Gardener (1983) considers students as having a variety of intelligences and he states that in order to do differentiation in learning, student strengths and weaknesses must be taken into consideration and he believes his multiple intelligence theory (verbal-linguistic, logic-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, interpersonal, intrapersonal and naturalist intelligences) is a way to differentiate curriculum according to learning profiles (Tomlinson, 1999, 2001; Tomlinson and Strickland, 2005).

2.8.3 Why does the teacher differentiate?

According to the teachers, in mixed ability classes, if the new knowledge is inaccessible, it is impossible to learn. Also, if the students are not motivated, it is again impossible to learn and lastly if the materials are too difficult or too easy, in other words not appropriate to the level of students, it is difficult to learn, too. Thus, teachers need to differentiate instruction in a mixed ability class to enable all students to learn (Tomlinson, 1999, 2001).

2.9 Learning Environments

According to Tomlinson and Cooper (2006) success can take place in a classroom that has some characteristics written below:

1. It is challenging and supportive.
2. It is safe and affirming.
3. It gives importance to the uniqueness of each individual.

4. It accepts learners as they are.
5. It gives each student a role and makes them feel appreciated by the others in the class.
6. It allows all students to participate in respectful work.
7. It allows the teacher and the students work in collaboration.
8. It aims to reach maximum individual growth and success.

A study was conducted by Rock, Greg, Ellis and Gable (2008). They tried to find out the effect of differentiated instruction at two school districts. This study followed one of the school for five years and another school for four years. The results revealed that the success of the students increased during this study. A similar study conducted by Beechen and Sweent (2008). They worked within an elementary school for eight years. At the end of these eight years, it was discovered that performance and achievement of the students increased. Brimfield, Masci and DeFiore (2002) conducted a study in a new school which was implementing differentiated instruction into their classes. It was discovered by the teachers that students were more motivated and successful.

2.10 Students` Position

According to Tomlinson(1999), in mixed ability classes students need to be the main workers and thinkers of the lesson because learning occurs when students have the chance to practice. Students have different level of readiness. Thus both more able and less able students need help to get ready. Less able students need more time to practice than more able students. On the other hand, more able students need to move quickly so they need more transformational tasks while less able students need foundational tasks. In addition, in mixed ability classes, students` way and pace of

learning are not the same. Moreover, students want to feel listened, safe and accepted as they are (Tomlinson, 2002).

Breaux and Magee (2010) provided the following poem, written by Breaux which represents the general voice of the students in mixed ability classes:

I am me, I am not you
I can hear you when you speak
I listen, but I do not understand
If I cannot understand today, and could not understand yesterday
I will not understand tomorrow
You can say it again and again, over and over
The same old way
But it means nothing
I do not disrespect you; I simply do not understand you.

When you show me, the picture becomes clearer
Like a light illuminating a darkened room
Where before I was scared and lost
The picture is familiar, and I feel that I have been there
I am able to connect and would like to see more.

When you allow me to do it, I understand
It makes sense, so I embrace it
You assist me at first, but I am comfortable when set free
I will not quit, because now I am involved

I yearn to do more

Please allow me, and

I will show you that I can learn… (p.1)

Stavroula, Leonidas and Mary (2001) conducted a quantitative study with 479 elementary school students to find out the impact of differentiated instruction in mixed ability classes in South Cyprus. Their experimental group consisted of 14 classes which received differentiated instruction and their control group consisted of 10 classes which didn`t receive any differentiated instruction. They used multiple sources to collect data and findings showed that there was a significant difference between students` success taught by differentiated instruction and students who didn`t receive any differentiated instruction.

2.11 Gaps in the Literature

According to the literature review, one major gap has been discovered. Most of the studies conducted research on how education programs prepare teachers for working in mixed ability classes. Some studies qualitatively analyzed the perceptions of middle school teachers about differentiation of the curriculum. On the other hand, a few studies were conducted in the primary schools to analyze the impact of differentiated instruction in mixed ability classes. Yet, no empirical research has been conducted on the elementary school teachers' implementation of differentiated curriculum in mixed ability classes and the differences in the teachers' implementation of differentiated curriculum with respect to their gender, school location, type of school (private or public), grade level and years of experience.

Chapter 3

METHOD

This chapter describes how the aims and purposes of the research are translated into a practical study and it has been arranged into the following sections: Research Design, Population and Sampling Procedures, Ethical Considerations and Getting Consent from the Ministry of Education, Data Collection, Data Analysis, Validity and Reliability, and Limitations.

3.1 Research Design

A researcher has to think about idealism and reality, between what could be done and what will actually work (Cohen, Manion and Morrison, 2000). According to Creswell (1994), quantitative research is a deductive process which deals with numerical measurements. This method aims to get numerical data from a specific group of people. The researcher has to define the research questions well. According to quantitative research techniques, the numerical data is analyzed using methods based on mathematics and statistics. This study has clearly defined research questions and quantitative research methods were chosen to be a proper way to collect data.

The main emphasis of this study is to collect and analyze data about elementary school teachers` implementation of differentiated curriculum approach within the mixed ability classes. The study tries to find out how elementary school teachers

implement differentiated curriculum in mixed ability classes and how teachers' implementation of differentiated curriculum differ with respect to gender, school location, type of school, grade level and years of experience.

3.2 Population and Sampling Procedures

In this study, the population under investigation includes all elementary schools in Nicosia. Nicosia district will be chosen as the region for the study, since Nicosia can be considered as a pilot region for representing all the schools in North Cyprus. In the Nicosia district there are 518 teachers. All teachers in the Nicosia district will be included in the sample which will yield a sample size of 518 teachers.

The study was conducted in nineteen public schools and three private schools. The exact number of elementary school teachers in Nicosia district was found 518. Near East Junior College was used for the pilot study. There were 100 teacher and 96 of them attended the pilot study. For the actual study there were a total of 418 teachers and 370 teachers were reached. Out of 370 teachers, 299 teachers completed and returned the instrument which is the 80.81% of the total number of teachers that was reached. Number of the participants for the pilot and the actual studies are shown in Table 3.1.

Table 3.1 Number of the participants for the pilot and the actual study

	Pilot Study	Actual Study
Number of teachers	100	418
Number of teachers reached	100	370
Number of instruments completed	96	299
Turn-around percentage	96%	80.81%

There were 184 (61.5%) female teachers and the remaining 115 (38.5%) were male. Ninety six (32.1%) participants were from rural schools and the rest 203 (67.9%) were from urban schools. Two hundred and seventy five (82%) participants were from public schools and the remaining 24 (8%) were from private schools. Fifty eight (19.4%) participants were 1st . grade teachers, 61 (20.4%) were 2nd grade teachers, 63 (21.1%) were 3rd grade teachers, 48 (16.1%) were 4th grade teachers and 69 (23.1) were 5th grade teachers. Five (1.7%) participants had experience between 1-2 years, 13 (4.3%) participants had experience between 3-5 years, 48 (16.1%) participants had experience between 6-10 years, 162 (54.2%) participants had experience between 11-20 years, 71 (23.7%) participants had more than 20 years of experience. (The participants` demographic information is shown in Table 3.2)

Table 3.2 Demographic information of the participants (N=299)

		NUMBER OF TEACHERS	%
Gender	Female	184	61.5
	Male	115	38.5
School Location	Rural	96	32.1
	Urban	203	67.9
School Type	Public	275	92
	Private	24	8

(table continues)

Table 3.2 (continued)

		NUMBER OF TEACHERS	%
Grade Level	1st Grade	58	19.4
	2nd Grade	61	20.4
	3rd Grade	63	21.1
	4th Grade	48	16.1
	5th Grade	69	23.1
Years of Experience	1-2 Years	5	1.7
	3-5 Years	13	4.3
	6-10 Years	48	16.1
	11-20 Years	162	54.2
	20 Years and more	71	23.7

3.3 Ethical Considerations and Getting Consent from the Ministry of National Education Youth and Sports

3.3.1 Anonymity

The names of all teachers have been kept to ensure confidentiality. Teachers were mentioned as female teachers from public or private schools and male teachers from public or private schools. So the anonymity of the participant teachers is protected.

3.3.2 Permission

Permission was taken from the Ministry of National Education Youth and Sports before data collection. The ministry asked for documents related to the study ans after supplying these documents, permission were given to carry out the study (see Appendix A).

3.4 Data Collection

To investigate the elementary school teachers' implementation of differentiated curriculum approach within mixed ability classes, data were obtained both from public and private schools in the Nicosia district of the Turkish Republic of Northern Cyprus. Together with the pilot study, 395 teachers participated in the study. Total participants of the study include 120 private school teachers and 275 public school teachers.

3.4.1 Developing the Data Collection Instrument - Questionnaire

The study started by employing a pilot study which involved all elementary school teachers of Near East Junior College in Nicosia. The purpose of the pilot study was to check the reliability and validity of the translated questionnaire.

While some research was being carried out for the literature review, Susan Hallam and Judith Ireson`s questionnaire (2005) was found valuable and appropriate for this study.

The researcher provided them the necessary information about her study and she asked for permission to use the translated form of their instrument (see Appendix B). The instrument was revised and adopted to the TRNC context (see Appendix C1). The instrument seeks to investigate elementary school teachers' implementation of differentiated curriculum in mixed ability classes. There are two sections of the instrument. The first section of the instrument includes four items to elicit demographic features of the teachers (gender, school type, years of experience and grade level) and the second section is a scale which aims to measure the participants' awareness and degree of implementation of differentiated curriculum, and it consists of twenty eight statements. A five point Likert-type scale has been used to assess the responses of the participants.

Each statement is rated as given as below:

strongly agree = 5, *agree = 4*, not Sure = 3, *disagree = 2*, and *strongly disagree =1*. Out of twenty eight items, twenty six of them are positive statements and the remaining two are negative. Coding of positive statements were done according to the rating given above and the negative statements are reverse coded as *strongly agree = 1, agree = 2, not sure = 3, disagree = 4, strongly disagree = 5.*

The scale which was designed and used by Sussan Hallam and Judith Ireson (2005) was translated into Turkish by using translation and back-translation method and tested for validity and reliability(see Appendix C2).

3.4.2 Administration of the Data Collection Instrument- Questionnaire

All public and private elementary schools of Nicosia region (9 Eylül İlkokuku, Şht. Doğan Ahmet İlkokulu, Şht. Yalçın İlkokulu, Gelibolu İlkokulu, Şht. Ertuğrul İlkokulu, Şht. Tuncer İlkokulu, Arab Ahmet İlkokulu, Atatürk İlkokulu, Çağlayan İlkokulu, Necati Taşkın İlkokulu, Dilekkaya İlkokulu, Hamitköy İlkokulu, Haspolat İlkokulu, Değirmenlik İlkokulu, Minareliköy İlkokulu, Balıkesir İlkokulu, Cihangir İlkokulu, Gönyeli İlkokulu, Alayköy İlkokulu, Levent İlkokulu, Future American İlkokulu ve Near East İlkokulu) were chosen for this study. The researcher personally talked to the school head-masters and informed them about the study and visited their schools to give out the questionnaires to all teachers. The questionnaire was administered in March 2011.

3.5 Data Analyses

The data was analyzed through the SPSS program. First of all, the mean, the standard deviation and the frequencies of each variable was computed as descriptive statistics. Then, to answer the first research question, frequencies of each statement in the questionnaire were analyzed separately to find out how elementary school teachers implement the differentiated curriculum in the mixed ability classes. In addition, one sample t-test was conducted to analyze elementary school teachers` implementation.

To answer the second research question, independent samples t-test and ANOVA were conducted to evaluate how the teachers' implementation of differentiated curriculum differ with respect to gender, school location, type of school, grade level and years of experience.

3.6 Validity and Reliability

First of all, the original questionnaire was translated into Turkish. In order to understand whether the translated statements have the same meaning with the original ones, a back-translation procedure was used. All translated statements were given to one of my colleagues who is a native speaker of English. He was asked to translate the given Turkish statements into English. Both the original and the back translated statements were compared and it was found that they both have exactly the same meaning. That is to say, the original questionnaire was successfully translated into Turkish.

After the translation was completed that three of my colleagues were asked to examine the statements of the questionnaire in order to ensure face validity. It was decided that the design of the questionnaire and all statements were clear and understandable. Validity means a valid instrument. In other words, if "a questionnaire measures what it purports to measure", it is a valid instrument (Cohen et al., 2000, p.105). Thus, in order to ensure content validity, my supervisor and other two experts were asked to evaluate the statements of the questionnaire for comprehensiveness clarity and suitability for the research questions. According to the suggestions given by these experts, we eliminated statements 18, 31 and 32 because they didn`t give ample information about the implementation or awareness of differentiated curriculum. On the other hand, it was also conducted that the questionnaire had high content validity.

Ross (2005) stated that "A reliable test is a test which would provide a consistent set of scores for a group of individuals if it was administered independently on several

occasions" (p. 41). According to Cohen et al., (2000), reliability is equal to consistency and replicability. In other words, if a questionnaire was applied on a standardized group of people in a similar context, then, the results had to be standardized too.

Thus, to ensure reliability, a pilot study was carried out for internal consistency estimate of 28 statements. According to George and Mallery (2001) listed values of Cronbach's alpha for different rates of reliability are as follows:

$\alpha < .5$ is unacceptable

$.5 < \alpha < .6$ is poor

$.6 < \alpha < .7$ is questionable

$.7 < \alpha > .8$ is acceptable

$.8 < \alpha > .9$ is good

$\alpha > .9$ is excellent

As a result of item analysis, the Cronbach`s alpha value was found as .758. So it is clear that the questionnaire has a good reliability. Table 3.3 shows the Cronbach`s alpha value of the study.

Table3.3 Cronbach`s alpha value

Cronbach's Alpha	N of Items
.758	28

Chapter 4

RESULTS OF DATA ANALYSES

In this chapter, the results of the data collected to examine the elementary school teachers' implementations of differentiated curriculum approach within the mixed ability classes is presented. The analyses results are given in the same order of the research questions stated in Chapter 1.

As indicated in Chapter 3, a Scale for Measuring Implementation of Differentiated Curriculum (SMIDC) was administered to all elementary school teachers in Nicosia region. The instrument was conducted to analyze the elementary school teachers' implementation of differentiated curriculum approach within mixed ability classes. Table 4.1 presents the frequencies and percentages of the participants according to gender, school location, school type, grade level and years of experience.

Table 4.1 Characteristics of the participants (N=299)

		Number of teachers	%
Gender	Female	184	61.5
	Male	115	38.5
School Location	Rural	96	32.1
	Urban	203	67.9

(table continues)

Table 4.1(continued)

		Number of teachers	%
School Type	Public	275	92
	Private	24	8
Grade Level Being Taught	1st Grade	58	19.4
	2nd Grade	61	20.4
	3rd Grade	63	21.1
	4th Grade	48	16.1
	5th Grade	69	23.1
Years of Experience	1-2 Years	5	1.7
	3-5 Years	13	4.3
	6-10 Years	48	16.1
	11-20 Years	162	54.2
	20 Years and more	71	23.7

4.1 Analyses Results for Research Question 1

How do elementary school teachers implement differentiated curriculum in mixed ability classes?

To answer this research question, frequencies were found and one sample t-test was conducted to find out how elementary school teachers implement differentiated curriculum in mixed ability classes.

As can be seen in Table 4.2, frequency of the responses to each item of the instrument was found. Nearly equal number of respondents agreed and disagreed about statements 1, 9, 26 and 27. For the majority of the statements (for statements 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25), most of the participants (above 50% of the participants) mentioned that they agreed and strongly agreed for these statements. For the statements 24 and 28, most of the participants (above 50% of the participants) mentioned that they disagreed and strongly disagreed for these statements. Specially 18% of the participants disagree and strongly disagree about the statement 24 which is "I group pupils so that they are in mixed ability groups within the class". The results of the frequency analyses showed that all elementary school teachers in Nicosia district have a homogenous idea on the implementation of differentiated curriculum in mixed ability classes.

Table 4.2: Frequencies of responses to the statements of the instrument

	Strongly Agree f(%)	Agree f(%)	Not Sure f(%)	Disagree f(%)	Strongly Disagree f(%)
1. Only very good teachers can teach mixed ability classes successfully.	47(15.7)	87(29.1)	26(8.7)	84(28.1)	54(18.1)
2. In mixed ability classes teachers tend to teach to the average child.	47(15.7)	131(43.8)	25(8.4)	78(26.1)	18(6)

(table continues)

Table 4.2 (continued)

		Strongly Agree f(%)	Agree f(%)	Not Sure f(%)	Disagree f(%)	Strongly Disagree f(%)
3.	Developing the appropriate teaching skills necessary to teach a mixed ability class benefits all pupils.	138(46.2)	135(45.2)	14(4.7)	4(1.3)	8(2.7)
4.	In mixed ability classes, I expect the more able students to work at a faster rate.	85(28.4)	171(57.2)	21(7)	18(6)	4(1.3)
5.	In mixed ability classes, I expect the more able pupils to cover the work in more depth than the less able pupils.	87(29.1)	168(56.2)	18(6)	21(7)	5(1.7)
6.	In mixed ability classes, I expect more independent thought from higher ability pupils.	87(29.1)	163(54.5)	27(9)	19(6.4)	3(1)
7.	In mixed ability classes, I expect the more able pupils to take more responsibility for their written work.	62(20.7)	160(53.5)	36(12)	37(12.4)	4(1.3)

(table continues)

Table 4.2 (continued)

	Strongly Agree f(%)	Agree f(%)	Not Sure f(%)	Disagree f(%)	Strongly Disagree f(%)
8. In mixed ability classes, I expect more analytical thought from the more able pupils in a class.	58(19.4)	180(60.9)	36(12)	21(7)	2(0.7)
9. In mixed ability classes, all pupils in the class work on the same topic at the same time.	37(12.4)	112(37.5)	38(12.7)	81(27.1)	31(10.4)
10. In mixed ability classes, less able pupils cover fewer topics than the more able pupils.	51(17.1)	158(52.8)	46(15.4)	37(12.4)	6(2)
11. I give different activities to pupils of differing ability.	98(32.8)	50(50.2)	16(5.4)	30(10)	5(1.7)
12. I use different resources with pupils of differing ability within the class.	92(30.8)	152(50.8)	18(6)	31(10.4)	6(2)
13. I use different resources within the class in order to differentiate work.	95(31.8)	168(56.2)	11(3.7)	22(7.4)	3(1)

(table continues)

Table 4.2 (continued)

	Strongly Agree f(%)	Agree f(%)	Not Sure f(%)	Disagree f(%)	Strongly Disagree f(%)
14. In mixed ability classes, I provide more opportunities for rehearsal/repetition of information for the less able pupils.	116(38.8)	146(48.8)	21(7)	13(4.3)	3(1)
15. In mixed ability classes, I set more structured work for the less able pupils in the class.	71(23.7)	152(50.8)	25(8.4)	36(12)	15(5)
16. In mixed ability classes, I encourage/allow more discussion of work by more able pupils.	126(42.1)	156(52.2)	6(2)	10(3.3)	1(0.3)
17. In mixed ability classes, I am more likely to use practical activities with less able pupils.	96(32.1)	167(55.9)	22(7.4)	13(4.3)	1(0.3)
18. In mixed ability classes, I use more structured comprehension/question and answer activities with the less able pupils.	75(25.1)	175(58.5)	32(10.7)	13(4.3)	4(1.3)

(table continues)

Table 4.2 (continued)

	Strongly Agree f(%)	Agree f(%)	Not Sure f(%)	Disagree f(%)	Strongly Disagree f(%)
19. In mixed ability classes, the homework I set pupils varies according to their ability.	60(20.1)	126(42.1)	47(15.7)	57(19.1)	9(3)
20. In mixed ability classes, I provide more detailed written feedback on homework from the more able pupils.	68(22.7)	161(53.8)	22(7.4)	40(13.4)	8(2.7)
21. In mixed ability classes, I have to spend more time getting lower ability children to behave than higher ability children.	87(29.1)	131(43.8)	29(9.7)	35(11.7)	17(5.7)
22. In mixed ability classes, I determine the seating arrangements.	120(40.1)	137(45.8)	19(6.4)	13(4.3)	9(3)
23. I group pupils by ability within the class.	49(16.4)	114(38.1)	34(11.4)	77(25.8)	25(8.4)
24. I group pupils so that they are in mixed ability groups within the class.	6(2)	48(16.1)	15(5)	137(45.8)	93(31.1)

(table continues)

Table 4.2 (continued)

	Strongly Agree f(%)	Agree f(%)	Not Sure f(%)	Disagree f(%)	Strongly Disagree f(%)
25. I group pupils in my classes according to the nature of the topic I am teaching.	61(20.4)	136(45.5)	53(17.7)	41(13.7)	8(2.7)
26. I am happy with the resources available in the department for teaching mixed ability classes.	27(9)	87(29.9)	47(15.7)	94(31.4)	44(14.7)
27. There are sufficient extension materials to stretch the most able pupils.	24(8)	82(27.4)	52(17.4)	108(36.1)	33(11)
28. There are sufficient resources to support the least able pupils.	19(6.4)	62(20.7)	57(19.1)	104(34.8)	51(17.1)

One sample t-test analysis was used to examine teachers' awareness and implementation of differentiated curriculum as stated in the first research question. Positive statements coded as Strongly Agree = 5, Agree = 4, Not Sure = 3, Disagree = 2, and Strongly Disagree = 1, whereas the negative statements were coded as Strongly Agree = 1, Agree = 2, Not Sure = 3, Disagree = 4, and Strongly Disagree = 5 as mentioned before. The test value was set as 3 for the one sample t-test. The results of one sample t-test are shown in Table 4.3. Since the overall mean is 3.73,

the participants` implementation of differentiated curriculum in mixed ability classes is significantly above average, t(298) = 33.849, p = .000 < .001. Therefore, by looking at the results, it is very clear that the elementary school teachers of Nicosia region are aware of differentiated curriculum in mixed ability classes.

Table 4.3: One sample t-test for Implementation of differentiated curriculum in mixed ability classes

Implementation of differentiated curriculum in mixed ability classes	N	SD	Mean	Accepted Mean (satisfied)	Mean difference	t	df	p
	299	.37310	3.7304	3	.73035	33.849	298	**.000**

Significant difference is presented in bold face.

In Table 4.4 all items are presented, and according to one sample t-test results, the means of the responses to the items 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, and 25 are significantly above the set value 3 meaning that teachers are in favor of the implementation of differentiated curriculum in their classes. However, teachers` responses to items 1, 26, 27 and 28 are significantly below the set value 3 which means that teachers don't agree that only very good teachers can teach in mixed ability classes. Also the teachers don't agree that they are happy with the resources available in their department to teach in mixed ability classes. In other words, they thought that sufficient resources to support both more able and less able students are not available.

Table 4.4: One sample t-test results for the statements of SMIDC

Implementation of differentiated curriculum in mixed ability classes	N	SD	Mean	Accepted Mean (satisfied)	Mean difference	t	df	p
1. Only very good teachers can teach mixed ability classes successfully.	298	1.391	2.96	3	-.037	-.458	297	.647
2. In mixed ability classes teachers tend to teach to the average child.	299	1.198	3.37	3	.371	5.358	298	**.000**
3. Developing the appropriate teaching skills necessary to teach a mixed ability class benefits all pupils.	299	.843	4.31	3	1.308	26.829	298	**.000**
4. In mixed ability classes, I expect the more able students to work at a faster rate.	299	.846	4.05	3	1.054	21.540	298	**.000**

(table continues)

Table 4.4 (continued)

Implementation of differentiated curriculum in mixed ability classes	N	SD	Mean	Accepted Mean (satisfied)	Mean difference	t	df	p
5. In mixed ability classes, I expect the more able pupils to cover the work in more depth than the less able pupils.	299	.885	4.04	3	1.040	20.318	298	**.000**
6. In mixed ability classes, I expect more independent thought from higher ability pupils.	299	.852	4.04	3	1.043	21.172	298	**.000**
7. I expect the more able pupils to take more responsibility for their written work.	299	.952	3.80	3	.799	14.522	298	**.000**

(table continues)

Table 4.4 (continued)

Implementation of differentiated curriculum in mixed ability classes	N	SD	Mean	Accepted Mean (satisfied)	Mean difference	t	df	p
8. In mixed ability classes, I expect more analytical thought from the more able pupils in a class.	299	.806	3.91	3	.913	19.581	298	**.000**
9. In mixed ability classes, all pupils in the class work on the same topic at the same time.	299	1.241	3.14	3	.144	2.004	298	**.046**
10. In mixed ability classes, less able pupils cover fewer topics than the more able pupils.	298	.960	3.71	3	.708	12.735	297	**.000**
11. I give different activities to pupils of differing ability.	299	.967	4.02	3	1.023	18.294	298	**.000**

(table continues)

Table 4.4 (continued)

Implementation of differentiated curriculum in mixed ability classes	N	SD	Mean	Accepted Mean (satisfied)	Mean difference	t	df	p
12. I use different resources with pupils of differing ability within the class.	299	.983	3.98	3	.980	17.240	298	**.000**
13. I use different resources within the class in order to differentiate work.	299	.855	4.10	3	1.104	22.324	298	**.000**
14. I provide more opportunities for rehearsal/repetitio n of information for the less able pupils.	299	.827	4.20	3	1.201	25.095	298	**.000**
15. In mixed ability classes, I set more structured work for the less able pupils in the class.	299	1.096	3.76	3	.763	12.028	298	**.000**

(table continues)

Table 4.4 (continued)

Implementation of differentiated curriculum in mixed ability classes	N	SD	Mean	Accepted Mean (satisfied)	Mean difference	t	df	p
16. In mixed ability classes, I encourage/allow more discussion of work by more able pupils.	299	.708	4.32	3	1.324	32.330	298	**.000**
17. In mixed ability classes, I am more likely to use practical activities with less able pupils.	299	.760	4.15	3	1.151	26.169	298	**.000**
18. I use more structured comprehension/question and answer activities with the less able pupils.	299	.809	4.02	3	1.017	21.738	298	**.000**

(table continues)

Table 4.4 (continued)

Implementation of differentiated curriculum in mixed ability classes	N	SD	Mean	Accepted Mean (satisfied)	Mean difference	t	df	p
19. In mixed ability classes, the homework I set pupils varies according to their ability.	299	1.101	3.57	3	.572	8.892	298	**.000**
20. I provide more detailed written feedback on homework from the more able pupils.	299	1.021	3.81	3	.806	13.648	298	**.000**
21. In mixed ability classes, I have to spend more time getting lower ability children to behave than higher ability children.	299	1.152	3.79	3	.789	11.848	298	**.000**

(table continues)

Table 4.4 (continued)

Implementation of differentiated curriculum in mixed ability classes	N	SD	Mean	Accepted Mean (satisfied)	Mean difference	t	df	p
22. In mixed ability classes, I determine the seating arrangements.	298	.943	4.16	3	1.161	21.248	297	**.000**
23. I group pupils by ability within the class.	299	1.246	3.28	3	.284	3.944	298	**.000**
24. I group pupils so that they are in mixed ability groups within the class.	299	1.083	3.88	3	.880	14.041	298	**.000**
25. I group pupils in my classes according to the nature of the topic I am teaching.	299	1.033	3.76	3	.672	11.255	298	**.000**

(table continues)

Table 4.4 (continued)

Implementation of differentiated curriculum in mixed ability classes	N	SD	Mean	Accepted Mean (satisfied)	Mean difference	t	df	p
26. I am happy with the resources available in the department for teaching mixed ability classes.	299	1.242	2.86	3	-.137	-1.910	298	.057
27. There are sufficient extension materials to stretch the more able pupils.	299	1.175	2.85	3	-.147	-2.165	298	**.031**
28. There are sufficient resources to support the least able pupils.	293	1.182	2.64	3	-.362	-5.241	292	**.000**

Significant differences are presented in bold face.

4.2 Analyses Results for Research Question 2

How do teachers' implementations of differentiated curriculum differ with respect to gender, school location, type of school, grade level and years of experience?

To answer the second research question, an independent-samples t-test and ANOVA were performed to assess the differences in the means of teachers' implementation of differentiated curriculum with respect to their gender, school location, type of school, grade level they teach and years of experience.

First of all, an independent-samples t-test was conducted to assess the differences in the means of teachers` implementation of differentiated curriculum with respect to gender, school location and type of school. According to the results of independent samples t-test, there is no significant difference in teachers` implementation of differentiated curriculum with respect to their gender ($p = .152 > .05$). Also it was discovered that no significant difference existed in teachers` implementation of differentiated curriculum with respect to their school types ( $p = .887 > .05$). Finally, there isn`t any significant difference in teachers` implementation of differentiated curriculum with respect to their school location ($p = .235 > .05$). Levene's Test for Equality of Variance indicates that equal variances for male and female groups cannot be assumed ($p = .002 < .05$). In addition, Levene's Test for Equality of Variance shows that equal variances for the group of teachers teaching in public schools and the group of teachers teaching in private schools can be assumed ($p = .060 > .05$). Finally, the test results also revealed that equal variances for the group of teachers teaching in urban schools and the group of teachers teaching in rural schools can be assumed ($p = .540 > .05$). (see Table 4.5).

Table 4.5: Independent samples t-test for differences in teachers` implementation of differentiated curriculum with respect to their genders, school locations and types of school.

	Levene's Test		t-test			
	F	Sig.	df	t	p	d
Gender	10.086	**.002**	188.031	1.439	.152	-
School Type	3.559	.060	297	.143	.887	-
School Location	.377	.540	297	1.191	.235	-

Significant differences are presented in bold face.

Finally, ANOVA was performed to find out whether the grade level of students and years of experience of teachers have an effect in the teachers` implementation of differentiated curriculum. Based on the results of ANOVA, there is a significant difference in teachers` implementation of differentiated curriculum with respect to grade level of students ($p = .047<.05$). (See Table 4.6).

Table 4.6: Results of Analysis of Variance for differences in teachers` implementation of differentiated curriculum with respect to students` grade level.

	Sum of Squares	df	Mean square	F	p
Between Groups	1.335	4	.334	2.444	**.047**
Within Groups	40.147	294	.137		
Total	41.482	298			

To examine the differences between the responses of the groups of teachers teaching in different grade levels, a Post hoc-Dunnett C test was conducted since according to the ANOVA results there is a significant difference between groups. (See Table 4.7).

Based to the results of Post hoc-Dunnett C analysis, there is a significant difference between the responses of teachers teaching the 3rd grades and the 5th grades. (Mean Difference = .196). On the contrary, responses of teachers teaching the 3rd grades are not significantly different from the responses of teachers teaching the 1st grades, 2nd grades, and 4th grades. (Mean Differences = .096, .072 and .121). Also, responses of teachers teaching the 5th grades are not significantly different from the responses of teachers teaching the 1st grades, 2nd grades, and 4th grades.(Mean Differences = .099, .123 and .074).

Table 4.7: Dunnet C test results for differences in teachers` implementation of differentiated curriculum with respect to the grade levels they teach.

Grade Level	Grade Levels that Teachers Teach	Mean Difference	Std. Error
1st Grade	2nd Grade	-.02378	.06501
	3rd Grade	-.09666	.05911
	4th Grade	.02530	.07189
	5th Grade	.09943	.07137
2nd Grade	1st Grade	.02378	.06501
	3rd Grade	-.07288	.05782
	4th Grade	.04907	.07083
	5th Grade	.12320	.07031

(table continues)

Table 4.7 (continued)

Grade Level	Grade Levels that Teachers Teach	Mean Difference	Std. Error
3rd Grade	1st Grade	.09666	.05911
	2nd Grade	.07288	.05782
	4th Grade	.12195	.06546
	5th Grade	**.19608**	.06489
4th Grade	1st Grade	-.02530	.07189
	2nd Grade	-.04907	.07083
	3rd Grade	-.12195	.06546
	5th Grade	.07413	.07672
5th Grade	1st Grade	-.09943	.07137
	2nd Grade	-.12329	.07031
	3rd Grade	**-.19608**	.06489
	4th Grade	-.07413	.07672

Significant differences are presented in bold face.

In addition, Table 4.8 shows that there isn`t a significant difference in teachers` implementation of differentiated curriculum with respect to their years of experience ($p = .616 > .05$).

Table 4.8: ANOVA results for differences in teachers` implementation of differentiated curriculum with respect to their years of experience.

	Sum of Squares	df	Mean Square	F	p
Between Groups	,373	4	.093	.667	.616
Within Groups	40.109	294	.140		
Total	41.482	298			

Chapter 5

CONCLUSION

In this final chapter, findings gathered from the instrument are summarized. Also answers of the research questions are presented. The collected data reflect how elementary school teachers implement differentiated curriculum in mixed ability classes. The chapter concludes with the limitations of the study and recommendations for further research.

5.1 Summary of the Study

The main purpose of this study was to investigate how elementary school teachers implement differentiated curriculum in mixed ability classes. This study also analyzed how the teachers' implementation of differentiated curriculum differs with respect to gender, school location, type of school, grade level and years of experience. Thus this study was conducted in public and private schools in the Nicosia district of the Turkish Republic of Northern Cyprus. Apart from the pilot study, a total of 299 elementary school teachers participated in this study (275 public school teachers and 24 private school teachers). Data was collected and analyzed by using quantitative research methods.

Susan Hallam and Judith Ireson`s questionnaire (2005) was translated into Turkish and administered to the elementary school teachers. The questionnaire basically asked teachers some general statements about differentiating curriculum in mixed

ability classes. The questionnaire includes two sections. The first section seeked demographic information about teachers` gender, school location, school type, grade level and year of experience. The second section, asked for the responses of the teachers to scale measuring the extend the teachers use or are in favor of differentiated curriculum in mixed ability classes. The data collected were analyzed by using the SPSS program and answers to research questions were found.

5.2 Discussion

In Chapter 1 it was mentioned how teachers teach in mixed ability classes and how it plays an important role in students' education. Students differ in terms of their needs, interests, readiness, learning styles, etc. Thus, teachers need to differentiate the instruction according to their students to meet their needs. There is a great number of research which claim that differentiated instruction has positive effects in mixed ability classes. In this respect, how the elementary school teachers of the Nicosia district implement differentiated curriculum in their classes is very critical and important because all elementary schools in the Nicosia district have heterogeneous (mixed ability) classes and students need differentiation in order to learn.

The rest of this Chapter discusses the findings of this study and compares them with the findings of other researchers.

5.2.1 Discussion related to Research Question 1

With regard to how elementary school teachers implement the curriculum in mixed ability classes, the study found out that almost all of the teachers have a homogenous idea about the use and benefit of differentiated curriculum in mixed ability classes. Also, it was found out that most of the participants' (above 50%) implementation or awareness of differentiated curriculum is significantly above the average. So, it is

clear that elementary school teachers of the Nicosia district are aware of the necessity of differentiated instruction in mixed ability classes and they try to implement it. However, these findings contrast with Millroad's (2002) findings. In this study, it was discovered that although teachers are aware of the necessity for individualizing the task, they don't use a certain strategy to deal with these heterogeneous classes and they teach the whole class. In addition, teachers mentioned that unsuccessful learners have poor communicative skills. On the other hand, it was discovered that unsuccessful learners describe themselves as listeners and writers rather than readers and communicators. Also, it was found out that they preferred analyzing rather than memorizing. However, successful learners described themselves as readers, speakers, communicators and analyzers rather than listeners and writers.

The study of Renick (1996) and Manson (1999) held two research whether the teachers were ready for working in mixed ability classes. Their results were similar. It was found that although the teachers received education in differentiated instruction, they weren`t ready to meet the needs of all the students. According to Manson (1999), most of the teacher education programs don't prepare tomorrow`s teachers to deal with the increasing variety of students, in other words, to meet the needs of diverse learners.

Tomlinson (1995) also discovered that the teachers of Midland describe differentiated instruction as individualization or tailoring. Tomlinson (2001) describes curriculum as proactive rather than individualized. The results showed that these teachers think that differentiated instruction is reactive rather than proactive. Also, they don`t do any modifications in content, process and product. In other words they use a single lesson for all students.

McGarvey, Marriott, Morgan and Abbott (1997, 1998) conducted two studies in Northern Ireland in primary schools and they worked with teachers too. They found that teachers were trying to use differentiated instruction. However, they were struggling with lots of difficulties because they didn't have proper knowledge on differentiation. Also, they proved that needs of all students may not always be met because teachers considered differentiation impossible and they mentioned that they could only make provision for a small number of groups.

Only one study which was conducted in Cyprus was found. Stavroula, Leonidas and Mary (2001) held a study with elementary school students to find out the impact of differentiated instruction in mixed ability classes in South Cyprus. Their findings show that there was a significant difference between students' success taught by differentiated instruction and students who didn't receive any differentiated instruction.

5.2.2 Discussion related to Research Question 2

With regard to teacher and school characteristics (gender, school type, school location, years of experience and grade level of students), no previous study was found. Therefore, this study will shed light on these topics. It was crucial to examine the teacher and school differences that appeared while implementing differentiated curriculum.

In relation to the implementation of differentiated curriculum, this study found that there was no significant difference between male and female teachers. Gender is not a factor in differentiating the instruction. Findings also revealed that there was no significant difference between private and public schools. Similarly, there was no significant difference between urban and rural schools. Also, there was no significant

difference among the teachers' implementation or awareness of differentiated curriculum with respect to their years of experience. However, the study found that there is a significant difference in implementation or awareness of differentiated curriculum among teachers teaching different grades.

5.3 Implications to Teachers and Administrators

Concerning the findings of this study, it can be recommended to implement the differentiated curriculum in all mixed ability classes. As it was mentioned before, differentiated curriculum actually means differentiated instruction. Thus, teachers have an important role in differentiating their instruction. This would increase the success of the students and each student would become an active and a successful individual. However, it was realized that there wasn't any in-service programs about implementation of curriculum differentiation. Teachers have some ideas on this topic but it isn't enough to implement it successfully. So, they need to be trained. As it is known, all elementary schools in The Turkish Republic of Northern Cyprus (TRNC) have mixed ability classes. Therefore, if such in-service programs are designed to inform and train elementary school teachers, they will be able to teach more effectively. This would help students to be successful who are different in terms of their interests, readiness and learning profiles.

5.4 Suggestions for Further Study

This study elucidates the importance of elementary school teachers` implementation of differentiated curriculum in mixed ability classes in Nicosia district in the Turkish Republic of Northern Cyprus. Also, further research is required to investigate the elementary school teachers` implementation of differentiated curriculum in Famagusta, Kyrenia and other districts as well. Moreover, further research can investigate middle school teachers` implementation of differentiated curriculum in

mixed ability classes. Finally, as a further research the students` attitudes towards differentiated curriculum can be analyzed.

REFERENCES

Alpren, M. & Baron, B. G. (1973). *Procedural Options in Developing Curriculum.* Jurriculum Theory Network, Vol.11, pp.65-76.

Beauchamp, G. A. (1957). *Curriculum Organization and Development in Historical Perspective.* Review of Educational Research, Vol.27, No.3, pp.241-249.

Beecher, M., & Sweeny, S. M. (2008). *Closing the achievement gap with curriculum enrichment and differentiation: One school`s story*. Journal of Advanced Academics, *19*(3), 502-530.

Bell, B. & Pearson, J. (1992). *Better Learning*. International Journal of Science Education, 14 (3): 349-361.

Bosch, N. (2001). *Differentiated Curriculum*. Retrieved, from the World Wide Web: www.adifferentplace.org/differentiated.htm.

Breaux, E. & Magee, M. B. (2010). *How the Best Teachers Differentiate Instruction.* Eye on Education, Inc.

Brimfield, R. M. B. (1992) *Curriculum! What`s Curriculum?* The Educational Forum, 56(4), 382-289.

Brimfield, R., Masci, F., & DeFiore, D. (2002) *Differentiating instruction to teach all learners.* Middle School Journal, *33*(3), 1-5.

Cohen, L., Manion, L. and Morrison, K. (2000). *Research Methods in Education*. Routledge Falmer, London.

Coonor, W. L. & White, R. (1942). *General Aspects of Instruction: Learning, Teching and the Curriculum, Chapter I, The Curriculum: A General View.* Review of Educational Research, Vol.12, No.3, pp.259-273.

Creswell, J.W., *Research Design: Qualitative & Quantitative Approaches,* London: SAGE Publications, 1994. Available:http://www.sagepub.com/upm-data/9733_036046Ch1.pdf

Dewey, J. (1902). *The child and the curriculum.* Chicago: University of Chicago Press.

Eisenhart, C. (2007). *The Process of Differentiated Instruction: I Do...We Do...You Do!* Rhode Island Reading First Leadership Meeting.

Eisner, E. W. (1985). *The Educational Imagination: on the Design and Evaluation of School Programs*. New York: Macmillan.

Ellis, A. K. (2004). *Exemplars of Curriculum Theory*. Larchmont, NY: Eye on Education.

Franks, B. B. & Howard, M. K. (1974). *Tomorrow`s Curriculum Today.* The English Journal, Vol.63, No.4, pp.80-82.

Gagne, R. W. (1967). *Curriculum research and the promotion of learning*. In R. W. Tyler, R. M. Gagne,& M. Scriven (Eds.), *Perspectives of curricular evaluation.* Chicago: Rand McNally.

Gardner, H. (1993). *Frames of Mind: The Theoty of the Multiple Intelligence.* New York, NY: Basic Books.

George, D.and Mallery, P. (2001). *SPSS for Windows Step by Step*. A Pearson Education Company.

Glatthorn, A. A. (1994). *Developing a Quality Curriculum.* The Association for Supervision and Curriculum Development. ASCD Publications.

Glatthorn, A. A.; Boschee, F. Whitehead, B. M. (2005). *Curriculum Leadership: Development and Implementation. The nature of curriculum*. SAGE Publications. (Chapter 1, pp. 3-32)

Grundy, S. (1987). *Curriculum: Product or Praxis?* London: Falmer Press.

Hall, T. (2002). *Differentiated instruction* [Online]. Wakefield, MA: CAST. Available: www.cast.org/publications/ncac/ncac_diffinstruc.html

Hallam, S. and Ireson, J. (2005). *Secondary School Teachers` Pedagogic Practices When Teaching Mixed Ability and Structured Ability Classes.* Taylor and Francis, Research Papers in Education, Vol.20, No.1, pp.3-24.

Kalton, G. (1998). *Introduction to Survey Sampling.* Sage Sublications: Beverly Hills, London, New Delhi.

Kliebard, H. M. (1998). *The Effort to Reconstruct the Modern American Curriculum*. In Landon E. Beyer and Michael W. Apple (Eds.), *TheCurriculum: Problems, Politics, and Possibilities*. Albany, NY: State University of New York Press.

Koo Hok-chun, D. (2002). *Quality Education through a Post-modern Curriculum.* Hong Kong Teacher`s Centre Journal, Vol.1.

Manson, T. J. (1999). *Cross-ethnic, cross-racial dynamics of instruction: Implication for teacher education.* (Report No. UD032861). Clarksville, TN: Austin Peay State University. (ERIC Document Reproduction Service No. ED 429 141)

Mcgarvey, B.; Marriott, S.; Morgan, V.; Abbott, L. (1997). *Planning for Differentiation: The Experience of Teachers in Northern Ireland Primary Schools.* Journal of Curriculum Studies, Vol.29, No.3, pp.351-363.

Mcgarvey, B.; Marriott, S.; Morgan, V.; Abbott, L. (1998). *Approaches to Differentiation in the Core Subjects: The Experiences of Northern Ireland Primary Teachers.* Evaluation and Research in Education, Vol.12, No.3.

Millroad, R. (2002). *Teaching Heterogeneous Classes.* ELT Journal, Vol.56/2.

Renick, P. R. (1996). *Study of differentiated teaching methods used by first-*

year special educators. Paper presented at the annual conference of the Midwestern Educational Research Association, Chicago, IL.

Rock, M. L., Gregg, M., Ellis, E., & Gable, R. A. (2008). *A framework for differentiating classroom instruction. Preventing School Failure, 52*(2), 31-47.

Ross, K. N. (2005). *Educational Research: Some Basic concepts and Terminology*. International Institute for Educational Planning, UNESCO. Available:http://www.unesco.org/iiep

Schiro, M. (1978). *Curriculum for better schools: The great ideological debate.* Englewood Cliffs, NJ: Educational Technology Publications.

Shulman, L. (1987). *Knowledge and teaching: Foundations of the new reform.* Harvard Educational Review, 57(1), 1-22.

Stavroula, V., Leonidas, K., Mary, K. (2011). *Investigating the Impact of Differentiated Instruction in Mixed ability Classrooms: It is Impact on the Quality and the Equity Dimensions of Education Effectiveness.* Paper presented at the International Congress of School Effectiveness and Improvement 2011.

Stirling, D. L. (1997). *The Reflective Dialectic of Pedagogic Praxis Curriculum*. Arizona State University, (Unpublished).

Strickland, C. A. (2004). *Differentiated Instruction: An Overview.* Educators Publishing Service.

Taba, H. (1962). *Curriculum development: Theory and practice.* New York: Harcourt Brace Jovanovich.

Tanner, D., & Tanner, L. (1975). *Curriculum: Theory into practice.* New York: Macmillan.

Terwel, J. (2005). *Curriculum Differentiation: Multiple Perspectives and*

Developments in Education. Journal of Curriculum Studies, Vol.37, No.6,pp.653-670.

The United Nations Educational Scientific and Cultural Organization, (2004). *Changing Teaching Practices.*

Theisen, T. (2002). *Differentiated Instruction in the Foreign Language Classroom:Meeting the Diverse Needs of All Learners.* The Communique, Issue 6.

Tomlinson, C. (1995). *Deciding to differentiate instruction in middle school:One school's journey. Gifted Child Quarterly*, 39, 77-87.

Tomlinson, C. (1999). *The Differentiated Classroom: Responding to the Needs of all Learners*. Alexandria, VA: Association for Supervision and Curriculum Development. ED 429 944.

Tomlinson, C. (2001). *How to Differentiate instruction in Mixed-Ability Classrooms (2nd ed.).* Alexandria, VA: Association for Supervision and Curriculum Development.

Tomlinson, C. (2002). *Invitations to learn.* Educational Leadership, 60, 6-10.

Tomlinson, C. (2004). *The mobius effect: Addressing learner variance in schools.* Journal of Learning Disabilities, 37(6), 516-524.

Tomlinson, C. (2005). *Differentiating Instruction for Advanced Learners in the Mixed ability Middle school Classroom*. *ERIC Digest.*

Tomlinson, C. A. and Allan, S. D. (2000) *Reasons for optimism about differentiation: Its basis in theory and research.* In Tomlinson and Allan. *Leadership for differentiating schools and classrooms.* Alexandria, VA: Association for Supervision and Curriculum Development.

Tomlinson, C.,& Cooper, J. (2006). *An Educator`s Guide to Differentiatin Instruction.* University of Virginia.

Tomlinson, C. A., & Strickland, C. A. (2005). *Differentiation in practice: A resource guide for differentiating curriculum, grades 9–12.* Alexandria, VA: ASCD.

Tyler, R. W. (1949). *Basic Principles of Curriculum and Instruction*. The University of Chicago Press: Chicago and London.

Tyler, R. W. (1957). *The curriculum then and now.* In Proceedings of the 1956 Invitational Conference on Testing Problems. Princeton, NJ: Educational Testing

Vygotsky, L. (1978). *Mind in Society: The Development of Higher Psychological Processes.* Cambridge, MA: Harvard University Press.

Wiles, J. (2009). *Leading Curriculum Development.* A Sage Company, Corwin press.

Young, M. (1999). *Knowledge, Learning and the Curriculum of the Future.* British Educational Research Journal, Vol.25, No.4, pp.463-477.

APPENDICES

Appendix A: Permission of the Ministry of National Education Youth and Sports

KUZEY KIBRIS TÜRK CUMHURİYETİ
MİLLİ EĞİTİM GENÇLİK VE SPOR BAKANLIĞI
İLKOGRETİM DAİRESİ MÜDÜRLÜGÜ

SaYI: ***iOD.0.00-3512010/1B*** - \ 1235
Lefkoşa

25.10.2010

Sn. Mine Ulaş,

"**Farklı Düzeyde Yetenekleri Olan Ögrencilerin Bulunduğu Sınıflarda Ögretmenlerin Müfredatın Kullanımında Ögrencinin Düzeyine Göre Farklık Yaratıp Yaratmadığı** " konulu anketin soruları Talim ve Terbiye Dairesi Müdürlüğü tarafından incelenmiş ve uygulanmasmda bir sakınca görülmemiştir.

Anketi uygulamadan önce okul müdürlukleri ile temas kurulmasi ve uygulama tamamlandiktan sonra da anket sonuclarının Müdürlüğümüze ve Talim Terbiye Dairesi Müdürlüğü'ne iletilmesi hususunda bilgilerinizi saygi ile rica ederim .

M. Bumin PAŞA
Müdür

Appendix B: Permission from Susan Hallam for her Questionnaire

Dear Susan Hallam,

I am an MA student in the Eastern Mediterranean University in
North Cyprus (Educational Sciences Department).
Part of my research for my MA entails the Secondary school Teachers' Perceptions of the teaching methods in the mixed ability and structured ability classrooms . I have found your article in Taylor and Francis mentioned about a questionnaire but I couldn't find the questionnaire and I am writing to ask permission to use the questionnaire for research purposes. I will, of course, cite your work accordingly.

I would be grateful to receive more information on this topic.

Thanking you, I look forward to receiving your reply and remain,

yours sincerely,

Mine Şahin,
MA student,
Educational Sciences Department,
Eastern Mediterranean University,
North Cyprus.

RE: about your articleTuesday, August 17, 2010 1:16 AMFrom: "Susan Hallam" <S.Hallam@ioe.ac.uk>View contact detailsTo: "mine þahin" <minesahin7@yahoo.com>Dear Mine,

I'm afraid that I can't send you a copy of the questionnaire as it was in a special format for analysis.

The statements in the articles are what was included in the questionnaire.

Best wishes, Sue

Appendix C1: Questionnaire

Dear Teachers,

I have been doing a research for my MA Thesis at the department of Educational Sciences in Eastern Mediterranean University.

The purpose of this questioonaire is to investigate the elementary school teachers' implementation of differentiated curriculum in the mixed ability classes.

All information you provide will be kept confidental. If you have any questions you can call me or my advisor.

Thank you for your cooperation.

Mine Ulas
MA Student
Eastern Mediterranean University
Tel.: 0542868072
minesahin7@yahoo.com

Asst. Prof. Dr. Hüseyin Yaratan
Supervisor
Department of Educational Sciences
Eastern Mediterranean University
Tel.: 6302613
huseyin.yaratan@emu.edu.tr

SECTION I

Personal Information

Please choose the appropriate option for yourself and fill in the optic form.

1. **Gender:** (a) Female (b) Male

2. **Year of Experience:**

   (a) 1-2 year(s)
   (b) 3-5 years
   (c) 6-10 years
   (d) 11-20 years
   (e) 20 years and more

3. **Type of school:**

   (a) Private School
   (b) Public School

4. **Grade Level** (If you are teaching more than one grade level, choose the one that you have more hours and answer section two in terms of the grade level you chose.)

   (a) 1st Grade
   (b) 2nd Grade
   (c) 3rd Grade
   (d) 4th Grade
   (e) 5th Grade

SECTION II

To express your opinion about the items written below, please choose the best option (from a to e) and fill in the optic form.

Options

(a)strongly agree;
(b)agree;
(c)not sure;
(d)disagree;
(e)strongly disagree.

	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
5. Only very good teachers can teach mixed ability classe successfully.	a	b	c	d	e
6. In mixed ability classes teachers tend to teach to the average child.	a	b	c	d	e
7. Developing the appropriate teaching skills necessary to teach a mixed ability class benefits all pupils.	a	b	c	d	e
8. In mixed ability classes,I expect the more able students to work at a faster rate.	a	b	c	d	e
9. In mixed ability classes, I expect the more able pupils to cover the work in more depth than the less able pupils.	a	b	c	d	e
10. In mixed ability classes, I expect more independent thought from higher ability pupils.	a	b	c	d	e
11. In mixed ability classes, I expect the more able pupils to take more responsibility for their written work.	a	b	c	d	e
12. In mixed ability classes,I expect more analytical thought from the more able pupils in a class.	a	b	c	d	e
13. In mixed ability classes, all pupils in the class work on the same topic at the same time.	a	b	c	d	e

	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
14. In mixed ability classes, less able pupils cover fewer topics than the more able pupils.	a	b	c	d	e
15. I give different activities to pupils of differing ability.	a	b	c	d	e
16. I use different resources with pupils of differing ability within the class.	a	b	c	d	e
17. I use different resources within the class in order to differentiate work.	a	b	c	d	e
18. In mixed ability classes, I provide more opportunities for rehearsal/ repetition of information for the less able pupils.	a	b	c	d	e
19. In mixed ability classes, I set more structured work for the less able pupils in the class.	a	b	c	d	e
20. In mixed ability classes, I encourage/allow more discussion of work by more able pupil.	a	b	c	d	e
21. In mixed ability classes, I am more likely to use practical activities with less able pupils.	a	b	c	d	e
22. In mixed ability classes, I use more structured comprehension/ question and answer activities with the less able pupils.	a	b	c	d	e
23. In mixed ability classes, the homework I set pupils varies according to their ability.	a	b	c	d	e
24. In mixed ability classes, I provide more detailed written feedback on homework from the more able pupils.	a	b	c	d	e
25. In mixed ability classes, I have to spend more time getting lower ability children to behave than higher ability children.	a	b	c	d	e
26. In mixed ability classes, I determine the seating arrangements.	a	b	c	d	e
27. I group pupils by ability within the class.	a	b	c	d	e
28. I group pupils so that they are in mixed ability groups within the class.	a	b	c	d	e
29. I group pupils in my classes according to the nature of the topic I am teaching.	a	b	c	d	e
30. I am happy with the resources available in the department for teaching mixed ability classes.	a	b	c	d	e
31. There are sufficient extension materials to stretch the most able pupils.	a	b	c	d	e
32. There are sufficient resources to support the least able pupils.	a	b	c	d	e

Appendix C2: Anket

Değerli Öğretmen Arkadaşlarımız,

Doğu Akdeniz Üniversitesi Eğitim Bilimleri Bölümü'nde yüksek lisans tezim için araştırma
yapmaktayım.

Araştırmamın amacı, farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda ilkokul öğretmenlerinin öğrencilerin düzeylerine göre müfredatın kulanımında farklılık yaratıp yaratmadıklarını ortaya çıkarmaktır.

Vereceğiniz kişisel bilgiler kesinlikle gizli tutulacaktır. Eğer sorularınız varsa bana ve/veya tez danışmanıma ulaşabilirsiniz.
Yardımınız ve işbirliğiniz için şimdiden teşekkür ederiz.

Mine Ulaş
Master öğrencisi
Doğu Akdeniz Üniversitesi
Tel.: 05428680728
minesahin7@yahoo.com

Yrd. Doç. Dr. HüseyinYaratan
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BÖLÜM I

Kişisel Bilgiler

Aşağıda verilen seçeneklerden sizin için uygun olanı lütfen **CEVAP KAĞIDINA** işaretleyiniz:

1. **Cinsiyetiniz:** (a) Kadın (b) Erkek
2. **Meslek kıdeminiz:**

   (a) 1-2 yıl
   (b) 3-5 yıl
   (c) 6-10 yıl
   (d) 11-20 yıl
   (e) 20 yıl ve üzeri

3. **Görev yaptığınız okulun çeşidi:**

   (a) Özel okul
   (b) Devlet okulu

4. **Ders verdiğiniz sınıf** (Birden fazla sınıfta ders veriyorsanız, lütfen sadece en çok ders verdiğiniz sınıfı işaretleyiniz ve Bölüm II'deki soruları da bu sınıfı göz önünde bulundurarak cevaplayınız.)

   (a) 1. Sınıf
   (b) 2. Sınıf
   (c) 3. Sınıf
   (d) 4. Sınıf
   (e) 5. Sınıf

BÖLÜM II

Aşağıda verilen tümcelere karşı tepkinizi (a)'dan (e)'ye kadar olan seçeneklerden yalnızca birini seçerek lütfen **CEVAP KAĞIDINA** işaretleyiniz.

Seçenekler:
(a)kesinlikle katılıyorum;
(b)katılıyorum;
(c)emin değilim;
(d)katılmıyorum;
(e)kesinlikle katılmıyorum.

Size uygun olanı lütfen **CEVAP KAĞIDINA** işaretleyiniz.	Kesinlikle katılıyorum	Katılıyorum	Emin değilim	Katılmıyorum	Kesinlikle katılmıyorum
5. Yalnızca çok iyi öğretmenler farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda başarılı öğretim yapabilirler.	a	b	c	d	e
6. Farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda, öğretmen dersi vasat öğrencilerin düzeyine göre öğretir.	a	b	c	d	e
7. Farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda, öğretmenin gerekli öğretim becerisini geliştirmesi bütün öğrencilere yarar sağlar.	a	b	c	d	e
8. Farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda, daha yetenekli öğrencilerin daha hızlı çalışmalarını beklerim.	a	b	c	d	e
9. Farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda, daha yetenekli öğrencilerin az yetenekli öğrencilere kıyasla konuları daha derinlemesine öğrenmesini beklerim.	a	b	c	d	e
10. Farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda, yüksek yetenekli öğrencilerden daha bağımsız fikirler beklerim.	a	b	c	d	e

Size uygun olanı lütfen **CEVAP KAĞIDINA** işaretleyiniz.	Kesinlikle katılıyorum	Katılıyorum	Emin değilim	Katılmıyorum	Kesinlikle katılmıyorum
11. Farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda, daha yetenekli öğrencilerin yazılı çalışmalarında daha çok sorumluluk almalarını beklerim.	a	b	c	d	e
12. Farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda, daha yetenekli öğrencilerden daha analitik düşünce beklerim.	a	b	c	d	e
13. Farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda, bütün öğrenciler aynı anda, aynı konu üzerinde çalışırlar.	a	b	c	d	e
14. Farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda, az yetenekli öğrenciler çok yetenekli öğrencilere kıyasla daha az konuyu tamamlar.	a	b	c	d	e
15. Farklı düzeyde yetenekleri olan öğrencilere farklı etkinlikler veririm.	a	b	c	d	e
16. Sınıfta, farklı düzeyde yetenekleri olan öğrencilerle farklı olanaklar (kaynaklar) kullanırım.	a	b	c	d	e
17. Sınıfta, yapılan çalışmaları farklılaştırmak için farklı olanaklar (kaynaklar) kullanırım.	a	b	c	d	e
18. Farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda, daha az yetenekli öğrencilere, öğrendikleri konuları tekrarlamaları için daha çok fırsat veririm.	a	b	c	d	e
19. Farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda, az yetenekli öğrencilere daha düzenli (planlı) çalışmalar veririm.	a	b	c	d	e
20. Farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda, konuların, az yetenekli öğrenciler tarafından da, tartışılmasını teşvik ederim.	a	b	c	d	e
21. Farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda, az yetenekli öğrenciler için pratik etkinlikler kullanmam daha olasıdır.	a	b	c	d	e
22. Farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda, az yetenekli öğrenciler için daha düzenli (planlı) kavrama veya soru-cevap etkinlikleri kullanırım.	a	b	c	d	e
23. Farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda, öğrencilere verdiğim ödevler öğrencilerin yeteneklerine göre farklılık gösterir.	a	b	c	d	e

Size uygun olanı lütfen **CEVAP KAĞIDINA** işaretleyiniz.	Kesinlikle katılıyorum	Katılıyorum	Emin değilim	Katılmıyorum	Kesinlikle katılmıyorum
24. Farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda, az yetenekli öğrencilerin ödevlerine daha ayrıntılı yazılı geribildirimde bulunurum.	a	b	c	d	e
25. Farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda, az yetenekli öğrencilerin uslu durmalarını sağlamak için çok yetenekli öğrencilere kıyasla daha çok zaman harcamam gerekir.	a	b	c	d	e
26. Farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda oturma düzenini ben kurarım.	a	b	c	d	e
27. Sınıfımdaki öğrencileri yeteneklerine göre gruplara ayırırım.	a	b	c	d	e
28. Sınıf içerisinde grup oluştururken içerisinde farklı düzeyde öğrencilerin bulunduğu gruplar oluştururum.	a	b	c	d	e
29. Sınıfımdaki öğrencileri, öğrettiğim konunun doğasına uygun olarak gruplara ayırırım.	a	b	c	d	e
30. Farklı düzeyde yetenekleri olan öğrencilerin bulunduğu sınıflarda öğretim yapabilmek için okulda bulunan olanakların (kaynakların) yeterliliği konusunda mutluyum.	a	b	c	d	e
31. Daha yetenekli öğrencileri daha ileriye götürmek için yeterli ek materyal vardır.	a	b	c	d	e
32. En zayıf öğrencileri desteklemek için yeterli olanak (kaynak) vardır.	a	b	c	d	e

Appendix D: Outputs

Characteristics of the participants

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	female	184	61,5	61,5	61,5
	male	115	38,5	38,5	100,0
	Total	299	100,0	100,0	

Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-2 years	5	1,7	1,7	1,7
	3-5 years	13	4,3	4,3	6,0
	6-10 years	48	16,1	16,1	22,1
	11-20 years	162	54,2	54,2	76,3
	More than 20 years	71	23,7	23,7	100,0
	Total	299	100,0	100,0	

School Type

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	State School	275	92,0	92,0	92,0
	Private School	24	8,0	8,0	100,0
	Total	299	100,0	100,0	

Grade Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1. Grade	58	19,4	19,4	19,4
	2. Grade	61	20,4	20,4	39,8
	3. Grade	63	21,1	21,1	60,9
	4. Grade	48	16,1	16,1	76,9
	5. Grade	69	23,1	23,1	100,0
	Total	299	100,0	100,0	

School Location

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rural School	96	32,1	32,1	32,1
	Urban School	203	67,9	67,9	100,0
	Total	299	100,0	100,0	

Frequencies of responses to the statements

Q1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	54	18,1	18,1	18,1
	2	84	28,1	28,2	46,3
	3	26	8,7	8,7	55,0
	4	87	29,1	29,2	84,2
	5	47	15,7	15,8	100,0
	Total	298	99,7	100,0	
Missing	System	1	,3		
Total		299	100,0		

Q2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	18	6,0	6,0	6,0
	2	78	26,1	26,1	32,1
	3	25	8,4	8,4	40,5
	4	131	43,8	43,8	84,3
	5	47	15,7	15,7	100,0
	Total	299	100,0	100,0	

Q3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	8	2,7	2,7	2,7
	2	4	1,3	1,3	4,0
	3	14	4,7	4,7	8,7
	4	135	45,2	45,2	53,8
	5	138	46,2	46,2	100,0
	Total	299	100,0	100,0	

Q4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	1,3	1,3	1,3
	2	18	6,0	6,0	7,4
	3	21	7,0	7,0	14,4
	4	171	57,2	57,2	71,6
	5	85	28,4	28,4	100,0
	Total	299	100,0	100,0	

Q5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	5	1,7	1,7	1,7
	2	21	7,0	7,0	8,7
	3	18	6,0	6,0	14,7
	4	168	56,2	56,2	70,9
	5	87	29,1	29,1	100,0
	Total	299	100,0	100,0	

Q6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	1,0	1,0	1,0
	2	19	6,4	6,4	7,4
	3	27	9,0	9,0	16,4
	4	163	54,5	54,5	70,9
	5	87	29,1	29,1	100,0
	Total	299	100,0	100,0	

Q7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	1,3	1,3	1,3
	2	37	12,4	12,4	13,7
	3	36	12,0	12,0	25,8
	4	160	53,5	53,5	79,3
	5	62	20,7	20,7	100,0
	Total	299	100,0	100,0	

Q8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2	,7	,7	,7
	2	21	7,0	7,0	7,7
	3	36	12,0	12,0	19,7
	4	182	60,9	60,9	80,6
	5	58	19,4	19,4	100,0
	Total	299	100,0	100,0	

Q9

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	31	10,4	10,4	10,4
	2	81	27,1	27,1	37,5
	3	38	12,7	12,7	50,2
	4	112	37,5	37,5	87,6
	5	37	12,4	12,4	100,0
	Total	299	100,0	100,0	

Q10

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	6	2,0	2,0	2,0
	2	37	12,4	12,4	14,4
	3	46	15,4	15,4	29,9
	4	158	52,8	53,0	82,9
	5	51	17,1	17,1	100,0
	Total	298	99,7	100,0	
Missing	System	1	,3		
Total		299	100,0		

Q11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	5	1,7	1,7	1,7
	2	30	10,0	10,0	11,7
	3	16	5,4	5,4	17,1
	4	150	50,2	50,2	67,2
	5	98	32,8	32,8	100,0
	Total	299	100,0	100,0	

Q12

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	6	2,0	2,0	2,0
	2	31	10,4	10,4	12,4
	3	18	6,0	6,0	18,4
	4	152	50,8	50,8	69,2
	5	92	30,8	30,8	100,0
	Total	299	100,0	100,0	

Q13

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	1,0	1,0	1,0
	2	22	7,4	7,4	8,4
	3	11	3,7	3,7	12,0
	4	168	56,2	56,2	68,2
	5	95	31,8	31,8	100,0
	Total	299	100,0	100,0	

Q14

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	1,0	1,0	1,0
	2	13	4,3	4,3	5,4
	3	21	7,0	7,0	12,4
	4	146	48,8	48,8	61,2
	5	116	38,8	38,8	100,0
	Total	299	100,0	100,0	

Q15

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	15	5,0	5,0	5,0
	2	36	12,0	12,0	17,1
	3	25	8,4	8,4	25,4
	4	152	50,8	50,8	76,3
	5	71	23,7	23,7	100,0
	Total	299	100,0	100,0	

Q16

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	,3	,3	,3
	2	10	3,3	3,3	3,7
	3	6	2,0	2,0	5,7
	4	156	52,2	52,2	57,9
	5	126	42,1	42,1	100,0
	Total	299	100,0	100,0	

Q17

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	,3	,3	,3
	2	13	4,3	4,3	4,7
	3	22	7,4	7,4	12,0
	4	167	55,9	55,9	67,9
	5	96	32,1	32,1	100,0
	Total	299	100,0	100,0	

Q18

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	1,3	1,3	1,3
	2	13	4,3	4,3	5,7
	3	32	10,7	10,7	16,4
	4	175	58,5	58,5	74,9
	5	75	25,1	25,1	100,0
	Total	299	100,0	100,0	

Q19

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	9	3,0	3,0	3,0
	2	57	19,1	19,1	22,1
	3	47	15,7	15,7	37,8
	4	126	42,1	42,1	79,9
	5	60	20,1	20,1	100,0
	Total	299	100,0	100,0	

Q20

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	8	2,7	2,7	2,7
	2	40	13,4	13,4	16,1
	3	22	7,4	7,4	23,4
	4	161	53,8	53,8	77,3
	5	68	22,7	22,7	100,0
	Total	299	100,0	100,0	

Q21

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	17	5,7	5,7	5,7
	2	35	11,7	11,7	17,4
	3	29	9,7	9,7	27,1
	4	131	43,8	43,8	70,9
	5	87	29,1	29,1	100,0
	Total	299	100,0	100,0	

Q22

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	9	3,0	3,0	3,0
	2	13	4,3	4,4	7,4
	3	19	6,4	6,4	13,8
	4	137	45,8	46,0	59,7
	5	120	40,1	40,3	100,0
	Total	298	99,7	100,0	
Missing	System	1	,3		
Total		299	100,0		

Q23

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	25	8,4	8,4	8,4
	2	77	25,8	25,8	34,1
	3	34	11,4	11,4	45,5
	4	114	38,1	38,1	83,6
	5	49	16,4	16,4	100,0
	Total	299	100,0	100,0	

Q24

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	93	31,1	31,1	31,1
	2	137	45,8	45,8	76,9
	3	15	5,0	5,0	81,9
	4	48	16,1	16,1	98,0
	5	6	2,0	2,0	100,0
	Total	299	100,0	100,0	

Q25

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	8	2,7	2,7	2,7
	2	41	13,7	13,7	16,4
	3	53	17,7	17,7	34,1
	4	136	45,5	45,5	79,6
	5	61	20,4	20,4	100,0
	Total	299	100,0	100,0	

Q26

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	44	14,7	14,7	14,7
	2	94	31,4	31,4	46,2
	3	47	15,7	15,7	61,9
	4	87	29,1	29,1	91,0
	5	27	9,0	9,0	100,0
	Total	299	100,0	100,0	

Q27

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	33	11,0	11,0	11,0
	2	108	36,1	36,1	47,2
	3	52	17,4	17,4	64,5
	4	82	27,4	27,4	92,0
	5	24	8,0	8,0	100,0
	Total	299	100,0	100,0	

Q28

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	51	17,1	17,4	17,4
	2	104	34,8	35,5	52,9
	3	57	19,1	19,5	72,4
	4	62	20,7	21,2	93,5
	5	19	6,4	6,5	100,0
	Total	293	98,0	100,0	
Missing	System	6	2,0		
Total		299	100,0		

One Sample t-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
mean of Differentiated curriculum scale	299	3,7304	,37310	,02158

One-Sample Test

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
	Lower	Upper	Lower	Upper	Lower	Upper
mean of Differentiated curriculum scale	33,849	298	,000	,73035	,6879	,7728

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Q1	298	2,96	1,391	,081
Q2	299	3,37	1,198	,069
Q3	299	4,31	,843	,049
Q4	299	4,05	,846	,049
Q5	299	4,04	,885	,051
Q6	299	4,04	,852	,049
Q7	299	3,80	,952	,055
Q8	299	3,91	,806	,047
Q9	299	3,14	1,241	,072
Q10	298	3,71	,960	,056
Q11	299	4,02	,967	,056
Q12	299	3,98	,983	,057
Q13	299	4,10	,855	,049
Q14	299	4,20	,827	,048
Q15	299	3,76	1,096	,063
Q16	299	4,32	,708	,041
Q17	299	4,15	,760	,044
Q18	299	4,02	,809	,047
Q19	299	3,57	1,101	,064
Q20	299	3,81	1,021	,059
Q21	299	3,79	1,152	,067
Q22	298	4,16	,943	,055
Q23	299	3,28	1,246	,072
Q24	299	3,88	1,083	,063
Q25	299	3,86	,972	,056
Q26	299	2,86	1,242	,072
Q27	299	2,85	1,175	,068
Q28	293	2,64	1,182	,069

One-Sample Test

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
	Lower	Upper	Lower	Upper	Lower	Upper
Q1	-,458	297	,647	-,037	-,20	,12
Q2	5,358	298	,000	,371	,23	,51
Q3	26,829	298	,000	1,308	1,21	1,40
Q4	21,540	298	,000	1,054	,96	1,15
Q5	20,318	298	,000	1,040	,94	1,14
Q6	21,172	298	,000	1,043	,95	1,14
Q7	14,522	298	,000	,799	,69	,91
Q8	19,581	298	,000	,913	,82	1,00
Q9	2,004	298	,046	,144	,00	,29
Q10	12,735	297	,000	,708	,60	,82
Q11	18,294	298	,000	1,023	,91	1,13
Q12	17,240	298	,000	,980	,87	1,09
Q13	22,324	298	,000	1,104	1,01	1,20
Q14	25,095	298	,000	1,201	1,11	1,29
Q15	12,028	298	,000	,763	,64	,89
Q16	32,330	298	,000	1,324	1,24	1,41
Q17	26,169	298	,000	1,151	1,06	1,24
Q18	21,738	298	,000	1,017	,92	1,11
Q19	8,982	298	,000	,572	,45	,70
Q20	13,648	298	,000	,806	,69	,92
Q21	11,844	298	,000	,789	,66	,92
Q22	21,248	297	,000	1,161	1,05	1,27
Q23	3,944	298	,000	,284	,14	,43
Q24	14,041	298	,000	,880	,76	1,00
Q25	11,255	298	,000	,672	,55	,79
Q26	-1,910	298	,057	-,137	-,28	,00
Q27	-2,165	298	,031	-,147	-,28	-,01
Q28	-5,241	292	,000	-,362	-,50	-,23

Independent Sample t-test:

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
mean of Differentiated curriculum scale	female	184	3,7567	,32016	,02360
	male	115	3,6882	,44319	,04133

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
mean of Differentiated curriculum scale	Equal variances assumed	10,086	,002	1,548	297	,123	,06850	,04425	-,01858	,15558
	Equal variances not assumed			1,439	188,031	,152	,06850	,04759	-,02538	,16239

Group Statistics

	School Type	N	Mean	Std. Deviation	Std. Error Mean
mean of Differentiated curriculum scale	State School	275	3,7313	,38021	,02293
	Private School	24	3,7199	,28508	,05819

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	
mean of Differentiated curriculum scale	Equal variances assumed	3,559	,060	,143	297	,887	,01136	,07954	-,14518	,16790	
	Equal variances not assumed			,182	30,633	,857	,01136	,06255	-,11627	,13898	

Group Statistics

	School Location	N	Mean	Std. Deviation	Std. Error Mean
mean of Differentiated curriculum scale	Rural School	96	3,7677	,40260	,04109
	Urban School	203	3,7127	,35798	,02513

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	
mean of Differentiated curriculum scale	Equal variances assumed	,377	,540	1,191	297	,235	,05500	,04618	-,03589	,14588	
	Equal variances not assumed			1,142	168,259	,255	,05500	,04816	-,04009	,15008	

One Way ANOVA:

ANOVA

mean of Differentiated curriculum scale

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1,335	4	,334	2,444	,047
Within Groups	40,147	294	,137		
Total	41,482	298			

Multiple Comparisons

Dependent Variable: mean of Differentiated curriculum scale
Dunnett C

(I) Grade Level	(J) Grade Level	Mean Difference (I-J)	Std. Error	95% Confidence Interval	
		Lower Bound	Upper Bound	Upper Bound	Lower Bound
1. Grade	2. Grade	-,02378	,06501	-,2068	,1592
	3. Grade	-,09666	,05911	-,2630	,0697
	4. Grade	,02530	,07189	-,1780	,2286
	5. Grade	,09943	,07137	-,1010	,2999
2. Grade	1. Grade	,02378	,06501	-,1592	,2068
	3. Grade	-,07288	,05782	-,2354	,0897
	4. Grade	,04907	,07083	-,1512	,2493
	5. Grade	,12320	,07031	-,0741	,3205
3. Grade	1. Grade	,09666	,05911	-,0697	,2630
	2. Grade	,07288	,05782	-,0897	,2354
	4. Grade	,12195	,06546	-,0632	,3071
	5. Grade	,19608(*)	,06489	,0141	,3781
4. Grade	1. Grade	-,02530	,07189	-,2286	,1780
	2. Grade	-,04907	,07083	-,2493	,1512
	3. Grade	-,12195	,06546	-,3071	,0632
	5. Grade	,07413	,07672	-,1422	,2904
5. Grade	1. Grade	-,09943	,07137	-,2999	,1010
	2. Grade	-,12320	,07031	-,3205	,0741
	3. Grade	-,19608(*)	,06489	-,3781	-,0141
	4. Grade	-,07413	,07672	-,2904	,1422

* The mean difference is significant at the .05 level.

ANOVA

mean of Differentiated curriculum scale

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,373	4	,093	,667	,616
Within Groups	41,109	294	,140		
Total	41,482	298			

Multiple Comparisons

Dependent Variable: mean of Differentiated curriculum scale
Dunnett C

(I) Experience	(J) Experience	Mean Difference (I-J)	Std. Error	95% Confidence Interval	
		Lower Bound	Upper Bound	Upper Bound	Lower Bound
1-2 years	3-5 years	,18681	,11589	-,2227	,5964
	6-10 years	,06247	,07683	-,2329	,3579
	11-20 years	,07562	,06773	-,2034	,3546
	More than 20 years	,13457	,07739	-,1608	,4299
3-5 years	1-2 years	-,18681	,11589	-,5964	,2227
	6-10 years	-,12434	,10925	-,4655	,2168
	11-20 years	-,11120	,10306	-,4360	,2136
	More than 20 years	-,05225	,10964	-,3936	,2892
6-10 years	1-2 years	-,06247	,07683	-,3579	,2329
	3-5 years	,12434	,10925	-,2168	,4655
	11-20 years	,01314	,05561	-,1433	,1696
	More than 20 years	,07209	,06704	-,1168	,2610
11-20 years	1-2 years	-,07562	,06773	-,3546	,2034
	3-5 years	,11120	,10306	-,2136	,4360
	6-10 years	-,01314	,05561	-,1696	,1433
	More than 20 years	,05895	,05637	-,0983	,2161
More than 20 years	1-2 years	-,13457	,07739	-,4299	,1608
	3-5 years	,05225	,10964	-,2892	,3936
	6-10 years	-,07209	,06704	-,2610	,1168
	11-20 years	-,05895	,05637	-,2161	,0983