

EARLY CHILDHOOD TEACHERS' VIEWS ABOUT AND PRACTICES
WITH DIFFERENTIATED INSTRUCTION
IN THE PRIMARY YEARS PROGRAMME

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ABSTRACT

EARLY CHILDHOOD TEACHERS' VIEWS ABOUT AND PRACTICES WITH DIFFERENTIATED INSTRUCTION IN THE PRIMARY YEARS PROGRAMME

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The aim of this study was to investigate the views and practices of early childhood teachers on differentiation. In order to explore the research questions, 19 pre-kindergarten and kindergarten teachers of an International Baccalaureate (IB) world school in Turkey were interviewed about differentiation, their written curriculum documents were analyzed, and the classrooms were observed.

This study was designed and conducted as a qualitative case study. As the case, an authorized International Baccalaureate Primary Years Programme school was chosen since differentiation is one of the significant teaching and learning approaches of this program. Data were collected from the participants' perspective, in a naturalistic setting and over five months.

For data analysis, raw data turned into descriptive statements, and they were interpreted as detailed descriptions through related literature.

The findings of this study revealed that early childhood teachers implementing differentiation believe in the benefits approach and have a positive attitude towards it; meanwhile, they reflect this in their practices. Early childhood teachers mostly use 'process' to be differentiated and 'readiness' to be considered for children's variety. Furthermore, the study revealed that early childhood teachers have some challenges in terms of planning, time management and classroom management. Also, teachers need more training on and experience with differentiated instruction in order to implement it effectively. Furthermore, Turkish Early Childhood Education Program was compared with the general principles of differentiation and it was found that the program is suitable for implementation of differentiated instruction.

Keywords: differentiated instruction, differentiation, early childhood education, primary years program

ÖZ

OKUL ÖNCESİ ÖĞRETMENLERİNİN İLK YILLAR PROGRAMI'NDA FARKLILAŞTIRILMIŞ ÖĞRETİM HAKKINDA GÖRÜŞ VE UYGULAMALARI

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Bu çalışmanın amacı İlk Yıllar Programı'nda okul öncesi öğretmenlerinin farklılaştırılmış öğretim konusunda görüş ve uygulamalarının araştırılmasıdır. Araştırma sorularını incelemek için Türkiye'deki bir IB Dünya Okulu'ndan 19 okulöncesi öğretmeni ile farklılaştırma hakkında mülakatlar yapılmış, yazılı müfredat dokümanları incelenmiş ve sınıfları gözlemlenmiştir.

Araştırmacının temel amacı özel bir durumdaki öğretmenlerin farklılaştırma hakkında görüş ve uygulamalarını incelemek olduğundan, çalışma niteliksel bir durum incelemesi olarak tasarlanmış ve uygulanmıştır. Bu amaca ulaşmak için, farklılaştırmayı önemli bir öğretim ve öğrenme yaklaşımı olarak kabul eden bir Uluslararası Bakalorya İlk Yıllar Programı yetkili okulu seçilmiştir. Veri, katılımcıların bakış açıları üzerinden doğal bir ortamda yaklaşık beş ayda toplanmıştır. Data analizi için Miles ve Huberman'ın (1994) kılavuzu kullanılmıştır. Veri analizi ise, ham verinin

tanımlayıcı ifadelere dönüştürülmesi ve ilgili literatür doğrultusunda detaylı şekilde yorumlanmasını içermektedir.

Bu çalışmanın bulguları, farklılaştırma uygulayan okul öncesi öğretmenlerin yaklaşımın faydalarına inandıklarını ve bu yaklaşıma yönelik olumlu tutumları olduğunu aynı zamanda bu tutumlarını uygulamalarına yansıttıklarını göstermiştir. Okul öncesi öğretmenleri çoğunlukla süreci öğrencilerin farklılıklarından hazırbulunuşluğa göre farklılaştırdıkları görülmüştür. Ayrıca, çalışma sonucunda okul öncesi öğretmenlerinin farklılaştırılmış öğretimde planlama, zaman yönetimi ve sınıf yönetimi konusunda bazı zorluklar yaşadıkları belirlenmiştir. Bunun dışında, öğretmenlerin farklılaştırma konusunda daha fazla eğitime ve üzerinde deneyim kazanmaya ihtiyacı vardır. Ayrıca, Türk Okul Öncesi Eğitim Programı farklılaştırmanın genel ilkeleri ile karşılaştırılmış ve programın farklılaştırma yapılmaya uygun olduğu görülmüştür. Son olarak, bu çalışma ile farklılaştırılmış öğretim uygulayan okul öncesi öğretmenin ve öğrenme ortamının göstergeleri belirlenirken aynı zamanda planlama için rehber olacak adımlar tanımlanmıştır.

Anahtar kelimeler: farklılaştırılmış öğretim, farklılaştırma, okul öncesi eğitim, ilk yıllar programı

to my little shining stars;

DEFNE & SARP

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LIST OF ABBREVIATIONS

DI: Differentiated instruction

IBO: International Baccalaureate Organization

IB-PYP: International Baccalaureate Primary Years Programme

IB-MYP: International Baccalaureate Middle Years Programme

IB-DP: International Baccalaureate Diploma Programme

IB-CP: International Baccalaureate Career Programme

MONE: Ministry of National Education

CHAPTER I

INTRODUCTION

Far away there in the sunshine are my highest aspirations.
I may not reach them, but I can look up and see their
beauty, believe in them, and try to follow where they lead.

Louisa May Alcott

Due to the rapid changes and emergent needs in the world, a reform in the educational systems of countries needs to be considered (OECD, 2015). Obviously, this change is a part of the evolution of the educational systems. The current system of education had been designed, conceived and structured for a different era and is related to the intellectual culture of the Enlightenment and the economic circumstances of the Industrial Revolution. Before the middle of the 19th century, there were no systems of public education (Mulhern, 1959). Nevertheless, now life has changed enormously through inventions, technology and investments and through new inquiries and discoveries. When we compare the traditional education shaped by the needs of the 19th century with 21st century children, there is a big gap between them with regards to children's needs in education.

In this new era, there are numerous educational models, programs and approaches designed and being implemented for children. The overall aim is to educate children for the 21st century. On the way to this common goal, educators try to be equal towards all children, no matter if they are

from different cultures, backgrounds, capacities and economies. In order to be equal, education systems have standards, national curricula, and common learning outcomes to be covered as well as central exams. But we need to consider whether this equality is fair to all children or not.

The traditional educational system reminds me of big factories with only one process even if the raw material is different. All materials are put on the conveyor belt from the same starting point and go through identical processes that constitute the mass production for the factory; at the end, we have similarly processed products that have different origins. Then, what happens to the raw materials on the conveyor belts that are different? They will probably be labeled "defective products." As can be seen in this analogy, the system needs to be altered in order to gain the best outcome from different raw materials. Thus, this new era's educators need to keep in mind that children who come to our schools are different from each other even they are *all* called "students."

In an early childhood setting, every child is unique with his or her own learning preferences, needs and capacities, which make educators want to meet the needs of all children. When the general definition of early childhood education is considered, each child has the right to improve his or her skills in different aspects through their specialty (Wortham, 2006). Differentiated instruction is a process that enhances student learning by matching children's characteristics and differences with changes in various instructional components such as grouping practices, teaching methods, and classroom resources (Tomlinson & McTighe, 2006). According to Heacox (2002), differentiated instruction promotes acceptance of student differences and this leads to affirming the learning strengths of all students. Since each child is seen as unique, in a differentiated classroom all children's learning rates and styles are acknowledged. Differentiated instruction recognizes that in order to be fair for all students, tasks sometimes need to be different for some students, and differentiated instruction accepts that success means

different things to different people. In order to reach this success, students' motivation is also very significant because it recognizes that student interest is the key to motivation, that students have different interests, and that they build feelings of self-confidence and confidence in learning by supporting and celebrating student success.

Differentiated instruction differs from traditional methods in terms of the classroom environment, the teachers, and assessment, among other aspects. According to differentiated instruction, each student has particular performance, interests and learning preferences, thus each child needs appropriate support. Furthermore, it is integrated into the curriculum and classroom hours, and the children are supported during class hours (Tomlinson, Brimijoin, Narvaez, 2008). As mentioned above, differentiated instruction is not conducted after class hours; it occurs during the day and is integrated into all learning experiences. It is obvious that teachers need to be flexible because they are expected to use different strategies for teaching, learning, and assessment.

One of the curriculum frameworks which claims differentiated instruction as part of its teaching and learning approach is the International Baccalaureate Primary Years Programme (IB-PYP). According to IB-PYP's definition of children's learning, learning experiences are differentiated to accommodate the range of abilities and learning styles in the group through exploring the learning styles and individual differences of the students (IBO, 2009).

The International Baccalaureate (IB) is a non-profit educational foundation and it is focused on students all over the world. There are four programs for students aged 3 to 19 to help develop the intellectual, personal, emotional and social skills needed to live, learn, and work in a rapidly globalizing world.

The IB was founded in 1968, and by the beginning of 2015 it is currently implemented in 3,676 schools in 146 countries to develop and offer

four challenging programs to over 1,139,000 students aged 3 to 19 years (About the IB, 2015). The schools implement the programs through the criteria defined in the "The Programme standards and practices," which is essential for all prospective and authorized IB World Schools. This document contains the program standards, practices, and requirements which are specific to each individual program. The standards defined by the IB provide critical information for the administration, resources, planning, implementation, development, and assessment of all International Baccalaureate programs. Schools are responsible for implementing the program according to the standards, and they go through an authorization process under the light of these standards.

While being at the center of this study, the IB-Primary Years Programme is for students aged 3 to 12 and focuses on the development of the whole child as an inquirer, both in the classroom and in the world outside (IBO, 2009).

The IB-PYP is a transdisciplinary curriculum framework that fosters differentiated instruction by aligning with written, taught, and assessed curriculum. Schools offering IB-PYP need to take official IB trainings, and they pass through an evaluation process to become an authorized IB-PYP school (IBO, 2011). In this study, a school that implements the International Baccalaureate Primary Years Programme was chosen for investigation into differentiated instruction.

1.1. Purpose of the Study

In this study, the IB-PYP early childhood teachers' views about and practices with differentiated instruction were investigated through interviews with the teachers, classroom observations, and document analysis.

This description focuses on the teachers' general views about differentiated instruction, how they implement differentiated instruction in

the PYP classrooms, and the challenges they have while implementing differentiated instruction in early childhood education.

1.2. Research Questions

This study aims to investigate the IB-PYP early childhood teachers' views about differentiated instruction through their teaching practices in the classroom. The research questions for the study are:

- a. What are the early childhood teachers' views about differentiated instruction in early childhood education?
- b. How do early childhood teachers implement differentiated instruction in the PYP classrooms?
- c. What are the challenges early childhood teachers have while implementing differentiated instruction in early childhood education?

In order to find the answers to these research questions, qualitative research methodology was followed and a case study was selected as the research design.

1.3. Significance of the Study

The main aim of this study is to investigate early childhood teachers' views about and practices with differentiated instruction. In order to achieve this aim, a school with practice in differentiated instruction was chosen to be investigated since the aim of the study constitutes on teachers' views and practices coming from their existing experiences. To be able to make the aim happen a school which implements IB-PYP was chosen because teaching and learning philosophy of the programme addresses differentiation. The study was conducted in Turkey and it is significant for the researcher and the participants since it gives an opportunity for them to reflect on their own practices and views regarding these practices. The study is one of the

pioneering studies conducted to examine early childhood division of IB-PYP curriculum in Turkey and also it investigated differentiated instruction and IB-PYP together.

According to Tomlinson and Allan (2000), there are some misconceptions about differentiated instruction. Some people believe that it is a way of individualized instruction although people know that it would be very hard to individualize instruction for every student at the same time, in the same classroom with a single teacher. However, individualized instruction is a possibility in differentiation since teachers may use whole group, small group, and individual instruction. Moreover, differentiated instruction is not labeling students and having ability groups—a high-level group, a middle group, and a low group. Also, it is not placing all students of the same academic level into the same group. It is varying instruction to meet the needs of all students. Furthermore, some people believe that it is more work for students, but they should remember that students should be given quality work. What differentiated instruction involves is quality over quantity. In order to learn more about the underlying reasons of these misconceptions teachers need to be given chance to reflect on their practices and share their views. Thus, these misconceptions can be clarified through academic studies about differentiated instruction.

Most of the studies about differentiated instruction examined the implementations at higher levels rather than early childhood education, and mostly they studied gifted students. More studies are needed to clarify the challenges and contributions of differentiated instruction. Hence, differentiated instruction would be implemented more effectively in educational settings. Teachers and students would definitely benefit from the results. In addition, perspectives about differentiated instruction would become more abstract, and these studies would lead to further studies.

There have been some studies conducted about differentiated instruction. Most of them are related to the education of gifted children since

the roots of differentiated instruction go beyond the education of special children (Tomlinson, 1999). Studies on the International Baccalaureate Primary Years Programme have been conducted over the past 10 years by some researchers. For instance, Biro (2003) conducted a qualitative study aiming to explore teacher–teacher interactions during the implementation of IB-PYP. Biro stated that teachers' interaction in IB-PYP is important because of the transdisciplinary nature of the curriculum. Humprey (2004) researched the performance of high ability African American upper elementary grade students in IB-PYP. Humprey (2004) found that the factors contributing to the success of high ability African American elementary school students was consistent with those of students in other racial groups. Another dissertation was submitted by Hartman (2008), which was a descriptive study of four leadership behaviors that contribute to creating a culture of trust, as demonstrated by elementary principals in IB-PYP. She carried out her study with six IB-PYP schools and found that there is a relationship between trust levels and successful change implementation and that the principals' behaviors influence the level of principal–teacher and teacher–teacher trust.

It was found that there are few studies in Turkey related to the International Baccalaureate Primary Years Programme. One of them was submitted by Karamanoğlu (2006) entitled "Assessing Primary Students Success in Science Courses via Primary Years Programme: Portfolio." She found that portfolios can be used as an evaluation technique; in teaching the "variety of living things," portfolios were found to be effective regarding the students' successes; preparing portfolios has a positive effect on learning; portfolios improve students' inquiry and communication skills; and finally, preparing portfolios improves students' auto-control. Another study was conducted by Turan (2004) as a master thesis, covering three different IB-PYP schools. This study was a deep inquiry about the curriculum model of the Primary Years Programme at the elementary level. Also, another study was conducted by the researcher of this dissertation in 2010, which was

about the transdisciplinary approach of the International Baccalaureate Primary Years Programme (Özer, 2010).

The number of schools implementing the International Baccalaureate Primary Years Programme has been increasing yearly in Turkey. In 2006, there were four schools implementing IB-PYP; on the other hand, in 2014 there were more than 31 schools in Turkey implementing PYP as authorized or candidate schools; by the end of June 2015 there are 22 authorized PYP schools in Turkey. Studies will help to define the advantages and disadvantages of this curriculum model; thus, studies will help to increase the quality of this curriculum model. This study will bring insight into the implementation of differentiated instruction in early childhood classrooms from several aspects through the teachers' points of view. It will provide a full range of teachers' perspectives on differentiated instruction.

This study combines the International Baccalaureate Primary Years Programme and differentiated instruction in terms of classroom implications and teacher views and practices through a one-year qualitative research study. Furthermore, the study focuses on early childhood division of the programme and as well as differentiation in order to draw a picture of teachers' viewpoints and their challenges through in place practices. The revealed information would help schools to develop their action plans in terms of using differentiation as the pedagogy for teaching and learning.

1.4. Definition of Terms

The following terms need to be defined for this study:

Disciplines: Each subject area used in an educational setting (IBO, 2012).

Collaborative Planning: Team and collaborative work of teachers while creating a curriculum (IBO, 2008a).

Curriculum: Set of courses and their content offered at a school (Wortham, 2006).

Differentiation: Process of adapting and modifying instruction to meet an

individual student's needs (Tomlinson, 2010).

Homeroom teacher: Teacher who is directly responsible for a class, monitors student learning, and is the individual who best knows the personal, social, and academic development of a particular student.

Learning: Act of making and strengthening connections between thousands of neurons in the brain and between the learner and the content.

Single Subject Teachers: Specialist subject teachers who are not homeroom teachers.

Zone of Proximal Development: The gap between the child's current or actual level of development as determined by independent problem solving and the child's emerging or potential level of development as determined by solving a problem with support by an adult or through collaboration with more capable peers (Vygotsky, 1978).

Primary Years Programme: The curriculum framework for 3 to 12 year-old children that is offered by the International Baccalaureate Organization and requires authorization of the organization in order to be implemented by the schools.

1.5. Limitations of the Study

There are some limitations of the study related to teachers' views about and practices with differentiated instruction and, consequently, the International Baccalaureate Primary Years Programme.

This study is designed to be a qualitative case study, which does not aim to make generalizations (Fraenkel & Wallen, 2006). The main aim is to define the situation in a single school in depth by interviewing a number of teachers, which is the nature of qualitative studies. In order to find the correct case for the study, a school which already uses differentiation as its pedagogy for teaching and learning was selected. The school is an authorized IB-PYP school which has been implementing the programme for about nine years. Although general principles and model for differentiation is

the same for all grade levels and subjects, the case ended up investigating differentiation in IB-PYP in early years. However, detailed information about IB-PYP curriculum model was given in the dissertation; also the practices and documents that are required by the IB were defined in detail. While transferring the findings to other cases, IB-PYP specific practices should be considered.

Furthermore, because the participants had background information about differentiated instruction, this might have affected their reflections positively (or negatively). Particularly, using differentiation is a practice of the programme (IB-PYP) and teachers are required to use this pedagogy when they start working with the programme. Therefore, some personal views might be subjective rather than objective. To overcome this limitation, multiple data sources were used to do triangulation, which is defined in method chapter.

Finally, the researcher herself has teaching and coordinating experience in IB-PYP for long years. Her experience and positive attitude towards the programme and differentiation could have had some effects on the comments and conclusions. In order to be objective rather than subjective during inquiry process, different strategies were used for validity and reliability of the study. The precautions for making the researcher to have a stance of neutrality towards the case were presented in the methodology chapter.

1.6. My Motivation for the Study

My motivation for working on the PYP for my doctoral dissertation starts with my teaching experience with IB-PYP. Working with children through their inquiry journey added a new perspective to my vision, and this led me to conduct academic studies on IB-PYP.

My master's thesis was about the transdisciplinary approach of the integrated curriculum and was titled "A Case Study on Transdisciplinary

Approach of Integrated Curriculum: Perspectives of Early Childhood Teachers.” The purpose of this study was to examine teachers’ beliefs and perspectives about an applied transdisciplinary approach of integrated early childhood curriculum. Since IB-PYP is first and foremost a transdisciplinary curriculum developed for international primary education, I chose to examine teachers’ beliefs and perspectives about the transdisciplinary approach, collaborative planning, the integration of disciplines in a transdisciplinary curriculum, and the benefits of this curriculum for children and parents in a private kindergarten which is implementing the Primary Years Programme.

My interaction with the IB-PYP started in 2006 with my teaching experience in an IB World School. I attended many IB official workshops such as on teaching and learning, making it happen in the classroom, transdisciplinary learning, and assessment and so on. These workshops enlightened me regarding the program and led me to work with it more. After my teaching experience, I started working as a PYP Coordinator in an IB World school. Moreover, since 2009, I have been working as a workshop leader, and since 2011 I have been working as a school visit team member on behalf of the IB, delivering IB workshops and evaluating schools around the world. My these IB Educator roles enlighten my understanding of the programme and provided me opportunities to see different cultures, countries, regulation implementing the same international programme with a same framework.

During the interactions with PYP teachers from different schools, I have realized that differentiation is one of the most emphasized aspects of the PYP and for most of the teachers it is an emerging concept which they try to learn how to effectively implement in their PYP classrooms. These feedbacks coming from the practitioners led this study being conducted in order to have an in-depth inquiry, draw conclusions and give suggestions for the field through these conclusions.

CHAPTER II

REVIEW OF RELATED LITERATURE

The purpose of this qualitative case study is to explore early childhood teachers' views about and use of differentiated instruction in the Primary Years Programme of the International Baccalaureate. In this chapter, a literature review will be presented by pointing out the definitions and theoretical background of differentiated instruction, teacher views about and practices with differentiated instruction, and differentiated instruction in the International Baccalaureate Primary Years Programme.

2.1. Differentiated Instruction

Nowadays, because classrooms are becoming increasingly diverse, educational authorities, teachers, and school administrators are looking to teaching and learning strategies in order to manage the diversity in the classroom. Differentiated instruction causes educators to rethink the structure of the classroom and invites all stakeholders into learning context within the classroom. In this way, it aims to be beneficial for all children who are different from each other in many aspects.

According to Tomlinson (2006), who is a professor with many studies on differentiated education, it is teaching with student variance in mind. That is, assessing where the students are rather than adopting a standardized teaching by assuming all children are the same. Thus, differentiated instruction is "responsive" teaching rather than "one-size fits all."

Differentiated instruction encourages the modification of instruction to address student diversity and to meet curricular objectives by emphasizing student differences and high levels of participation through flexible grouping and simultaneous activities. A main feature of differentiated instruction is group-driven tasks, but it also places importance on whole-class and individualized instruction. It focuses on the quality of the activities versus the quantity of the work assigned (Tomlinson, 1999).

General

In studies (Heacox, 2002; Tomlinson, 2010), different ways to manipulate the instruction plan is described in order to provide differentiated instruction effectively in the classroom. At the core of the classroom practice of differentiation is the modification of five curriculum-related elements—content, process, product, learning environment, and affect—which are based on three categories of student need and variance—readiness, interest, and learning profile. Thus, to meet each student's individual needs in the classroom, the teacher can provide differentiated learning by providing choice in either or all of the areas. Carol Ann Tomlinson (2010) developed a concept map of effective differentiated instruction. Figure 1 shows the key elements and relationships between them.

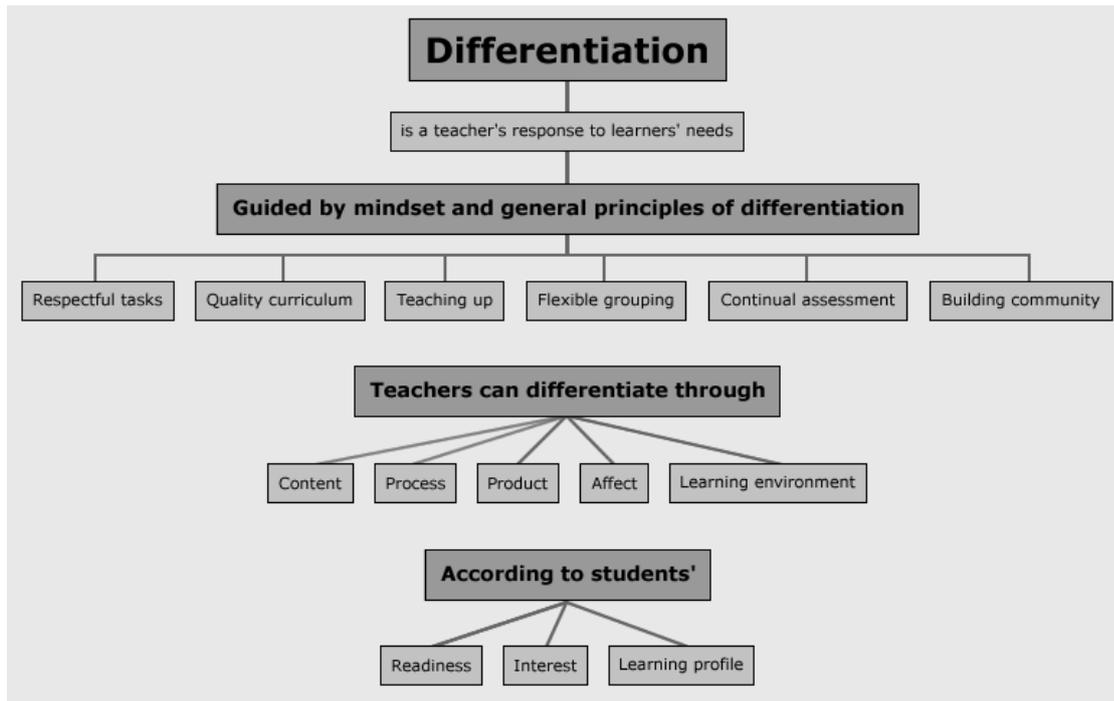


Figure 1: Tomlinson's map of differentiated instruction
 Carol Ann Tomlinson, 2010

Teachers differentiate through one or more of five key aspects of education. They are content, process, product, affect and learning environment.

Content

Content is “what” students learn and includes curriculum topics, skills, concepts, or themes. They might be reflected in national or international standards. According to Tomlinson (1995), content deals specifically with what students are learning about and where they are in their understanding of a course.

As defined by Bailey and Williams-Black (2008), the content of a lesson is the curriculum that is being taught, and this is likened to the input of teaching and learning. When differentiating the content, teachers target what they want students to master at the end of the lesson. Tomlinson (2001) suggests two ways of differentiating the content. The first is adapting

what is taught—that is, changing the topic. The second way of differentiating the content is adapting or modifying how we give students access to what we teach—that is, changing the level of the same content.

Process

According to Tomlinson (2001), process is the way students learn, and it also refers to how students understand the information, ideas, and skills given in a lesson. Differentiating the process means learning activities or strategies that provide appropriate methods for students to explore the content of that lesson (Theroux, 2004).

Tomlinson (2001) identified this procedure as "sense-making." In order to differentiate the process, Tomlinson (2001) believed that "activities should be interesting to the students, allow the students to think on a higher level, and allow the students to use key skills in order to understand the key ideas" (p. 79). She also emphasized that the activities be intellectually demanding.

Product

Basically, product is the end result of student learning and reflects student understanding. Moreover, it is how students demonstrate what they have come to know, understand, and are able to do after an extended period of learning.

A product is defined as what a student develops to show their understanding of the content which was learned (Bailey & Williams-Black, 2008). Differentiating the product encourages students to demonstrate what they have learned in a wide variety of forms that reflect knowledge and the ability to manipulate an idea. This phase of differentiating is identified as evaluation (Tomlinson, 2003).

This means that differentiating the product supports students in choosing any way to show what they have learned, and this way of showing

would be something that they feel comfortable with. In this way, the students will also reflect their own way of learning, which serves as a clue for teachers.

Affect

For differentiated instruction, affect was recently mentioned by Tomlinson and Imbeau (2010) as a part of what to differentiate. According to them, affect is the impact of students' emotions and feelings on their learning, and through this their motivation to learn, ability to work with others, and self-concept will be effected. Thus, students' affect towards learning will have an impact on their development, positively or negatively. Also, different from content, process, and product, taking into consideration students' affective needs is related with the learning environment.

Learning environment

According to Tomlinson, Brimijoinand, and Narvaez (2008), the learning environment is the physical and emotional context in which learning occurs. The appearance, organization, and structure of a classroom can help students learn through appealing colors, effective displays of student work, spaces for both solitary and collaborative work, and easy access to materials and supplies.

Differentiation can be done according to one or more aspects of student diversity: readiness, interest, and learning profile. Tomlinson stated that "The students' experiences, culture, gender, genetic codes and neurological wiring, all affect how and what they learn" (Tomlinson, 1999, p. 10). These variances between children can be determined by formative assessment or inventories by the teachers (Landrum, 2010).

Readiness

This is a student's current level in terms of specified knowledge, understanding, and skills (Edwards, Carr, & Siegel, 2001). Vygotsky (1978) stated that an individual learns in his or her zone of proximal development, which is a point where a child cannot do a task alone but can do it with scaffolding or support.

Students' readiness is significant in differentiated instruction. It was found that students whose academic skills are below average in non-differentiated learning environments will have lack of taking advantage of learning advantages and this will lead to a poorer quality of education (Edwards, Carr, & Siegel, 2001).

Interest

Interest is what engages the attention, curiosity, and involvement of a student. Renninger (1990) found that there is a short- and long-term positive effect when students are interested in their work at the school. Having information on the different interests of children helps teachers to increase the engagement of students in a particular lesson.

Learning profile

Learning profile is a preference for taking in, exploring, or expressing content that is the best way for individuals to learn (Tomlinson, 2001). Thus, differentiating according to learning profiles can be referred to as the learning style; intelligence preference, gender, and culture and all of these can differ for each student in terms of learning.

Dunn (1996) stated that when instruction is matched with the students' learning styles, it leads to positive improvements in student learning.

2.1.1. Theoretical Framework

In the past, most of the studies conducted on differentiated instruction were in the field of talented and gifted education. However, now, differentiated instruction is becoming an instructional tool for every child and classroom (Heacox, 2002). The theoretical background of differentiated instruction is based on some well-known studies. Also, although the name was not mentioned as "differentiation," there are many theories that inform differentiated instruction in terms of being respectful to student diversity in teaching and learning.

Differentiated instruction is mainly related to the studies of Lev Vygotsky. The significant items in his work are the unique manner used to identify and use the concepts of development, the social origin of the mind, and the role of speech in cognitive development (Elliott et al., 2000). According to Vygotsky (1978), learning should align with a student's developmental level and not simply intelligence test results, which only identify a student's developmental level at the time of testing. As stated by Vygotsky (1978), the zone of proximal development determines children's actual learning capacity. The zone of proximal development (ZPD) is the difference between what children can do independently and what they can do with help. Thus, students need to work at a level which is close to what they can do independently. In an educational setting, this is the responsibility of the teacher to keep students' ZPD in mind and create learning engagements according to it.

The implications of Vygotsky's ideas in the differentiated instruction context can be seen in scaffolding which is fully related with children's level of ability. Thus, the teacher designs the lesson so that the instruction extends to just above the student's current developmental level, building on that which the student already knows but encouraging the student to move ahead into areas that pose greater challenge. Thus, scaffolding can be stated as the appropriate strategy to access the zone of proximal behavior

(Vygotsky, 1978). Through scaffolding, the teacher can also engage student interest and modify tasks to suit ability levels, and, in this way, the learning engagement of children will also be meaningful, compelling learner interest and providing a basis for the use of supporting materials.

Benjamin Bloom's (1956) work is considered as another root of differentiated instruction. Bloom's taxonomy of education is focused on the case of teaching programs and aims to classify the goals of the educational system. The taxonomy has three major domains: affects, psychomotor, and cognitive. The cognitive domain was revised in 2001 by Anderson and Krathwohl. There is an order from lower thinking skills to higher order thinking skills in Bloom's revised taxonomy: remembering, understanding, applying, analyzing, evaluating, and creating. The rules of Bloom's taxonomy are evident in differentiated instruction. For example, students who are academically talented may require less time to work on a task, concepts, and ideas given in the 'remembering' level of Bloom's taxonomy; they can go further to higher skills in the taxonomy. Furthermore, the students who are below the basic level need to work on lower thinking skills more and move to higher ones (Heacox, 2002). In the case of differentiated instruction, educators can utilize Bloom's taxonomy to categorize activities by their level of challenge and complexity.

Brain research brought new inspiration as the human brain has significant implications for educators and also for differentiated education. It was found that, a high quality of education initiates the adaptation of brain to process, store, and retrieve information (Greenleaf, 2003). In order to implement differentiated instruction, some concepts are being suggested through brain research. Firstly, educators should present safe learning environments in order to encourage learning of children because when children face with failure in the learning environments, would not feel safe. Furthermore, challenging level of a learning experience for children should be adopted in order to make the student feel comfortable (Tomlinson &

Kalbfleisch, 1998). Also, the student must be able to make meaning from the ideas and skills through significant association. It is stated that learning can occur only when the learner has engagements that are not boring or anxiety-inducing for them (Jensen, 1998).

Differentiated instruction mainly deals with the individual differences of children. When differences of humans are considered, the studies of Howard Gardner come to mind since they are mainly about human cognition. Gardner's intelligence theory states that cognition is unique, and individuals can be described as having a single quantifiable intelligence (Campbell, Campbell, & Dickinson, 2004). According to Gardner, each individual possesses different cognitive features. Gardner defined intelligence as the ability to solve problems that one encounters in real life, the ability to generate new problems to solve, and the ability to make something or offer a service that is valued within one's culture (Calleja, 2005).

Educators and schools that promote the multiple intelligences theory base their practices on the conclusion that all students can be successful in an area. The implementations of differentiated instruction in the classroom coupled with multiple intelligences allow teachers to become better observers of students' skills and to teach students through their individual strengths. Differentiated instruction and multiple intelligences provide opportunities to transform curriculum, instruction, and assessments to take place as individualized learning (Heacox, 2002).

According to Landrum (2010), multiple intelligences foster the learning styles of children in a differentiated classroom. The concept of learning styles has interesting implications for educators. Recently, a growing emphasis on differentiated instruction may have further increased teachers' tendency to look at learning styles as an instructionally relevant variable when individualizing instruction in increasingly heterogeneous classrooms. He concludes that there is insufficient evidence, however, to support learning

styles as an instructionally useful concept when planning and delivering appropriately individualized and differentiated instruction.

2.2. Teacher Views about and Practices with Differentiated Instruction

Teachers are the essence of the educational process since they have a role in every phase of the process. Stronge (2002) denoted qualities of effective teachers based on a study and concluded that effective teachers in modern classrooms develop classroom routines that give importance to learner variance.

Many teachers try new innovations for the benefit of their students with different needs. Also, having trouble with current teaching practices makes teachers want to be a part of differentiated instruction. On the other hand, some cases as a lack of training and administrative support on the subject may result from resistance to differentiated instruction. Tomlinson (2005) stated that teachers argue against the feasibility of differentiated instruction and that teachers' involvement with differentiated instruction through practice as receivers of training. Edwards, Carr, & Siegel (2006) also found that although the early childhood teachers have positive attitudes towards differentiation, some researchers found that if a teacher resists implementing differentiation, it might be because of a lack of training and administrative professional development on DI.

Tomlinson (1999) presented five reflections observed against differentiated instruction in practice.

- Teachers fail to differentiate in terms of considering the learner's speaking language, students with special education needs, and gifted students.
- Teachers are not responsive to cultural and racial needs through differentiated instruction.
- Any evidence of differentiation is accidental and not intentional.

- Even teachers who differentiate for an exception do so only for the exception in a specific class setting.
- Differentiated instructional training for pre-service teachers occurs seldom.

It is stated that the reasons teachers are having trouble adopting the differentiated instruction approach include perceptions of the complicated nature of implementing the approach. Teachers need to receive training on differentiated instruction to have the in-depth information that will be transformed into implementation (Tomlinson and Allan, 2000).

Besides the challenges of teachers, there are studies which revealed valuable information about effectiveness of the approach. Tomlinson and Callahan et al. (1997) found that those teachers who use multiple intelligence at the primary grade levels as a focus are more flexible towards teaching and become more student-centered.

Ernest (2010) conducted a case study on increasing teaching efficacy using differentiated instruction in an inclusion classroom that used pre-assessment, self-assessment, and on-going assessment to implement the principles of differentiated instruction in order to become more responsive to students' needs in a systematic way. It was found through qualitative data that the implementation of the differentiated instruction process helped the teacher realize how she could positively impact students' learning by using the concepts of content, product, process, and learning environments.

2.3. International Baccalaureate Primary Years Programme and Differentiated Instruction

Differentiated instruction can be found systematically in the pre-established curriculum model created by the International Baccalaureate Organization for 3-12 age group of children as Primary Years Programme. In this part of the dissertation, detailed information about IB-PYP and its pedagogy of differentiated instruction will be presented.

2.3.1. International Baccalaureate Organization

The International Baccalaureate Organization is a non-profit organization aimed at developing inquiring, knowledgeable, and caring young people who help to create a better and more peaceful world through intercultural understanding and respect. To achieve this goal, the organization works with schools, governments, and international organizations to develop challenging programs of international education. The aim of these programs is to bring up active, compassionate, and lifelong learner students across the world. The Primary Years Programme (PYP) was introduced in 1997, the Middle Years Programme (MYP) was introduced in 1994, the Diploma Programme (DP) was introduced in 1969, and the Career Programme (CP) was introduced in 2011 (About the IB, n.d.).

These programs have specific age ranges: the Primary Years Programme is for ages 3 to 12, the Middle Years Programme is for ages 11-16, and the Diploma Programme and Career Programme are for ages 16-19. In all of these programs, the development of the child understanding the concept of international mindedness is the focus of teaching and learning.

Each IB program has its own features and curriculum models because there is not a requirement for schools to offer all programs. However, if a school offers more than one program, the children will have a chance to enjoy a continuous international educational experience from early childhood to high school graduation. The IB's mission statement and the IB learner profile connect the four programs.

IB wants to educate people who have the elements of the IB student profile, and IB's overall aim is clearly stated in its mission statement (IBO, 2010, p. 3):

The International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect.

To this end the organization works with schools, governments and international organizations to develop challenging Programmes of international education and rigorous assessment.

These Programmes encourage students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right.

2.3.2. How Schools Become IB World Schools

The schools who want to implement any of the IB Programmes apply for and go through an authorization process, which lasts about 2-3 years for PYP. IB has standards and practices with a set of criteria, against which both the IB World School and the IB itself can measure success in the implementation of the four programs. They provide critical information for the planning, implementation, development, and evaluation of all International Baccalaureate Programmes. Figure 2 summarizes the authorization process of schools who want to become an IB world school.

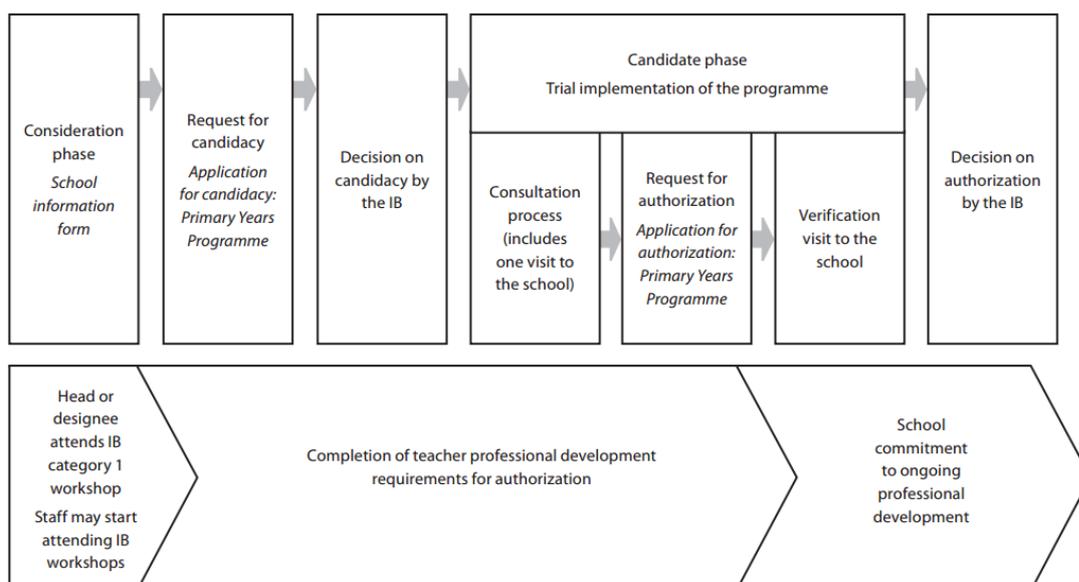


Figure 2: Overview of the IB authorization process (IBO, 2010)

There are 7 core standards and several practices under these standards and requirements for different practices. That is, the standards are general requisites established for schools in order to implement any IB program. Practices are further definitions of the standards. Requirements are program-specific, as each program has unique features and demands specific requirements. Figure 3 summarizes the program standards, practices, and requirements and how they are used in all programs.

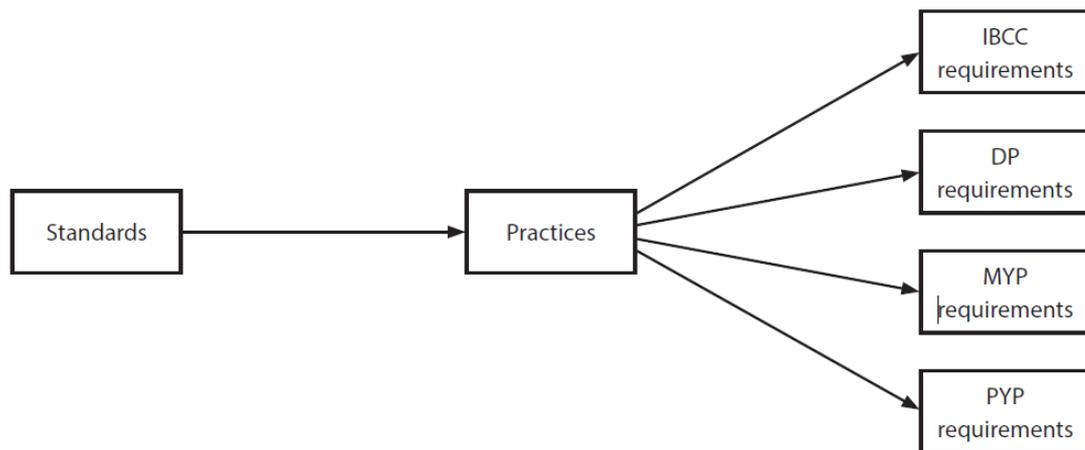


Figure 3: Overview of program standards and practices (IBO, 2014)

2.3.3. IB-PYP in Turkey

By the end of June 2015, there are 53 IB World schools who are authorized to implement one or more of the IB programmes. The first teaching of IB programme in Turkey was in 1994, and the programme was IB-Diploma Programme which is designed for high schools. Since then, more schools applied for candidacy and received authorization by the IB to implement one or more programmes. There is not an authorized IB-Career Programme school by the time of this research, and there are 2 schools who are authorized to implement PYP, MYP, and DP with a continuum.

22 of the schools are authorized by the IB to implement the PYP in their early childhood and elementary classrooms. The first PYP school in Turkey was authorized in 2005 to implement IB-PYP (IBO, 2015). Since then every year more schools become interested in the programme and went

through the authorization process. Although this information shows the interest towards IB-PYP in Turkey, all of the authorized schools are private school which has annual tuition fees from their students. It is estimated that, the payments for becoming an IB world school might not be feasible for public schools since IB schools pay annual school fees to the organization and also professional development activities for teachers requires budget. Except international schools, other authorized PYP schools implement the program integrating it with Turkish Ministry of National Education's regulations.

2.3.4. Curriculum Framework: Primary Years Programme

The programme model of the IB-PYP includes five essential elements. Figure 4 is the program model for the Primary Years Programme developed by the IB and redesigned in 2014.

According to IB-PYP, "knowledge" is significant, it is the relevant content that students explore and know about through their prior experience and understanding. Knowledge is distributed around six transdisciplinary themes. In a PYP school, each grade level has six units of inquiry coming from the definitions of these transdisciplinary themes (IBO, 2009). There is an exception for 3-5 year olds; these age groups may have 4 units of inquiry. The transdisciplinary themes are defined as globally significant, offers students exploration, can be supported by other essential elements of the programme and creates a common ground for all PYP schools in the world (IBO, 2012a).

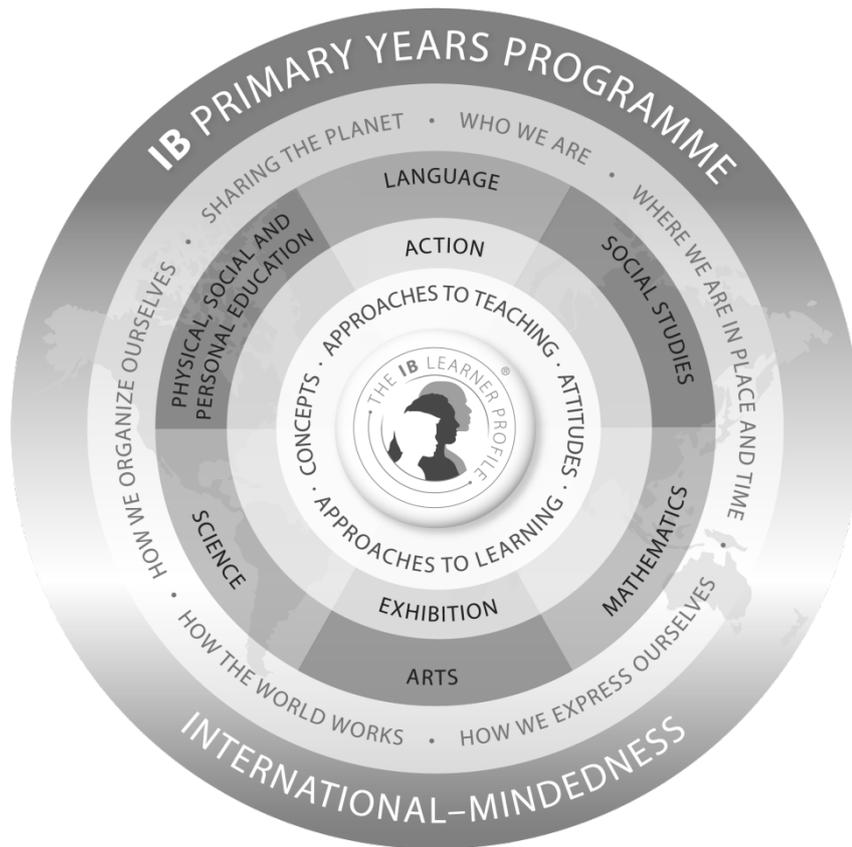


Figure 4: PYP Programme model (IBO, 2012b)

According to the IB (2009), “concepts” are powerful ideas that have relevance within the subject areas and stands above them and so that students have chance to explore and re-explore in order to develop an in-depth understanding. There are two types of concepts in the PYP: key concepts and related concepts. The eight key concepts are form, function, causation, change, connection, perspective, responsibility and reflection support teachers and students to think from different facets in a unit of inquiry. For each unit, no more than 3 key concepts are chosen to support inquiry; also the balance of eight key concepts should be equal for each grade level (IBO, 2012a). Related concepts are seen as big ideas that need to be explored during the unit of inquiry.

The example below is from “Developing a transdisciplinary programme of inquiry”. It shows how a central idea is created within transdisciplinary theme and how concepts are connected to that central idea.

Transdisciplinary theme: How the world works

Age group: 3–4 years

Central idea: The Earth’s natural cycles influence the activity of living things.

Key concepts: causation, change, connection

Related concepts: cycles, interaction, pattern

Lines of inquiry:

- Natural cycles (eg night and day, weather patterns, seasons)
- The actions people take in response to Earth’s natural cycles
- Patterns of behavior in living things related to Earth’s natural cycles

IB-PYP encourages the development of transdisciplinary “skills”. According to the IB (2009), skills are the abilities that the students need to demonstrate to succeed in a changing, challenging world, which may be disciplinary or transdisciplinary in nature. There are social skills, communication skills, thinking skills, research skills and self-management skills defined by the IB as valuable for both inside and outside of the school. For each unit of inquiry different skills are chosen to be developed throughout the unit duration.

“Attitudes” form a significant element in the curriculum. According to IB (2009), attitudes are dispositions of fundamental values, beliefs, and feelings about learning, the environment, and people. The attitudes as appreciation, commitment, confidence, cooperation, creativity, curiosity,

empathy, enthusiasm, independence, integrity, respect and tolerance planned and targeted by the teachers throughout the year.

Finally, “action” is the demonstration of understandings which can be reflected by responsible behaviors, in other words it is a presentation in practice of the other essential elements (IBO, 2009). All students in PYP schools have right and responsibility to take action which can be individual or collaborative group work.

The IB-PYP acknowledges the importance of particular subject areas: language, mathematics, social studies, science, arts, personal, social, and physical education. The knowledge, concepts, and skills that make up each of these subject areas are documented in detailed frameworks—“scope and sequences”—that set out the overall expectations for each subject within age ranges, or as a developmental continuum. These documents are provided to schools as example material. While some IB World Schools offering the IB-PYP may adopt these scope and sequences, others may be required to accommodate a locally or regionally determined subject-based set of learning outcomes or standards.

As differentiated instruction addresses, in PYP student learning is promoted through the planning and refining of the teaching and learning process to meet individual or group needs. These needs are determined by assessing the students’ prior knowledge and experiences as well as monitoring their achievement during the process. So that, teachers can plan and refine their teaching strategies accordingly. Assessment in PYP consists of assessing all essential elements of the programme including knowledge, skills, action and conceptual understanding (IBO, 2007). The assessment practices in the programme are divided into two categories: summative and formative assessment.

“Summative assessment” aims to give teachers and students insight into students’ understanding. Summative assessment is the culmination of the teaching and learning process and gives the students opportunities to

demonstrate what has been learned. “Formative assessment” provides information that is used to plan the next stage in the learning process. It is interwoven with learning and helps teachers and students to identify what the students already know and can do (IBO, 2009).

According to IB-PYP, effective assessment, which is core element of differentiated instruction, should help students to share their development with others; students could be demonstrating both the knowledge they gain and skills; students should use a variety of learning styles, multiple intelligences, and abilities to express their understanding; and students should be informed about the importance of a quality product or performance. Moreover, in IB-PYP, self and peer assessments are also an important part of assessment; children should be given the opportunity to reflect and express themselves from different points of view and interpretations (IBO, 2009).

2.3.5. The Relation of the IB and Differentiated Instruction

From the IB official document “Programme standards and practices” (2014), the practices which directly address differentiated instruction in an IB-PYP school are as listed below (pp. 9-14):

B2-8 : The school provides support for its students with learning and/or special educational needs and support for their teachers.

C1-6 : Collaborative planning and reflection incorporates differentiation for students’ learning needs and styles.

C2-3 : The written curriculum builds on students’ previous learning experiences.

C3-3 : Teaching and learning builds on what students know and can do.

C3-3-a : Teaching and learning addresses the competencies, experiences, learning needs and styles of students.

C3-6 : Teaching and learning addresses human commonality, diversity and multiple perspectives.

C3-10 : Teaching and learning differentiates instruction to meet students' learning needs and styles.

C3-10-a : The school provides for grouping and regrouping of students for a variety of learning purposes.

C3-14-a : The school provides environments in which students work both independently and collaboratively.

C3-15 : Teaching and learning encourages students to demonstrate their learning in a variety of ways.

C4-7 : The school analyses assessment data to inform teaching and learning.

C4-7-a : The school ensures that students' knowledge and understanding are assessed prior to new learning.

The IB ensures that in a school which is authorized to implement the program, these standards and practices will be in place. Schools are re-inspected regularly after authorization.

As shown in Figure 5, according to the IB-PYP's definition of curriculum, the main composites are "What do we want to learn?", "How best will we learn?" and "How will we know what we have learned?"—the three of which are woven together (IBO, 2009).

When the model of differentiated instruction is considered, there is a connection with the PYP's definition of curriculum and differentiated instruction. What we want to learn is the learning outcomes or objectives of the lesson, which is the *content* in the DI model. Also, how we will best learn is the teaching and learning that happens in the classroom, which is directly

linked to the *process* aspect of the DI model. Finally, how we will know what we have learned is the assessment part of the curriculum and is linked to the *product* aspect of the DI model. In accordance with the model of differentiated instruction, teachers can differentiate through content, process, and product, which are the main components of PYP's curriculum definition.

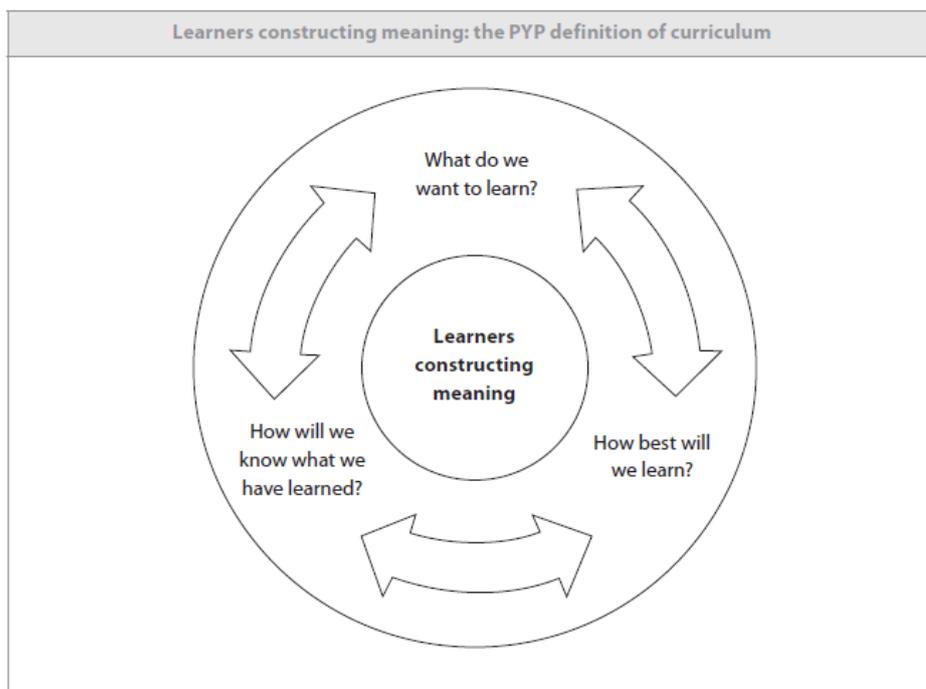


Figure 5: The PYP definition of curriculum (IBO, 2009)

The constructivist approach is the basis of the PYP curriculum model's perspective on students' learning. The approach recognizes that the learners have beliefs about how the world works based on their previous experiences and prior learning. In the light of new experiences and further learning, those beliefs, models, or constructs are revisited and revised (IBO, 2009). Thus, as students try to make meaning of their lives and the world around them, they repeatedly travel on the path of constructing, testing, and confirming or revising our personal models of how the world works.

PYP's educational perspective abides by the theories of Vygotsky, Bruner, and Gardner (IBO, 2009). According to the IB-PYP, learning happens when new knowledge is linked with previous knowledge. This tie between prior knowledge and new knowledge happens through planning, thus curriculum should give opportunity to children and provide them with experiences to test and revise their learning, allowing them to make connections between their previous and current perceptions while giving them the freedom to construct their own meaning within the context of differentiated instruction.

In PYP schools, the teachers' structuring of new experiences and the support they give to students' ideas about new experiences are essential to students' knowledge, understanding, and conceptual development. For the PYP, development and learning are interrelated, and the PYP curriculum framework allows students' conceptual understanding and through this a offers transdisciplinary connections (IBO, 2008).

The program supports the student's effort to gain an understanding of the world and to learn to function comfortably within it, to move from not knowing to knowing, to identify what is real and what is not real, and to recognize what is appropriate and what is not appropriate (IBO, 2008). To do this, the student must integrate a great deal of information and apply this accrual of knowledge in a cohesive and effective way.

In the PYP, the early childhood period is kept apart from other grade levels because it is understood that experiences during the early years lay the foundations for all future learning. A research conducted by educators from Deakin University and reported as "Early Years Education in the Primary Years Programme (PYP): Implementation Strategies and Programme Outcomes" indicates that the rapid rate of development that occurs in the physical, social, emotional, intellectual, and aesthetic domains is particularly important (Morissey et. al, 2014). Teachers' responsibility towards young

children and their development increases needs to focus on this holistic approach.

It was accepted that development usually occurs in recognizable and predictable ways and it is unique for each child, although it may occur at different paces (Morissey et. al, 2014). For many children, these early years also mark the first transition from home to group experiences outside of the family and to new physical and social environments. The role of the school becomes more significant since the school help these students to adapt their new environment as successful as possible by encouraging the development of secure and trusting relationships with new adults and peers (IBO, 2009a).

Teachers of students in the early years are encouraged to support students' interests, build up their self-esteem and confidence, and respond to spontaneous events, as well as support the development of skills in all cognitive areas in relevant ways. Children, from birth, are full of curiosity, and the IB-PYP provides a framework that gives crucial support for them to be active inquirers and lifelong learners (IBO, 2009a).

An aim of the IB-PYP is to implement differentiated instruction in engaging, relevant, challenging, and significant ways for learners in the 3–12 age range. In developing a curriculum of international education for primary school students, the IB-PYP definition of curriculum is broad and inclusive. The IB-PYP believes that all students should be supported to participate in the program to the fullest extent possible; the school's curriculum includes all those student activities, academic and non-academic, for which the school takes responsibility, since they all have an impact on student learning.

2.4. Differentiated Instruction, IB-PYP and Turkish National Early Childhood Education Program

By the end of May 2015, there are 22 authorized PYP schools in Turkey and 3 of them are international, 19 of them are national schools (IBO, 2015). The national IB-PYP schools implement the PYP through

integration with National ECE Program and IB-PYP curriculum framework. Thus, their need on learning more about how to use differentiated instruction with national program becomes more significant as the number of IB-PYP schools is increasing rapidly in Turkey. Furthermore, it is suggested by this study that not only the IB-PYP schools, but also Turkish early childhood education institutions can also use differentiated instruction in order to provide more responsive education to diverse children in classrooms.

Ministry of National Education in Turkey has launched the new early childhood education program in 2013 and effective use started from 2013-2014 academic year (MEB, 2013). In this part of the dissertation, the new program has been investigated in order to find the connections with differentiated instruction and make relevant suggestions to the field.

The program is designed for the children 36-72 months and it is defined as a developmental program which supports holistic development of children. The objectives defined in the program are consists of the skills, knowledge and capabilities that are aimed to given. Also there are indicators defined under each objective in order to make objective visible for teachers and parents. Teachers are supposed to prepare daily and monthly plans through using these objectives and indicators according to their students' readiness which can be compared by the age specific developmental capabilities defined in the program separately.

The main characteristics of the program are summarized and similarities and adaptability of differentiated instruction are discussed as following:

Child centered: The program supports children take active roles on their learning process in planning, implementing, inquiring and concluding. It is suggested by the program that students should be given opportunities to make choices of their own materials or activities. Similarly in differentiated instruction children are given opportunities to make their own choices.

Flexible: It was mentioned in the program that it can be adapted and individualized according to the variable needs of children, environment and family. Since teachers do plan their own curricula, they can make daily or promptly changes on their plans when needed. Being open minded to changes is also important for differentiated instruction. A program which is flexible as defined can be effectively adapted to differentiated instruction.

Spiral: The learning objectives and indicators are not defined age specific in the program. Instead, they are given for 36-48 months age arrange for teachers to choose according the student's needs. It is stated that by this way teachers will have chance to revisit or repeat some objectives when needed. This characteristic of Turkish National Early Childhood Education Program matches with the differentiating the content aspect, teachers have chance to tailor what they want to teach according to students' needs.

Eclectic: In order to establish the best program to raise children according to the needs of 21st century and national requirements, different approaches and theories on learning have been analyzed. The program is a synthesis of variety of educational models that match with the needs of early childhood education in Turkey. Similarly the theoretical background of differentiated instruction is based on more than one study which indicates DI does not belong to a single approach or theory; it can be widened and used in different cases.

Balanced: The program supports the development of whole child and suggests using objectives and indicators from different developmental areas. Also the program addresses the use of a balanced way of grouping, subjects, time and environment. In this section, there is not emphasis on mixed or other grouping strategies, but it suggests using whole class, small group and individual activities in a balanced way as in differentiated instruction.

Play based: The program emphasizes that play is the language of children for them to express themselves. Moreover, it is suggested to plan play based learning engagements for children. Teachers can plan differentiated play activities for young children, especially considering their variable interests. Since play is where children can construct meaning in a natural setting in classrooms and can be a part of a well-planned curriculum (Youngquist, & Pataray-Ching, 2004).

Developing creativity: It was mentioned in the Turkish National Early Childhood Education Program that children should be given opportunities to express themselves in an authentic way in the environments that is suitable for their learning needs and learning styles. Moreover, use of different materials, variety of teaching strategies and techniques is highlighted in the program. This statement is directly related to differentiation since it emphasizes tailoring the teaching process according to children's needs although differentiation is not mentioned by itself.

Use of daily life experiences and environment: The program claims that using children's own experiences as a resource for learning increases the engagement of children. Also getting information about environment and using them according to children's needs is significant in terms of making education more relevant for children and increase their motivation and it makes resources more accessible. Differentiated instruction also supports the use of variety of materials according to children's interests and this statement

Themes or topics are not the objectives, they are tools: The program states that instead of teaching themes or topics to children, teachers should make

them gain the objectives defined in the program while using themes or topic as a tool.

Learning centers: Learning centers are defined as divided areas in which children can play individually or as a group. These centers can be outside or inside and designed to feel children independent learners. Differentiated instruction also support having different learning areas for students designed according to their needs.

Cultural and global values: Cultural core values and being internationally minded is being emphasized in the program. In addition to this, respecting other people's differences and living together with human diversity was also considered as an aspect for the ECE program for young children in Turkey. This characteristic of the program directly supports one of the core values of differentiated instruction since it emphasizes respecting human variance.

Multifaceted assessment: The program supports assessing the process of learning rather than only the product. Assessment includes self-assessment of the child, the teacher and the program and the data coming from different sources are used to support each other. Furthermore, it is emphasized that teachers should consider assessment outcome while planning and implementing the next steps. Similarly, teachers need ongoing assessment data coming from the classroom in order to efficiently implement differentiated instruction. As this is supported by Turkish ECE Program, teachers have chance to use differentiated instruction while planning the next step.

Adaptations for children with special needs: Turkish National Early Childhood Education Program addresses the use of an inclusive special education needs program for early childhood education. It is suggested that teachers adapt

their plans according to the needs of children with special education needs while not isolating the children from the classroom and as in differentiated instruction; all children are being respected in terms of their variety.

Counseling services: The program supports teachers to collaborate with the counselors in the school in order to support children's development. Students' social and emotional comfort would affect the learning environment in the classroom.

Today classrooms becoming more diverse and the new Turkish ECE Program highlights children's individual differences and teachers' responsibility towards these differences. Although there is not a specific direction to differentiation, the program is suitable to implement the core elements of differentiated instruction, since there are many commonalities in pedagogy as mentioned previously. According to Tomlinson (2010), differentiation has general principals as giving children respectful tasks, providing a quality curriculum, teaching up, flexible grouping, continual assessment and building a community in the classroom. Suggestions for a better integration of differentiated instruction to Turkish National Early Childhood Education Program are presented in discussion chapter.

2.5. Summary

Differentiated instruction is a process that enhances student learning by matching students' characteristics and differences with changes in various instructional components such as learning objectives, grouping practices, teaching methods, and classroom resources (Tomlinson & McTighe, 2006).

As mentioned in the literature review part of this dissertation, Vygotsky's research, brain studies, Bloom's Taxonomy, and Gardner's theory of multiple intelligences are considered as the theoretical background of differentiated instruction. According to Heacox (2002), differentiated

instruction promotes acceptance of student differences, and this leads to an affirmation of the learning strengths of all students. Differentiated instruction points out that in order for the work to be fair to all students, it will sometimes be different for some students and accepts that success means different things to different people.

The International Baccalaureate Primary Years Programme (IB-PYP) is a systematic curriculum framework in which differentiation is a part of its teaching and learning approach. According to PYP's definition of children's learning, the learning experiences are differentiated to accommodate the range of abilities and learning styles in the group through exploring the learning styles and individual differences of the students (IBO, 2009).

There are many studies on differentiated instruction, and most of them focus on special education cases. This study will enhance the knowledge on teachers' beliefs and practices in the early childhood education setting. Moreover, International Baccalaureate Programmes have been investigated by some researchers in the aspects of curriculum and assessment. This study will open a new view on differentiated instruction as part of the IB-PYP and will contribute valuable information to educators. As the study was conducted in Turkey, the main characteristics of Turkish National ECE program were investigated. In accordance with differentiated instruction's general principles, the national program is child centered, considers multifaceted assessments and flexible in terms of being adapted to different needs of children (MEB, 2013).

CHAPTER III

METHOD

The aim of this study was to investigate the views and practices of early childhood teachers on differentiated instruction in International Baccalaureate Primary Years Programme. Semi-structured interviews, classroom observations, and document analysis were used to obtain in-depth information about participants' views and practices. In this chapter, the methodological approach, data collection, and data analysis of the study will be defined.

3.1. Research Questions

This study aimed to investigate the IB-PYP early childhood teachers' views about differentiated instruction through their teaching practices in the classroom.

Three research questions were developed in order to help guiding the exploration of the case.

- a. What are the early childhood teachers' views about differentiated instruction in early childhood education?

Through this first question, the researcher aimed to see how the teachers' definitions of differentiated instruction are common or varied and also what the factors is that affect their attitudes towards differentiated instruction in early childhood classrooms.

- b. How do early childhood teachers implement differentiated instruction in the PYP classrooms?

This question will help to understand the teaching and learning pedagogy that teachers use while they are differentiating the instruction as well as how effective these strategies are for different teachers and students. Specifically, this question will lead the researcher to see how and according to what the teachers differentiate, the factors that make them choose specific ways of differentiation. Thus, the connections between the teachers' views and practices are established and presented.

- c. What are the challenges early childhood teachers have while implementing differentiated instruction in early childhood education?

This question will lead the researcher to find out the obstacles for teachers in using differentiated instruction as pedagogy in their classrooms. Since it is a new approach for many teachers, potential implications and suggestions to the field could be developed accordingly.

3.2. Methodological Approach

According to Creswell (2007), when the variables are unknown it is more efficient to use qualitative research methodology, since quantitative research helps determine relationships among variables which are already exist. In the qualitative design, the researcher aims to find variables that are inside the situation through in-depth inquiry of participants' understanding of the world (Cheek et al., 2004). That is, qualitative research involves the researcher in the inquiry process and gives meaning through understanding of the researcher as in this study.

Through this study, gathering in-depth information and understanding about IB-PYP early childhood teachers' views about and practices with differentiated instruction was targeted. To achieve this goal, a case study

research design was chosen since the aim of this research will be achieved by deeply investigating a case. According to Cresswell (2007), case study is a qualitative approach in which the researcher investigates a bounded system (a case) through an in-depth inquiry into multiple sourced data and reports the findings descriptively. In this study, a case with many unknown outcomes was chosen to investigate since the data was gathered from a school through open-ended questions, observations and analysis. The case for this study is an IB-PYP school's early childhood division which uses differentiation as teaching and learning pedagogy, particularly the teachers working in this circumstance. According to Corcoran et. al (2004), the premier aim of a case study is to gain in-depth understanding that is happening a particular place and so the researcher can provide feedback to guide the field. Thus, it was aimed that the findings from this specific case could be transferred to other early childhood institutions which use differentiation. Also through thick description of the case and findings, the results might be used to develop further case studies.

The purpose of qualitative research is to understand phenomena, but a few qualitative designs exist for certain situations and intentions. At the end, the objective of this study is to have a better understanding of what early childhood teachers think about and how they implement differentiated instruction in a specific institution, and then through these data the researcher provides feedback to help practitioners grow. To this end, case study is seen as the most appropriate design for this study. A case study is set apart from other qualitative research because it involves issues that demand the attention of the stakeholders of the study area (Lancy, 1993). A case study can be useful by offering descriptions of innovative practices while interpreting or theorizing about a phenomenon (Merriam, 1998).

After deciding on conducting a case study, it was important to choose the type of case study. According to Stake (1995), there are three different types of case studies: the single instrumental, the collective and intrinsic

case studies. In order to investigate early childhood teachers' views about and practices with differentiated instruction, one school was purposefully chosen as the bounded system to illustrate the issue in detail as in intrinsic case studies. According to Stake (1995) when the researcher has a particular interest in the case should choose this type of case study when the aim is to better understand the case, not to develop a theory or to compare two situations.

A case study starts with defining and clarifying research questions (Merriam, 1998) and three research questions were developed to guide the study. While the research questions were being developed, it was important to connect them with the understandings of the focal domain of the research topic. The research questions covered teachers' views about differentiation to learn about their definitions and how they relate it with their teaching experiences, teachers' practices with differentiation to learn the connections between their views and practices and finally through these, the last research question aimed to learn about teachers' challenges while implementing differentiation in early childhood classrooms.

Data collection is one of the crucial parts of the research. It is recommended by Yin (2003) that documents, archival records, interviews, direct observations, participant observations, and physical artifacts be used for data collection in case studies. Interviews, classroom observations and documents were used in this study to gather information about the case.

3.3. School Setting

The school, located in Turkey and founded in 1993, is a private international primary school which is a non-profit foundation school whose teachers are not civil servants and whose main revenue comes from tuition fees. The school is observed and regulated under the requirements of Turkish Ministry of National Education. The school has sections for pre-kindergarten (4-5 year olds) and kindergarten (5-6 year olds). The early

childhood section is a part of the primary school. The school has one principal for the whole primary school and a section vice principal for the kindergarten. Also implementation of the Primary Years Programme is coordinated by Programme Coordinator who is responsible from all grade levels implementing the programme.

The school has been implementing the Primary Years Programme since 2006 and received the authorization from the IB in 2009. Although the school is an international school, they provide a blend of national and international education through using guidelines of two curriculum. While integrating national and PYP curriculum, the teachers compared the national curricula when the program was initially implemented and made the necessary adaptations and integrations in order to align the PYP to the curriculum of the Ministry of National Education. After the change of Turkish ECE program in 2013, teachers worked on it and made related updates.

As the primary school principal emphasizes, the employment process for faculty takes time for the school. All candidates are required to have teaching diploma in related subject; experience in schools depending on the subject and also having IB-PYP experience is preferred by the school. The teachers are supported by professional development activities such as professional books, in-service trainings and IB workshops. At the beginning and at the end of each academic year, teachers are given two weeks to work collaboratively on the curriculum. In these periods, new teachers are given in-service trainings by the academic coordinator, the PYP coordinator, the experienced teachers, and other specialists from universities. The school management has approved an annual expenditure for each year for PYP training. Furthermore, all new coming teachers attend a-seven-weekend "Introduction to the PYP" training held by the PYP Coordinator. In this training, teachers get core information on mission philosophy of the IB, international mindedness, the programme model, essential elements, planning and assessment.

During the academic year, there are many meetings and round-table discussions held in the school for the collaborative planning of the curriculum. Designated grade level team leaders and the PYP coordinator attend and lead these meetings regularly; occasionally, the school principal attends the meetings.

The medium of instruction is English at the school. In the early childhood section, each class has English and Turkish speaking teachers, and English immersion starts from early years: the instruction is done mainly in English, but also in Turkish. The primary school graduation level for these two foreign languages is C1 according to Common European Framework of Reference for Languages (CEFR). Furthermore, the school is also an accredited member of the European Council of International Schools (ECIS).

For the academic year that this study was conducted, the pre-kindergarten and kindergarten classes were using different facilities within the school campus. The kindergarten classes were using a bigger space with bigger classrooms than prekindergarten classes. However, each grade level had enough materials in the classrooms as books, games, manipulatives, art and craft materials. Each grade level had a big garden in which many play materials were settled.

Figure 6, drawn by the researcher, shows a sketch of one of the pre-kindergarten classrooms in the school. The approximate size of the classroom is 35 square meters. On the other hand, Figure 7, drawn by the researcher, shows a sketch of one of the kindergarten classrooms in the school. The size of the classroom is approximately 45 square meters. Both classrooms are equipped with rich materials for math, science, drama, language and other activities. Both facilities have an outdoor play ground.

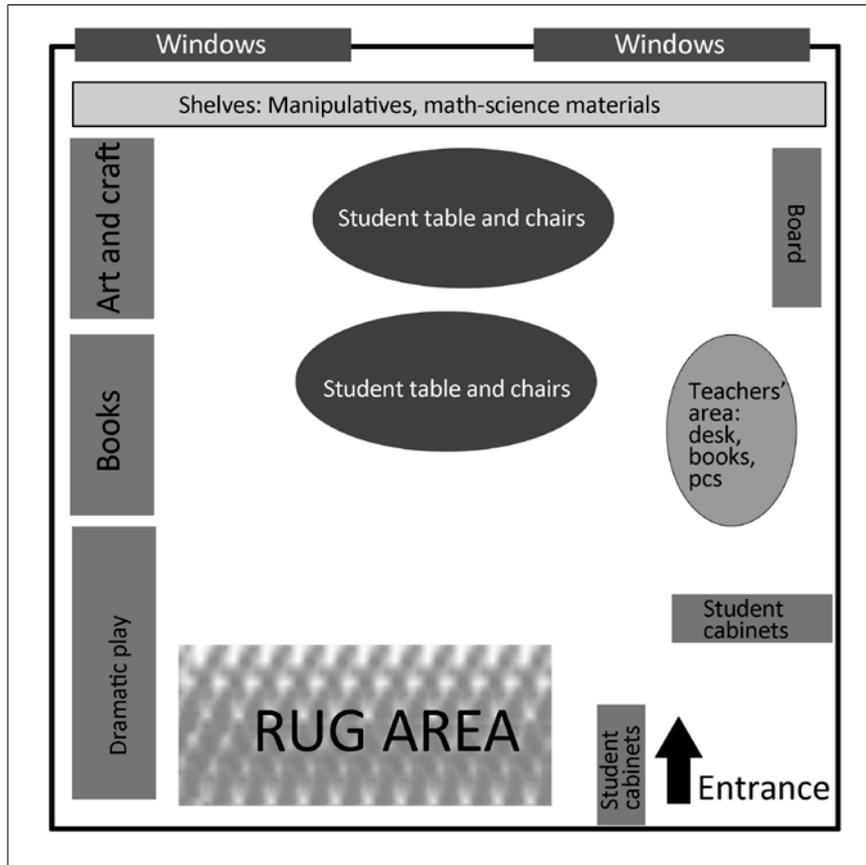


Figure 6: Sketch of a pre-kindergarten classroom

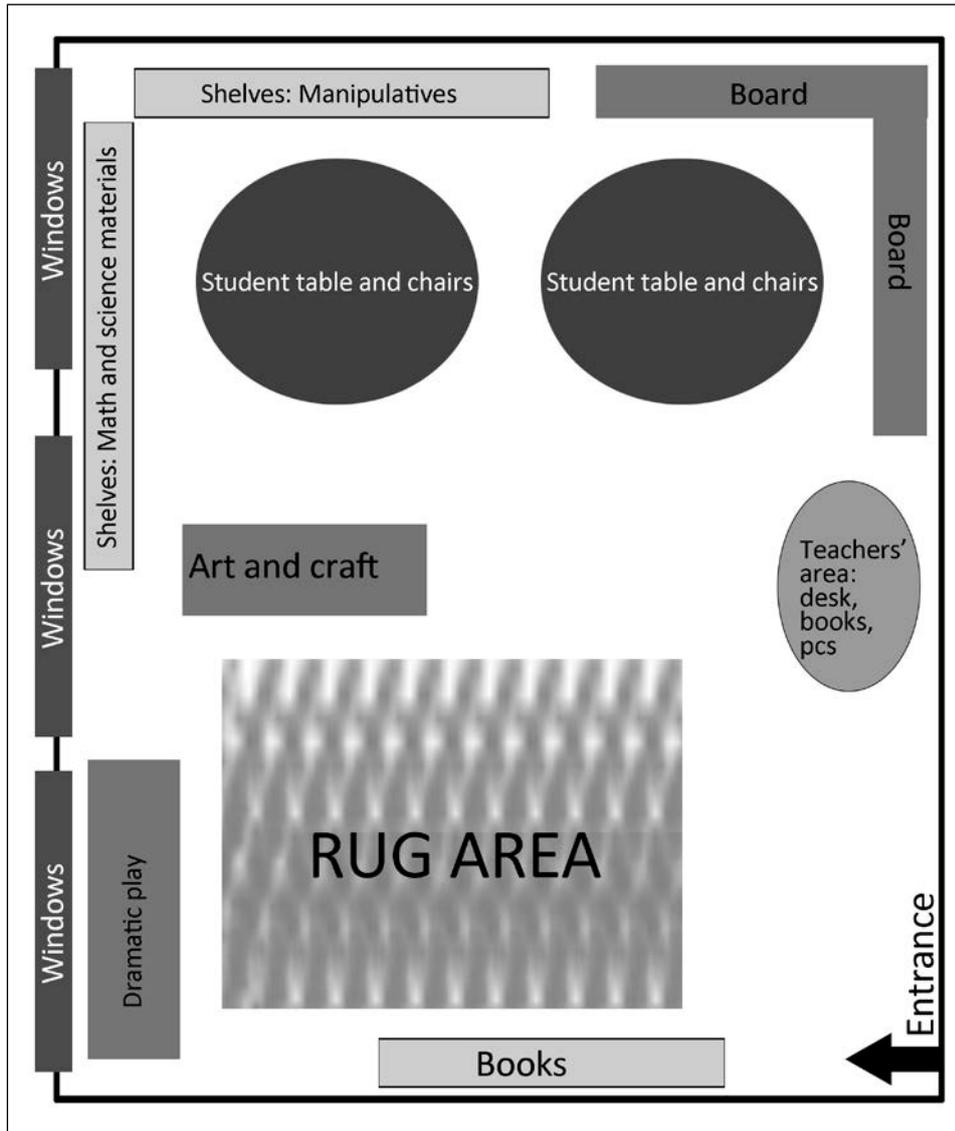


Figure 7: Sketch of a kindergarten classroom

3.4. Participants

The participants were chosen through convenience sampling method, which is a non-probability purposeful sampling technique where subjects are selected because of their convenient accessibility and proximity to the researcher (Fraenkel & Wallen, 2006). Since it is a qualitative case study, the data collection process was a long period, and the researcher visited the school many times during the process. Thus, the participants were

convenient for the researcher. Also it was important to choose an authorized IB-PYP school in order to investigate early childhood teachers' views about and practices with differentiation. This school is one of the oldest IB-PYP schools in Turkey, so the teachers and school culture are very familiar with the program.

The aim of the study was to find out early childhood teachers' views about and practices with differentiated instruction. The International Baccalaureate's Primary Years Programme is one of the curriculum frameworks that foster differentiated instruction to be implemented in all levels and subjects. As stated above, the school is a primary school which has pre-kindergarten and kindergarten grade levels in the early childhood section. There are five classes in each grade level, and each class has two homeroom teachers who teach all subjects, including Language, Social Studies, Science, Mathematics, Art, Music, Drama, and Play. Approach to teaching language is seen as a whole, that is, Turkish is the mother tongue and English is the language of instruction.

In qualitative studies, a huge amount of information is gathered from the participants, and therefore it is possible that they give similar information in return. The participants were informed about the study at the very beginning of the data collection in order to conduct the consent process that will allow for formalized interaction between researcher and the participants. After obtaining the relevant approval from the Ministry of National Education and the Middle East Technical University Ethical Committee, a consent form was submitted to the participants, and they were asked for permission to volunteer for the study. The participants were informed about the purpose of the research and what is expected of a research participant, including the amount of time likely to be required, the expected psychological and social risks and benefits, the fact that participation is voluntary and that one can withdraw at any time with no negative repercussions, and how confidentiality will be protected (Bernard, 1995).

Nineteen early childhood teachers (nine kindergarten, ten prekindergarten) volunteered to be participants in this study. One kindergarten teacher could not attend the study since she was out of school for medical leave. Participants were asked questions about their demographic data, teaching experience, and level of education. Table 1 summarizes the teachers' amount of experience in teaching. As shown in table 1, teachers are quite experienced in teaching, more than half of them have more than seven years of experience in teaching.

Table 1: Teachers' total teaching experience

Years	Number of teachers
1-3 years	5
4-6 years	2
7-10 years	8
More than 10 years	4

On the other hand, although they are experienced in teaching, most of them are quite new in implementing the PYP. Almost half of the teachers have PYP experience between 1 to 3 years. During the informal meeting with the school principal, she informed that the school did not have prekindergarten classes since this academic year, they launched five classes for prekindergarten and they had to hire new teachers for these classes. Thus, most of the early childhood teachers are new at the school. Before this academic year, the school had only 5 kindergarten classes with 10 early childhood teachers, beginning from this year the number of classes and teachers doubled-up with prekindergarten grade level.

The school has diverse teaching team in terms of culture, background and experience of the teachers for early childhood section. However, all of the participants of this study have at least an undergraduate degree in education. Teachers' academic background, their partners and reflections of

the researcher were given below:

Kindergarten- E teachers are K-T1 and K-T2. This year most of this class's students are repeating kindergarten, because of the change on primary school starting age in Turkey. Their Turkish teacher was K-T2 last year, she knows the students from last year.

K-T1: He has received her teaching degree from California State University (USA) in 2008. He has been working in different schools all over the world since 6 years. He is the English speaking teacher of his kindergarten class. This is the first year of him in the school and also in PYP. He is the only male teacher in the early childhood section of the school, not any difference for interaction among other teachers was observed by the researcher.

K-T2: She has received her BA degree from Boğaziçi University (Turkey) department of Early Childhood Education. She has been teaching for eight years and the year study was conducted was her fifth year in the school as well as in the IB-PYP. She works as the Turkish speaking teacher. She shares her class with K-T1.

Kindergarten- D teachers are K-T6 and K-T7.

K-T6: She has a BA degree from Kazakh State University of World Languages and International Relations (Kazakhstan) department of Teaching English Education in 1996. She has sixteen years of total teaching experience and this is her eleventh year in the school. She is the head teacher for kindergarten classes. Except her teaching role as English speaking teacher, she has duties for coordinating the grade level, leading meetings, collaborative planning sessions and establishing the communication line between teachers and the leadership team.

K-T7: She has a BS degree from Eskişehir Anatolian University (Turkey) department of Early Childhood Education in 2011. She worked in public schools for three years as preschool teacher. Also she has one year

experience in a private special education center. This is her first year in the school and also in the PYP.

Kindergarten- C teachers are K-T9 and another teacher who did not participate to the study, she was on health leave during the period of the study. An assistant teacher was helping K-T9 during this time period, when she was alone.

K-T9: She graduated from Middle East Technical University, department of Early Childhood Education in 2008. She has a master's degree on Educational Effectiveness and Instructional Design from Groningen University (The Netherlands) in 2009. She works as the English speaking teacher. She can speak Turkish, but she does not prefer to speak Turkish with children. She has five years of teaching experience and this is her second year in the school.

Kindergarten- B teachers are K-T8 and K-T5.

K-T5: She has a BS degree in Education and Special Education received from University of Texas at Austin (USA) in 1975. Also she has a Masters of Art degree from Lesley College Cambridge (USA) on Curriculum and Instruction in 1993. She is the most experienced teacher in the school, with 34 years of teaching in public and private schools all over the world. This is her second year in this school.

K-T8: She graduated from Middle East Technical University (Turkey), department of Early Childhood Education in 2013. This year is the first year of her in teaching and in the PYP. She had internship experiences in private and public preschools during her graduate education.

Kindergarten- A teachers are K-T3 and K-T4.

K-T3: She graduated from Hacettepe University (Turkey) department of Early Childhood Education in 2009. Also, she has a master's degree from the same

university and department received in 2013. Her Masters' specialization is on preschool playgrounds. She has worked in schools as part time teacher for three years. This is her first year in the school and the PYP. She works as the Turkish speaking teacher.

K-T4: She graduated from University of Minnesota Twin Cities (USA) Department of Elementary Teaching in 1999. Also she has a master's degree in educational administration received from University of St. Thomas (USA) in 2006. She works as the English speaking teacher, she is a native speaker, does not speak Turkish. She has been teaching for nine years, this is her first year in the school and the PYP.

Pre-kindergarten A teachers are PK-T2 and PK-T7.

PK-T2: She graduated from Hacettepe University (Turkey), department of Early Childhood Education in 2011. This is her first year in teaching and also in the school. After her graduation, she worked for TEMA Organization in material development department.

PK-T7: She is the head teacher for pre-kindergarten classes. She graduated from University of South Africa, department of Education Specializing in Early Childhood and Foundation Phase in 1980. She has been teaching for 25 years and this year is her third year in the school. Except her teaching role as English speaking teacher, she has duties for coordinating the grade level, leading meetings, collaborative planning sessions and establishing the communication line between teachers and the leadership team.

Pre-kindergarten B teachers are PK-T1 and PK-T3.

PK-T1: She graduated from Hacettepe University (Turkey) in 2004 Elementary Education. She has a teaching certificate from Arizona State University (USA) in Elementary Education in 2010. She is a Turkish speaking teacher and this is her first year in the school.

PK-T3: She graduated from Hacettepe University (Turkey), department of

Early Childhood Education in 2011. She is a native English speaker with working knowledge of Turkish and she works as the English speaking teacher. She started her profession in this school and this is her third year in the field.

Pre-kindergarten C teachers are PK-T4 and PK-T10.

PK-T4: She graduated from University of California Riverside (USA), department of Elementary Education in 2007. She has been teaching for seven years and this is her first year in this school. She has IB-PYP experience from an international school in Australia for three years.

PK-T10: She graduated from Hacettepe University (Turkey) Department of Elementary Education in 1997. Also she has a teaching certificate from University of Nevada (USA) department of Special Education received in 2007. She has 7 years of total teaching experience.

Pre-kindergarten D teachers are PK-T5 and PK-T6.

PK-T5: She graduated from Boğaziçi University (Turkey), Department of Early Childhood Education in 2010. She will receive her master's degree on Psychological Counseling from Middle East Technical University (Turkey) in 2015. She started teaching with this school and this is her second year at the school.

PK-T6: She has a BA degree from Dalhousie University (Canada) in English Teaching received in 2002 and she has another BA degree from Nottingham University (UK), Department of elementary Education in 2012. She has been teaching for eight years. This is her second year at the school.

Pre-kindergarten E teachers are PK-T8 and PK-T9.

PK-T8: She has a BA degree from Reinhardt College (USA) department of Elementary Education received in 2001. Also she has a Masters of Education degree from Georgia State University (USA), Department of Early Childhood

Education in 2006. This is her twelfth year in teaching and the first year in this school.

PK-T9: She was graduated from Boğaziçi University, department of Early Childhood Education in 2013. This year is her first year in teaching and in the school. She works as Turkish speaking teacher.

Table 2: Teachers' latest university degrees

Degree	Number of teachers
Bachelor's degree in Early Childhood Education	8
Bachelor's degree in Elementary Education	5
Master's degree in Early Childhood Education	2
Master's degree in Education	4

As given detailed above and summarized on table 2, all of the participants are from teaching background. Although the school's status is international, it is regulated under requirements of Turkish Ministry of National Education. The PYP coordinator of the school states during the informal meeting that "We choose candidates with related teaching diplomas, it is a school policy and requirement of the Ministry". For the school, having a working knowledge of English for all teachers is a requirement for candidates, since the medium of instruction is English and the classes are shared by two teachers. Also, the school prefers candidates with IB-PYP experience, but many teachers do not have this experience when they start working in the school as the coordinator states "It is hard to find experienced PYP teachers in Turkey, maybe in 10 years, there will be more".

In this section, detailed information on participants' educational and professional background was presented. The information was significant to the researcher, it is expected that this information and the findings from research will give insights about their relationship with each other.

3.5. Data Collection

The role of the researcher in a qualitative study is very significant since he or she is the main instrument for data collection. Humans are responsive to environmental cues that make them able to interact with the situation, they have the ability to collect information at multiple levels simultaneously, and they are able to perceive situations holistically (Fraenkel & Wallen, 2006). The researcher needs to adopt the stance suggested by the characteristics of the naturalist paradigm and develop the level of skill appropriate for a human instrument, or the vehicle through which data will be collected and interpreted. Moreover, the researcher must ensure that research design utilizes accepted strategies for naturalistic inquiry (Lincoln & Guba, 1985).

In the nature of qualitative studies, data are collected from a participant's perspective, in a naturalistic setting, and over an extended period of time (Wiseman, 1999). In this study, data collection started in early 2014. Table 3 shows the timeline of the data collection from the beginning of instrument development and this process lasted about one and a half year.

Table 3: Timeline of data collection

Time	Task accomplished
June 2013-September 2013	Development of interview questions and observation protocol
November 2013	Piloting of interview questions
December 2013	Editing of interview questions
January 2014-May 2014	Interviews and observations Document analysis
May 2014-August 2014	Data cleaning, organizing, coding
August 2014-November 2014	Data analysis

In order to answer the research questions, different data resources were used in this study. In qualitative studies, interviews are special kinds of conversations that are used by researchers to explore informants' experiences and interpretations (Hatch, 2002). Thus the main data source is the interviews done with the participant teachers. Also classrooms were visited and their daily practices in learning engagements were observed. Finally, curriculum documents and student samples were investigated in order to find pieces of differentiation. The data sources for this study are shown in Table 4, timeline data collection from these three sources were interwoven to each other depending on the teachers' and the school's available times and dates. Moreover, the school principal and the PYP coordinator were informed about the study regularly. During these informative sessions, informal interviews were done with them and some data from these interviews were used throughout the study, particularly on defining school routines, policies and regulations.

Table 4: Data collection techniques

Main Data Sources	Participants	Purpose
Interview	Teachers	Their views about and practices on differentiated instruction from different aspects
Classroom visits	Teachers	Classroom environment, teachers' practices in the classrooms
Document analysis <ul style="list-style-type: none"> • Units' plans • Weekly activity plans • Program of inquiry 		Detailed information about the written curriculum

Interviews:

To this end, interviews were conducted with the teachers in order to gain in-depth information about teachers' views about differentiated instruction in the PYP. Open-ended questions developed from the research questions helped identify teacher views about differentiated instruction. To this aim, an interview protocol was used that was pre-tested in order to make it align efficiently with the research questions. The interview questions were developed by the researcher and supervised by the thesis advisor according to the related literature in this field. According to the feedback from the thesis advisor, some questions about teachers' background information were added. In this way, the relationship between their previous experiences and viewpoints could be investigated.

Piloting interview questions

The pilot study is an exploratory trial of the original study to filter out ineffective questions and draw conclusions about the impact of the study (Creswell, 2007). Interview questions were piloted with four IB-PYP early childhood teachers who were not working in the same school. The results of the pilot study helped the researcher make modifications to the instrument. The pilot test helped provide feedback about the interview questions, and questions were modified to assure that they were clear and asked what was intended.

Several changes resulted from the pilot study relating to clarity, elaboration, and reordering. The reordering of questions was necessary because some pilot participants stated that some previous questions provided clues about upcoming responses to the questions that followed. The interview questions were hidden grouped mainly as demographic information, content, product, process, student variance and professional development. Furthermore, more details and prompts were added to some questions like "briefly describe an activity". So that participants would know the outline of the question better. The final interview questions were used

during the data collection period, and through these questions the researcher had chance to gain in-depth information about the participants' views about and self-reported practices with DI.

Participants were informed about the data collection process before the beginning of interviews and asked to sign the consent forms before the beginning of data collection. The interviews were conducted in a quiet area of the school where the researcher and the participant could be alone. All interviews were audio recorded. As is the nature of open-ended questions in the interview, participants were encouraged to give their initial thoughts, view, and perceptions about differentiated instruction in early childhood education. After all interviews were finished, the audio-taped interview was transcribed, and, for clarification, these transcriptions were shared with the participants. Except two participants, they were all agree on the ideas given.

Observations:

For this study, some classroom observations were conducted in order to obtain more information about the implementation in the classroom and see the classroom environments of the teachers. The observations were conducted during the time period of the interviews. The observations were conducted on each class basis, so that two teachers' practices were seen at the same time. One kindergarten class had only one teacher who was the English speaking teacher, since the Turkish speaking teacher was on health leave. An observation protocol was used for the observations. The main aim of the observations was to see the context in the classroom. Observations were open-ended and included both the learning engagement and the classroom environment. The observation questions for the researcher developed according to the research questions and meanwhile the interview questions in order to see the relation between teachers' views, self-reported practices and the practices in place in the classroom.

Documentation:

Documentation was a significant part of a research because documents reveal what people do or did and what they value. This occurs in a natural setting, so the data are presumed to have strong validity (Freebody, 2003). The main aim for investigating documents was to see how differentiation takes place in written curriculum.

Curriculum documents that were investigated are;

Unit planners : Each grade level had four units of inquiry to be completed in each academic year. Each unit planner includes the aim of the unit, essential elements chosen for the unit, learning engagement, assessment tasks and teacher reflections.

Programme of Inquiry : It is a school document that shows the overview of each grade level's units of inquiry. It shows transdisciplinary theme of the unit, central idea, lines of inquiry and concepts.

Weekly activity plans : This document was developed by the school, not a requirement of the IB. Two partner teachers of the classroom use this planner together to have detailed information on the learning engagements and field trips that will be done in the following week.

Furthermore, teachers keep some student samples electronically in order to "document" learning process. These samples also investigated with the unit planners. Additionally, teachers' portfolios, which include all the professional documents of the teachers, were also analyzed to gather in-depth demographic information.

3.6. Data Analysis

Data analysis in educational studies constitutes a systematic search for finding meaning. That is, it is a way of processing data to make it understandable for others (Fraenkel & Wallen, 2006). Analysis means organizing and interrogating the data in ways that allow researchers to see

patterns, identify themes, and discover relations between subjects through a detailed inquiry of the data (Hatch, 2002).

In the study, raw data were turned into descriptive statements and interpreted as detailed descriptions. To this end, the guidelines of Miles and Huberman (1994) were taken account. These steps include reducing data, displaying data, and drawing/verifying conclusions. They are not sequential—they may happen at the same time or over and over (Miles & Huberman, 1994). After the raw data were transcribed, themes and codes were affixed to a set of field notes drawn from the data collection by writing reflections or other remarks in the margins. Then, relationships between themes, current differences between subtitles, and common scopes were sorted. The themes and sub themes are displayed in Figure 16. The main themes are derived from the three research questions.

Finally, through the interpretations done by the researcher, the relation between findings and different variables was discussed with the literature.

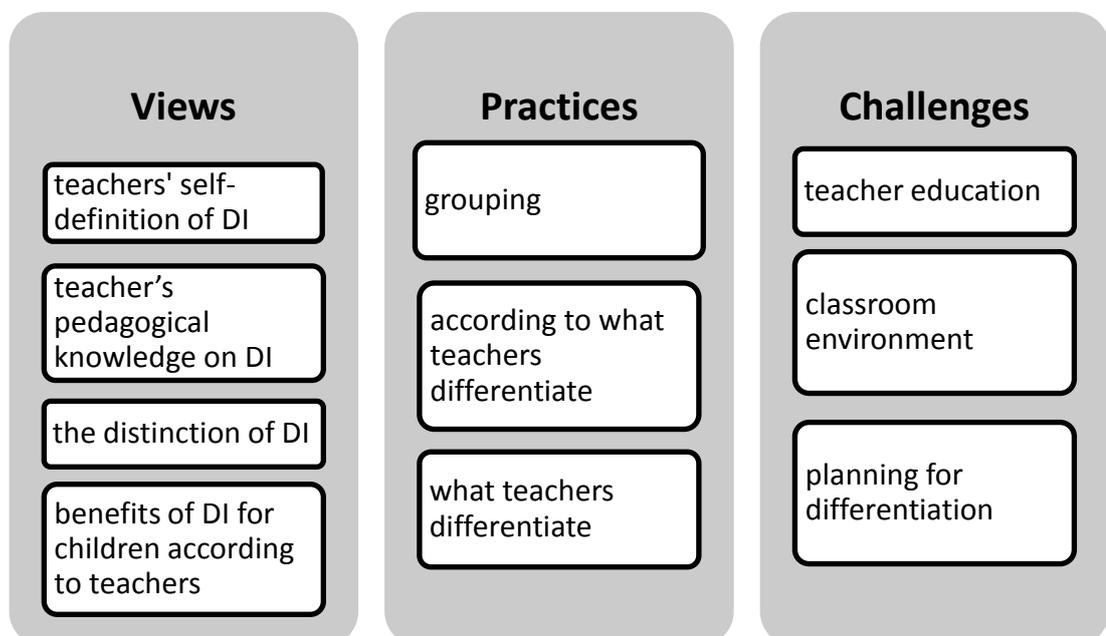


Figure 8: Themes and subthemes revealed from the results

3.7. Quality of the Research

The validity and reliability of qualitative research differs from that of quantitative research because of the difference in types of data and methods used to collect these data. Qualitative research, which does not aim to find a single truth as in quantitative research, involves collecting subjective accounts of perceptions of a reality (Winter, 2000). Therefore, in a qualitative research study, credibility equivalent to internal validity, transferability equivalent to external validity, dependability equivalent to reliability, and confirmability equivalent to objectivity are indicators of the quality of the research (Lincoln & Guba, 1985).

When qualitative research represents multiple realities regarding a central phenomenon, and accurately reports the perspectives of participants, then the research is said to have *credibility* (Lincoln & Guba, 1985). It is confidence in the "truth" of the findings. In order to meet the criteria of credibility, audio taping was used when collecting data so that no data would be lost or missed. All participants were asked for permission of their interviews being recorded, and all agreed to the use of an audiotape by the researcher. Moreover, sufficient time was spent at the school to understand the culture and social setting. Furthermore, as underscored by Creswell (2007), a peer from the education field was chosen as *peer reviewer* who provided an external check of the research process. The peer reviewer holds a doctoral degree on educational sciences. She contributed as reading the transcripts and developing the themes and codes. Then the codes and themes were compared to find commonalities with the researcher.

Transferability refers to the degree to which the findings of qualitative research can be applied to new situations (Lincoln & Guba, 1985). To enhance transferability, the research context that is central to the current research study, including background information on the sample used, was described in full detail. In addition, the data resources and their connections with the research questions that were central to the current research study

were outlined in full detail. Although this study was done in one single school which is an IB-PYP school, the findings can be applied in other cases in terms of differentiated instruction in early childhood education. To maintain this ability, deep descriptions of the school, participants, and environment were provided. The readers would find connections between teachers' background, their viewpoints on differentiation and their practices with the challenges they have in full detail. Thus the findings could be used in other cases by developing assumptions.

Traditionally, researchers seek to establish that the research is repeatable or easily replicated so as to ensure the same results would be gleaned if the study was repeated. However, because of the nature of qualitative research, the criterion of *dependability* is more appropriate, which emphasizes consistency (Lincoln & Guba, 1985). In order to enhance dependability, an audit of inquiry was conducted several times throughout the research process. The external auditor guided the study from the beginning in terms of consistency of agreement among data, research method, interpretations and conclusions. Furthermore, participants were asked follow-up interview questions to ensure true inquiry occurred and to ensure that background information and practical application of differentiated instruction were consistent. In addition, during data collection and analysis, the researcher coded and recoded the data to ensure consistency among findings.

Confirmability is enhanced when research interpretations are provided in a neutral manner (Lincoln & Guba, 1985). Typically in qualitative research studies, triangulation, member checking, and external audits are used to validate or confirm findings. Within the current research study, an external audit was conducted to determine confirmability (Creswell, 2007). An outside educator who was not involved with the study was requested to review various elements of the research. Member checking is also a part of the confirmation process. After transcribing the interviews, participants were

provided a copy of the transcript and were asked to check the accuracy of the data. Two of the participants updated their notes. Moreover, as mentioned before, different data sources were used to triangulate the data gathered from participants. Not only interviews, but also classroom observations and documents were used to gather information on research questions.

To sum up, the quality of the study was addressed during the data collection and data analysis by asking similar questions using different wording to ensure understanding, being clear and unchallenging in the questioning, interviewing participants at a time and place that was most convenient so as to limit distractions or stress, using open-ended leading questions followed by more probing follow-up questions, and piloting the interview questions prior to their use with the participants.

In this qualitative study, *role of the researcher* is quite different than any other quantitative studies in terms of methodological and personal standpoints. Methodologically, researchers in qualitative studies are considered as the instrument itself for data collection period and they become immersed in the case they are studying. In order to be objective rather than subjective some strategies that were mentioned in this chapter were used to eliminate any issues with quality of the research. Personally, the researcher has experiences in different roles as teacher, administrator, trainer in the IB-PYP and consequently differentiation. Thus, she has a positive attitude towards *differentiation in the PYP*. As mentioned in the section of researcher's motivation for the study her experience and expectations make this study happen, meanwhile this situation could have caused some biases. In order to prevent from any issues related to the researcher's personal stance towards the case, a school which has not got any personal or professional relationship with the researcher was chosen as the participant in order to keep the researcher as outsider from the case to be more objective. In addition to supervision from the thesis advisor and

peer guidance during the data collection and analysis, the researcher kept being reflective throughout the study and used the literature to stay within the outline of research questions.

CHAPTER IV

RESULTS

In this study, the IB-PYP early childhood teachers' views about and practices with differentiated instruction were investigated through interviews with teachers, classroom observations, and document analysis. In this chapter, the findings of the study from different data sources are presented based on themes and subthemes.

Data were collected from an authorized International Baccalaureate Primary Years Programme primary school's pre-kindergarten and kindergarten teachers about their experiences regarding differentiated instruction through open-ended semi-structured interviews and observations.

Nineteen participants (10 pre-kindergarten and 9 kindergarten teachers) were interviewed face-to-face during the study with 19 questions over a 4-month period. Also informal interviews with programme coordinator, school principal and counselor were also done in order to get information about general school process. The interview length with the teachers ranged from 35 to 85 minutes, with an average interview length of approximately 50 minutes. Also, their classrooms were observed on activity basis and each observation lasted approximately 90 minutes. Furthermore, the written curriculum documents including unit plans, weekly activity plans and programme of inquiry of the school were investigated.

The findings were grouped according to the three research questions. The results revealed themes under each research question. The results from each theme and subtheme are presented accordingly in this chapter.

4.1. Early Childhood Teachers' Views about Differentiated Instruction

In this first main theme, "views," different subthemes were revealed through the research findings. These are a teacher's self-definition of differentiated instruction, a teacher's pedagogical knowledge on differentiated instruction, the distinction of differentiated instruction, and the benefits of differentiated instruction for children according to teachers.

Teachers' self-definition of differentiated instruction:

As differentiated instruction supports the idea that children have different learning paths, teachers were asked how they plan in order to assure that every child in the classroom learns. This question led the teachers to think about their expectations from the students. Six of the teachers started answering this question by "I do not expect all children to learn at the same level." These teachers concluded by stating that some children may not learn as their teachers expected; they may need extra support for learning. One teacher continued:

I try to plan activities by keeping the typical child in my mind. That is, some children might be below this level, some above...I cannot be sure that everyone will learn at the same level, but I know that if I know how to teach them, they can learn. (PK-T4)

For this question, more than half the teachers stated that they have a chance to assure every child in the class learns, but this depends on what their students already know or do. K-T2 stated that "To answer this question, first I have to meet with my students and learn their skills and capabilities." The teachers felt that knowing more about the students affects students' learning and also the teachers' teaching in order to assure that every child in the classroom learns.

Children's pre-knowledge on something might be different from each other. For a child who knows less than others, the time will be longer to learn. But this does not mean that this child will not learn. (PK-T6)

One teacher supported her idea by how these children would learn if they were the same:

If all children were at the same level, then they will learn at the same level. But this is against the nature of human beings; we cannot expect that all of them learn in the same way. (K-T8)

Most of the teachers agree on the idea that children come to their classrooms with different readiness levels. Although the teachers believed that the children who come to their classrooms are different from each other in terms of readiness, they can learn. It was obvious that early childhood teachers mainly think about the *skills* that students have when they mention readiness. Three teachers (PK-T8, PK-T10, and K-T5) were asked what they mean by readiness, and they stated that socio-emotional skills, cognitive skills, and motor skills are the main skill areas for readiness in their classrooms. They found different domains of skills are diverse for young children.

Nine early childhood teachers relate this readiness with children's previous school experience. They talked about the early experiences of their students in different early childhood settings. The teachers believed that children's early school experience or their exposure to learning activities at home might determine their readiness level.

I have some students who come directly from home and some children who come with nursery experience. This might cause a big gap between them. (PK-T5)

I have some students who are really good at fine motor skills and cognitively, but there are some who did not have school experience before and grew up with their grandparents. These students need more time to learn some core skills. (PK-T10)

Ten of the teachers mentioned the difference among children being related with their heritage. "It comes from birth; no one is the same as someone else," said PK-T6, and similar to this view, K-T4 also said, "Even twins have different interests and abilities."

It can be concluded that teachers appreciate the variety in their classrooms, whether it comes from nature or nurture, and they respect this variety. In addition to this, during classroom observations, any labeling of students or different attitudes toward student variance was not observed.

The academic year that the data were collected, the Ministry of National Education published a new regulation on school age, so some children in kindergarten were registered to their previous grade level and they repeated the same class. One of the two teachers of this classroom underscored the benefits of students repeating; according to the teacher, they are better able to master many skills:

This year, more than half of my class is repeating. These students were in our school last year, and their parents wanted them to go to kindergarten one more year. So, this is an advantage for me since I know them very well. I took advantage of it while planning in order to make them learn the best. (K-T2)

Two teachers relate these differences to students' family backgrounds. They think that family is an important factor in children's development. One teacher spoke of the viewpoint of parents towards school:

I try to make my students to achieve at the same level, but they start the school year at different levels—even if they are in the same age group. They come from different families. Some parents want the school to teach everything; on the other hand, some parents deal with their children more. This becomes the difference between the children. (K-7)

The other teacher mentioned the attitudes of parents and how they see the school:

I have 16 students in my class. I need to know them well, but I also need to know about 32 parents in order to deal with them better. Students' families affect how they behave, understand, and their capabilities. If the parents are conscious about child development, then these children's readiness become different from the others. (PK-T4)

Early childhood teacher's self-definitions of differentiated instruction are based on their lived experiences in the classrooms. The teachers believe that each child is unique and children are different from each other in different aspects. Teachers related their practices of differentiated instruction with this uniqueness of children in mind.

Differentiated instruction is making content understood by each student in the class. It is not something for special students...there is a misconception about it...it is for all students, since even twins are different from each other in some ways. (K-T2)

In accordance with this idea, another teacher (PK-T10) stated that "Children have individual differences, and as teachers we have to observe it and be sensitive to these differences." The teachers believe that this uniqueness of children should be taken account while planning and implementing any educational program.

The self-definitions of eleven teachers about differentiated instruction included "tailoring education" or "changing the way of teaching" for children according to their needs. "It is a teacher's responsibility to change the way of teaching; otherwise, some children will be behind," said K-T9. Three teachers emphasized that differentiation is a change for them and hence the school. "Teachers should change what they are doing in the classrooms," said PK-T2, and in the same vein K-T6 also defined differentiation as a change in the teaching practices of a school.

Eight teachers' self-definitions of differentiated instruction included grouping students according to their needs. The teachers believe that in differentiated activities, teachers group some children and give the tasks to these groups. PK-T10 emphasized a point about grouping: "It is not individualized, we group students while differentiating."

Differentiation is not something personalized to each child.

You group similar children and give them activities. But it is different than the group works that we usually do. (PK-T3)

Although one of the teachers agreed with the definition of differentiation of the other teachers, she also thought that if a teacher uses a variety of different teaching strategies for whole class, then this might also be a way of differentiation. "For a given topic, I try to use at least one passive and one active activity, in order to make it fit it for all children," said PK-T7 with regards to differentiation. It is believed by the teacher that if a teacher can show something in different ways, each child will find the best way fitting to her/him. She is one of the most experienced teachers in the

school with 25 years of experience in different school in all over the world. Also she states that she used different approaches for teaching young children from the beginning of her career.

Two participants were not sure about the definition of differentiated instruction. One pre-kindergarten teacher said that "To be honest, I am quite new to differentiated instruction. It is hard for me to understand and implement, so I cannot give a clear definition." The other teacher stated her confusion about DI, "Sometimes I feel that I am doing the right thing, sometimes the wrong thing. I will do better differentiation in the future if I can learn better." Both teachers are new in the field. Although they could not give an exact definition for differentiation, during classroom observation for PK-T9, it was seen that she tried to be respectful to student needs. During the math activity, she guided some children to do their own task; on the other hand she gave more support to two children who have trouble finishing the task. She asked questions as "Why do you think this color goes to here?," "How would you change it?". These questions helped children to think again.

Teacher's pedagogical knowledge:

Although all teachers have at least a bachelor's degree in education, their self-definitions of differentiated instruction are based on how they see their children in the classroom, not from a lesson taught to them. Thus, their views are affected from these experiences on DI. Sixteen of the participants stated that they did not receive any special course or content during their graduate education in universities. Two teachers who were in universities outside Turkey stated that they had had special sessions about differentiated instruction during their undergraduate education in teaching. One teacher from Turkey stated that she had a workshop in a private primary school on DI during her university education. Table 2 summarizes the latest degrees

that the participant teachers had. Six of the teachers had a master's degree in the field of education.

Table 2: Teachers' latest university degrees

Degree	Number of teachers
Bachelor's degree in Early Childhood Education	8
Bachelor's degree in Elementary Education	5
Master's degree in Early Childhood Education	2
Master's degree in Education	4

With regard to being a lifelong learner as a teacher, teachers were asked about how they develop themselves professionally. According to their answers, the school supports all teachers in terms of professional development, both in school and in onsite and online trainings.

First of all, "trainings" come to teachers' minds when professional development is posed to them. They believe that teachers should renew themselves in the field through attending different trainings. The teachers apply to the principal for the trainings they want to attend, and the school funds these events at least once in an academic year for each teacher; some teachers attend more than one.

When we need to know more about something in our field, we pose this to our principal with a rationale; she usually approves. (PK-T6)

The teachers stated that they had all attended a "Making the PYP Happen" training which lasts seven weeks when they first start at the school. That training is given by the PYP coordinator, and it is done on Saturdays. In this training, they receive the core information about the program, including teaching and learning, assessment, and planning. During the informal interview with the coordinator, he stated that it is a part of new teachers'

orientation to school. Regardless of the grade level or subject, all PYP teachers attend this training when they first start working in the school.

Below is the list of professional development activities that the teachers attend according to their needs or school's assignment. During the informal interview, the school principal showed a positive attitude towards teachers' professional development and stated "We try to support all teachers in terms of their needs."

- In-school seminar and workshops: The trainings for the academic staff that are held by experienced school teachers or leaders or specialists from universities; these events are organized and, if necessary, paid for by the school.
- IB Official workshops: Onsite or online. The professional development events for IB teachers that are held by IB trainers; these trainings are paid by the school.
- Other trainings: Seminars, workshops, conferences that are organized by different schools, universities, or institutions; these trainings are paid for by the school.

Furthermore, the teachers' room in the school has many resources for teachers to read and reflect on. These resources are books on child development and psychology, activity examples for early childhood, CDs and DVDs for audio/visual materials, sample worksheets, assessment tools, and the IB curriculum documents. All teachers can easily access the written curriculum documents in the teachers' room.

The IB has an Online Curriculum Center (OCC) which is a password-protected area for all IB teachers in the world (IBO, n.d). IB World Schools have access to this area, and the PYP Coordinators register teachers to use it. Through OCC, teachers can reach different official IB resources; these resources are for implementing the curriculum and include teaching, learning, assessment, and other PYP curriculum support areas. There is also

a “teacher resource exchange center” in which different IB teachers share their samples of documents for PYP. None of the teachers mentioned the OCC during interviews although it is a rich resource center for the professional development of IB teachers. Only six teachers (K-T1, K-T5, K-T7, PK-T3, and PK-T6) mentioned that they read the documents that their PYP Coordinator sends to learn more about the program.

One of the interview questions was about how teachers adapt what they learn in professional development activities to their teaching. This question was significant for the researcher since the teachers stated that professional development is important for them, so it is assumed that their implications on their practice about what they have learned will affect their views on differentiated instruction. Most of the teachers agreed with the idea that the professional development activities that they do or attend are quite beneficial for their teaching in the classrooms. PK-T3 stated that “I learned many things about the program through the workshops I attended. I had never heard about PYP before I started at this school.”

One teacher (K-T2) stated that if someone does not transfer what he/she learned from trainings, then trainings are waste of time and money. She also mentioned that “Schools should support teachers more than anything else.” She was one of the experienced teachers in the school. One teacher (PK-T1) was using emotion board in which children can put their name tags on different emotions as happy, sad, excited, and annoyed. The teacher stated that she saw this in the training she attended and adapted it for her classroom. She uses this emotion board during the day or after an activity asking how they felt during the activity.

Teachers were asked to define the qualifications of an early childhood teacher who differentiate instruction. The overall aim of this question was to see how teachers as practitioners of DI see themselves and other teachers. It was an open-ended question which led to some common answers, as shown in Table 5.

Table 5: Early childhood teachers' qualifications for differentiation

Qualifications	Participants	Total
Collaboration	PK: T1, T3, T4, T8 K: T2, T3, T7, T9	8
Content knowledge	PK: T1, T9, T10 K: T1, T7,	5
Creative thinking	PK: T4, T6, K: T1, T2, T7, T8,	6
Communicating	PK: T3, T10 K: T1, T2, T3, T4, T8, T9	8
Observing	PK: T4, T5, T6, T7, T9, T10 K: T4, T5, T6, T7, T8,	11
Flexibility	PK: T1, T3, T4, T5, T7, T8, T9 K: T2, T3, T4, T6, T7, T8,	13
Lifelong learning	PK: T7, T8, T9, T10 K: T1, T4, T6, T7, T9	9
Motivation	PK: T1, T9, K: T9	3
Organization skills	PK: T9, T10 K: T1, T7, T8,	5
Reflection	PK: T4, T6, T8 K: T3, T4, T8, T9	7
Risk taking	PK: T10 K: -	1
Time management	PK: T1, T2, T4, T5, T6, T7, T8, T10 K: T1, T2, T3, T4, T5, T6, T9	15

Teachers' defined qualifications come from their experiences and observations during their experiences at the school. During the interviews,

the participants were also asked what they think about and mean by these qualifications.

What teachers meant by *collaboration* was working as a whole department. There are 10 kindergarten and 10 pre-kindergarten teachers in the school, and they have grade-level meetings every week. These meetings last about two hours with planning and reflection on implementations. One teacher who is in the first year of her teaching in the PYP stated that "If we did not have these meetings, I would not learn more about the program." Supporting this idea, PK-T6 stated "I think for effective differentiation, teachers should collaborate both in and out of the classroom to share what they do and know."

Having a good understanding of early childhood education and differentiated instruction was mentioned by five participants. These are termed as *content knowledge* by the researcher. The teachers believe that someone who implements differentiation should know what it is. Furthermore, they believe that knowing more about child development and education is a must for a teacher who implements differentiation. PK-T8 stated that "My major was elementary education; at the beginning of my teaching experience in early years, I had some challenges since I did not know much about young children. A kindergarten teacher should know many things about child development."

According to six participants, *creative thinking* was one of the qualifications for a teacher who implements differentiated instruction. They believe that teachers should think up and plan a variety of activities for differentiation. K-T2 stated, "That teacher should think out of the box. It is not easy to plan for differentiation; you need to find new solutions and ways of teaching."

Eight teachers thought that a teacher who differentiates should have good *communication* skills, such as active listening to what is going on in the classroom, clear speech for students to understand the teacher, good

presentation skills to inform parents, and effective communication with coworkers.

“Observation is the best way to assess young children; we need to be the best observers to differentiate” said PK-T9. Ten more teachers also mentioned good observation skills for teachers. They believe that they need to know more about the students in order to arrange activities according to their individual differences.

Answers such as “instead of structured time tables having flexible timing,” “have flexibility to change activities according to the class’s readiness,” “being able to decide some things on your own,” “choosing your own aims for some children,” and “just being flexible” were all grouped as *flexibility* by the researcher. The teachers believe that differentiating teachers should be flexible in terms of thinking and doing and decision making.

For nine of the teachers, lifelong learning was one characteristic of a teacher who differentiates. They believe that teachers should develop themselves professionally in order to keep up-to-date about the field. “Every day we learn something new about our job. If we do not follow these, we would do wrong things” said K-T6. Reading books, attending trainings, and observing experienced teachers were mentioned by the participants in terms of being a lifelong learner.

“When you are trying to do something that you learned recently in your workplace, you need some good words from your admin team,” said PK-T3, who is a new teacher at the school. Three teachers who are all new teachers mentioned that motivation both coming from oneself and from administrators is an important factor for a teacher. If the teacher has inner motivation, then she/he will become more passionate about differentiating.

Five teachers talked about good planning, coordination, and classroom management, which were termed as *organization skills* by the researcher. Five teachers believe that it is an important skill for teachers to have. K-T6 stated that “It is hard to manage 16 students in a classroom; if a teacher

does not know how to do it, then the classroom will turn into a mess.” In accordance with this idea, another teacher also gave an example about this:

If I want to do a one-hour differentiated activity, then I have to plan it, and this planning takes about one hour, sometimes more than that! I have to make a good plan for how to divide the students, how to give directions, how to assess children...it really requires some skills to be successful. (PK-T5)

Being *reflective* is an attribute of the IB Learner Profile which defines the type of students targeted to be educated in IB World Schools. According to the definition of the IB (IBO, 2014), being reflective for students means “We thoughtfully consider the world and our own ideas and experience. We work to understand our strengths and weaknesses in order to support our learning and personal development.” In accordance with this IB Learner Profile attribute, seven of the teachers believed that this should be a characteristic for a teacher who implements differentiation. K-T7 stated that “We want our students to be reflective, but we should be, too. If we review what we have done in the classroom and think about the next step accordingly, then it will really worth of what we wanted to do.”

Risk taking was mentioned once during the interviews. This teacher believes that in order to learn and implement differentiated instruction, a teacher should be risk taker and should not refrain from trying it.

Time management was the most mentioned qualification for a teacher who implements differentiated instruction. It was the first-mentioned qualification for 10 of the teachers out of 15. One teacher stated that “It is not easy to plan different activities for a limited time for different groups of students; even if you plan, you may not have time to do it.” Supporting this idea, another pre-kindergarten teacher mentioned that differentiated activities may last more or less than a teacher plans. This was another issue

for teachers to think about. They believe that teachers should have enough time to plan and implement DI.

The difference of differentiated instruction:

The participant teachers were asked about the difference of differentiated instruction from other traditional approaches. The teachers answered this question through their experiences about other approaches both from their own childhood and also from their teaching and pre-service experiences. This question also revealed information about how their views on differentiation were affected.

According to the teachers, in traditional approaches all students in the classroom are seen and treated the same; on the other hand, in differentiated classrooms teaching and learning are designed and implemented according to the needs of each child in the classroom. K-T5 stated that "Children and their needs are cared in DI," and supporting this K-T7 also added "Differentiated classrooms are more children-centered."

In traditional approaches, you work with the whole class, and they do the same thing. Of course you can slow down or repeat when children do not understand or go fast when they are getting the content fast in traditional classrooms, but it is not student specific. (PK-T4)

Also, some teachers believe that through differentiated instruction, students can be more engaged in education.

It is more tailored to individuals, higher levels of mastery at the end and more engaged students and harder working teachers. Students are more motivated in DI classrooms because there is more challenge. (K-T1)

Content—what teachers will teach in that specific lesson, unit, or year—can be flexible in differentiated classrooms. Teachers have the chance to adapt the content according to student needs.

In traditional education, the teacher defines the content at the very, very beginning and does not change it. Gives the content to children, and it is finished. But in DI, teachers try to make sure whether the students understood well or not.

(K-T2)

The participant teachers also mentioned that the teachers in differentiated and traditional classrooms are different from each other. "The teacher is different," said PK-T8 and continued by stating that the role of the teacher is being a facilitator, not the wise authority in DI classrooms.

Finally, teachers also mentioned the assessment practices in two classrooms. According to them, traditional assessment is using tests at the end of learning; on the other hand, in DI classrooms assessment is more authentic, as K-T8 stated, "Traditional classrooms are much more focused on the end result. Differentiation is more process based."

Benefits of differentiated instruction for children:

The teachers believed that differentiated instruction has many benefits for children's learning processes. All teachers agree on the idea that students learn better with differentiated instruction.

Two teachers stated that the benefits depend on how the teacher implements it in the classroom. PK-T10 stated that "If a teacher does differentiation just to fill the regulations of the program and the school, then it will be waste of time for the children. They will not benefit from it." In addition to this idea, an experienced teacher mentioned, "It might be unsuccessful if the teacher does not know how to design learning activities."

For early childhood classrooms, the benefits of differentiated instruction for children are categorized according to the answers of the participants:

Social-emotional development: Nine teachers mentioned the benefits of differentiated instruction for children's social-emotional development. Three pre-kindergarten teachers mentioned the children "feeling secure." PK-T3 stated that if the education is tailored to children's individual differences, then they feel more secure at the school.

Supporting this idea, PK-T7 stated, "For example, when children see books that are to their interest like animals, they can find themselves in the activity and become more engaged."

Teachers believe that children's emotional wellbeing affects their teaching and learning. Two English teachers gave examples about their classroom experiences.

I do not speak Turkish with children—actually I do not know Turkish...At the beginning of this year we had a student who was very shy and had problems with adaptation. So I tried to pair her with someone who knows both languages and understands me. It was mixing groups. He helped her very much to understand what I say...so that she felt more relaxed and secure. I think this was the first differentiation that I did in this academic year. (K-T1)

Another English teacher also told about her experience with non-English speakers. She stated that the children who do not understand what she says might feel upset and react towards the teacher. For these students, the teacher uses flash cards on which simple directions and messages about tasks are shown with cartoons.

Performance on skills and understanding: Most of the teachers (16 teachers- 8 kindergarten and 8 pre-kindergarten) mentioned the

improvement of children's skills and understanding through differentiated instruction when they were asked about benefits of DI for children.

When a task is more challenging than the student can do, it will not help to learn. But if we adapt it to his/her level, then she/he can manage it. (K-T2)

Another kindergarten teacher gave an example to support her idea:

If a child cannot use scissors, it means that she/he needs to work more on fine motor skills. I do not insist that the child has to cut; I tell her/him to tear. Tearing will help fine motor skills to be developed, and also I give some other activities for fine motor skills like play dough. Otherwise she/he will always struggle with cutting with scissors, which needs prior skills.

On the other hand, one teacher from kindergarten believed that fixing learning engagements at the student's ability level does not help that child to go further. She continued, "The child will remain at his/her level." This is related to one of the general principles of differentiation, differentiation supports teaching up, that is giving tasks which are at the upper part of children's zone of proximal development.

Involvement in school: For five of the participants, differentiated instruction helps students to develop more positive attitudes toward the school. According to them, children are more engaged in learning engagements when they are adapted to their needs.

4.2. Early Childhood Teachers' Practices with Differentiated

Instruction:

The second research question and the main theme revealed subthemes, as "grouping," "according to what they differentiate," and "what they differentiate."

Grouping:

Flexible grouping is one of the essential elements of differentiated instruction, as mentioned by Tomlinson and McTighe (2006). Teachers were asked about why and how they group their students. This question led teachers to think about their own choices and how they value students' needs.

All teachers stated that they use groupings every day. Eleven teachers stated that it is their natural way of learning, and/or they can learn from peers/each other.

I group children because collaborative learning is their nature. They love to work and interact with each other. And also when they are together, they talk more and give me data for assessment. (K-T4)

Sometimes it is easier for a child to learn from his/her friend rather than me; they can understand each other's language. (K-T9)

A teacher also mentioned her previous experiences and how they had changed. During her classroom observation, she gave children colored cards and asked them to come together with the same colors. She had already defined groups in her mind according to mixed ability groups and made students work like this in the math activity. Children never knew who was

the higher learner or low learner. Finding the same colors was just a fun movement activity for them. This teacher says:

At the beginning of my teaching years, I used to think that children can be grouped only for play. But then I realized that they can work on a common task together, even better than adults! (PK-T6)

According to some teachers, grouping is their natural way of doing something in social life. They believe that children make groups in a natural way in order to play or do something.

Even if they are as young as 5-year-olds, they are good at collaborating. Yesterday my students were carrying a big piece of wood in the garden and observing the cracks on it. It took them like half an hour, but they never gave it up, because I observed that they were enjoying being together while doing this. (K-T8)

I can obviously say that they even do not like to eat alone when they are late for breakfast. I think because most of them are the single child of their families, they seek peers. (K-T2)

Apart from that, 12 teachers also mentioned "putting the similar children together" in order to do group-specific activities. "I group my students because I give a different task to each group," said PK-T10.

For a math activity, I prefer to put high ability children together because they can do the task by their own; on the other hand, I put low ability children together so that I can sit with them and help them more at the same time. (K-T1)

Only five teachers talked about mixing different level students in the same group. They were all English teachers, and they use the same strategy to help non English speakers.

As a non-Turkish speaking teacher, I have some students who do not speak English well enough to understand me; at those times dual language speaking students help them to understand my instructions. (K-T1)

The teachers were asked about how they decide on groupings. Eleven of the teachers stated that they decide on groups according to their *aim* for that activity. They stated that before deciding on groups, they need to look at the aims of the activity. PK-T5 stated that "I need to know why I am doing this, so that I can decide how to group them. If my aim is to teach something for the first time, then I make similar ability groups; if my aim is to just have fun, I put the children together whose likings are similar."

Moreover, this question helped teachers to think about *according to what they* differentiate their instruction. The next subtheme about this research question was what they consider when they differentiate.

According to what they differentiate:

Teachers were asked about how students differ and how these differences affect their learning from each other. This question led to many different answers. This question provided information about how they see their students in different aspects. All teachers thought that the students are different from each other. As Tomlinson and McTighe (2006) stated, in differentiated classrooms students' interests, readiness, and learning profiles may differ, and this diversity affects how teachers teach. Teachers shared their views on each aspect of this question, and these were grouped according to the areas defined by Tomlinson (1999).

How young children's learning profiles differ from each other's:

The teachers believe that students learn differently from each other. Thus, the teachers were asked the teaching techniques that they use most. Some of their answers included role play, direct instruction, book reading, free play, experimentation, worksheets, videos, educational computer games, and so on.

The teachers stated that they try to use many different teaching techniques in order to reach every child in accordance with their learning styles. When the teachers were asked about the learning styles, 15 of them mentioned "visual, auditory, and kinesthetic learning" in terms of defining the way children learn best. K-T4 stated that "It is obvious that we do not use direct instruction in early childhood. My first aim it to choose example visuals or kinesthetics that they like and will be engaged with." Three of the teachers also added multiple intelligences when they were asked about the learning styles of children.

K-T2 gave an example about different learning styles of children:

Imagine that I am teaching the letter A. Learning letters might be hard for young children...Some children like to see images of that letter from a power point slide on the computer because they are more visual; on the other hand, some children like to play with flash cards. So me and my partner divide the children into groups and give them different tasks.

Some teachers believe that it is better to give every child a chance to take part in all styles. One teacher (PK-t-10) stated that "I try to use different techniques for all children, not for a group of children." This teacher believes that all children should be given the chance to work on all the stations.

Moreover, a few teachers believe that students' personal and family backgrounds also affect their learning in early childhood classrooms. For example, some children might be more active; on the other hand, some might not be as this activeness might be seen differently from the family's perspective. As PK-T10 mentioned, although the families' economic statuses are similar to each other, their social statuses might differ. One teacher stated that "Even their enviousness might affect our classroom environment. Such children should be directed to more collaborative works." Furthermore, as teachers stated during their self-definitions of differentiated instruction, they think that the family's attitudes toward the school and education of their children also affects students' individual differences.

Six of the teachers also mentioned gender; they believe that a child's gender also affects the teaching and learning process in the classroom.

For young children, gender can affect their preferences.

According to my own experience, a girl might not want to learn songs about cars. This is the same for the boys, too.

Boys want to have more active games. (K-T5)

Regarding this view, another teacher (PK-T10) gave an example for free play time: "If I give them one option like puppets for free play, boys will not be engaged; they prefer to play with blocks."

Two teachers mentioned that young children's learning profiles are not static; they can change over time. PK-T8 stated that "Even in a day, a child may prefer the computer for math, but he prefers worksheets for language."

Within this question, teachers were also asked about how they determine these learning profiles of the children. All teachers stated they use observation, and through these observations teachers decide by themselves. "I always observe my students, and I know them well. So I can identify what kind of activities they like," said PK-T-6. Six teachers mentioned support that could be obtained from outside the classroom, like an inventory or checklist

to be used for defining children's learning profiles. They believed that in this way they will be sure of what they are doing.

Six teachers also shared another way of determining the learning profiles of children in different groups. At the beginning of the activity, they talk about different stations and ask children to choose one. This was observed by the researcher in pre-kindergarten B. For that activity, the teacher set up two different tables: one was the card game table, and the other was the manipulative table. The focus of the activity was number sense. The teacher introduced the two different tables and asked students, "Which table would you like to work at?" Most of the students preferred the manipulatives; only two students chose the card game.

Although teachers agree on the idea that children learn in different ways, some teachers also mentioned that they do not know how to determine children's learning profiles. PK-T7 stated that "I try to give different tasks to them, but I am not sure if they are right or not. They are just my observation." In addition to this, three more teachers also stated that they are not sure about determining the learning styles of children. PK-T8 mentioned, "I do not know any assessment methods to identify how these children learn best."

How their interests affect teaching:

As interest is one of the components of differentiated instruction, the teachers were asked about how they address student interest in early childhood classrooms. The participant teachers thought interest is what children like, and they emphasized that interests can change instantly in the early years. "Although they have long-term interests like dinosaurs, they also have some daily interests because they are affected by television, peers, and other environments," said PK-T8 while defining interests. Some of the examples they gave for it were games, toys, colors, animals, and so on.

Seven teachers stated that they give children open-ended options and want them to choose one according to their desire for certain tasks.

I create different corners in the classroom and want children to choose one of them. For example, last week we were role playing on famous children's stories. I took four books from the library and put them in the four corners of my classroom. Then I put costumes and some other materials next to the books. The children had chance to choose any corner to role play in so that children become more interested in the activity.

Teachers relate differentiation to children's interests with some of the routines for free play they do in the school. Every day, the school's pre-kindergarten classes have a 60-minute activity called "Individual Choice Time," which was observed by the researcher for a week. There were five pre-kindergarten classes, and during Individual Choice Time each class's teachers arranged their classroom according to one learning area: cognitive, fantasy, creativity, big blocks, and garden. The teachers decided which classroom would become which area at the beginning of the month and that teacher was responsible for planning and implementing that area for that month. Each room had colored pegs which were used as entrance tickets.

When children come to the school every day they do circle time with their teachers in their own classrooms. During circle time, students decide which area they want to go to during Individual Choice Time. They take two different pegs, one is self-choice and the other one is teacher's choice. Then they first go to the teacher choice classroom for half an hour; after this, they go to their self-choices. Figure 9 shows the selection board for one class in prekindergarten.



Figure 9: Individual Choice Time Selection Board

During the observation done in February, it was noticed that students are very familiar with this routine, and they know what to do. PK-T1 stated that "The beginning of the academic year, a few weeks are for orientation to the school for the children. We share general rules and activities with the children. But it takes time to learn for the children."

In the kindergarten classes, they have "I Time" which was observed for a week by the researcher. This is different from pre-kindergarten's Individual Choice Time. The school has five kindergarten classes and five areas including library, fantasy, garden, fine motor, and science/math. Every day, each classroom goes to one area as whole class, and the children are free to choose what to do in that area. For example, Kindergarten-A goes to the library every Monday, and the children spend 30 minutes in that area. The children choose books to read according to their own interests. During I Time, all the children of a class are in the same area but are free to choose

what to do in that area. The two teachers of the class usually observe, initiate some activities, or guide children during play.

When Kindergarten-B was in fantasy area during I Time, one of the teachers was observing the classroom, and the other one was playing with the children. At the beginning, the teachers reminded the children of the general rules for that area and told the children that it is a free time for them, they can use any material in that area. All the children were engaged in an activity at that time. Four children were playing with puppets, and they were playing a game that had been established before—probably they had played the same game during the previous fantasy time the week before. This shows that children develop some habits related to the areas they visit.

How their readiness affects teaching:

From the interviews, it can be seen that teachers value the different readiness levels of children. Six of the participants even believed that readiness is the most important aspect for differentiation. "I think the most important benefit of differentiation is to help low-level learners," said K-T9. In addition to this, one teacher, PK-T6, pointed out that she used to think at the beginning that only student performance levels could be differentiated.

The teachers' understanding of readiness differed. What teachers mean and understand by readiness is shown in Table 6.

Table 6: Teachers' understanding of readiness

Examples	Total mentions
doing something / motor skills	11
math	13
cognitive skills	7
language skills in mother tongue	6
language skills in English	9
understanding a direction / conception	12
thinking skills	5
self-care	4
understanding on a topic	8

As can be seen from Table 6, teachers have different expectations of children in terms of readiness in terms of implementing differentiation. They believe that these items affect their teaching and students' learning in the classrooms and that they need to be kept in mind while differentiating.

When they were asked what readiness means to them and how it affects their teaching, most of the items mentioned by the teachers were related to the cognitive development of children.

For example, if a child is not good at counting, I cannot teach her/him addition. But if the other kids in the classroom can count and are ready to learn addition, then I should not wait for not ready ones. It is a good time for differentiation. K-T2

Only four teachers, who are all pre-kindergarten teachers, mentioned that self-care skills might differ from child to child. PK-T8 stated that "Some students are not even able to dress by themselves. So I need to think about this when planning my activities."

The teachers were also asked about how they determine a student's readiness. This question led the teachers to review their assessment practices. The teachers believe that assessing children throughout the year gives insight information on children and also helps teachers to improve their practices in classrooms. The teachers emphasized that they mainly use observation as an assessment strategy, and they use a variety of tools to record observation notes.

Observation is the key element of our assessment. You cannot give an exam to assess young children's readiness. The best way for us is to observe them and try to collect data on their progress. (PK-T6)

We get information about children's readiness through observing them and keeping a record of it to be used later. (K-T5)

The teachers also mentioned assessing them through selected work samples of children. "Portfolios give valuable information to us," said K-T2. Each student has a portfolio, and these portfolios are designed according to each unit of inquiry. Students share the portfolios with their parents. Teachers believe in the importance of assessment in their classrooms: "We decide on something through the assessment data, so we need to be careful," said PK-T7.

What they differentiate:

In order to obtain in-depth information about "what" the teachers differentiate, the key elements defined by Tomlinson and Imbeau (2010) were investigated through the interviews. Their answers regarding their differentiated activities gave more detail about what they understand by content, product, process, affect, and learning environment and how they

use them during differentiation. The findings on this theme are presented as the follows.

Content:

For early childhood teachers, content is the learning objectives, skills, and concepts that are aimed to be achieved by the children in that grade level. According to some teachers, attitudes are also a part of content since they believe that making children gain specific attitudes is also one of their aims of education in the school.

The participant teachers were also asked about how they decide the content for each grade level. Homeroom teachers stated that their learning objectives are taken from the early childhood education curriculum of the Turkish Ministry of National Education and IB scope and sequence documents. The English teachers stated that they use the school's English learning outcomes and IB scope and sequence documents.

We define it according to the school's scope and sequences and the requirements of national curriculum. Also, we consider students' age level and try to make it developmentally appropriate. Also, as teachers, our previous experiences are also very important. We reflect on each unit, and we use these recommendations the next year for the same grade level. We define overall objectives at the beginning of the year, but we adapt them according to student need in the year during the process. (K-T2)

As K-T2 stated above, content being developmentally appropriate for is also important for the school. Seven more teachers also mentioned developmentally appropriate practices during the interviews.

The main aim of this part of the interview was to learn more about how the teachers differentiate content in their classrooms. Two of the

teachers stated that they do not prefer to differentiate content much because they find it challenging. These two teachers are not partners.

At the end, my aim is to teach (for example) edges of shapes. I want all children to learn the same thing when the lesson finishes. But if I change the content and teach some students something else, how can I assure that they will also learn edges of shapes?

Along the same line with this idea, PK-T6 also mentioned that "Changing the objectives in a lesson for some children might not be manageable; instead we should try changing how we teach."

Other teachers shared their ideas about how they differentiate content. They mainly mentioned the skills that they differentiate. K-T8 stated that "I think what they know does not differ too much at these ages, but what they can do differs more," and she meant skills by saying what they can do.

At the beginning of this term, we were working on fine motors skills, and we knew that their abilities were different from each other. So one task was about working with play dough, and the other was about cutting. (PK-T7)

Furthermore, the English teachers also emphasized the children's level of English effect on the differentiation of content.

Our students have different backgrounds; some are coming from mixed parentage families and native speakers, but for some this is the first place they hear a single English word, so we cannot give the same task to each child. Some need to work on more basic topics while others are doing comprehensive ones. (K-T1)

Product:

In order to define different aspects of differentiated instruction, the teachers were asked to define “product,” and during the interviews teachers defined “product” by giving examples of it from their classrooms, such as “it is what they do in classrooms,” “their work,” “what they do in art, math, and other lessons.” K-T9 defined product as “This is the outcome of a kid’s learning, you can assess it.” Thus the answers of the teachers revealed that teachers agree with the idea that product is the end-product of learning.

Differentiating product is directly linked to teachers’ practices on assessment. They stated that they differentiate summative assessment tasks of a unit of inquiry. The summative assessment task is given to students at the end of each unit, and the aim of it is to assess whether students understood the central idea and can do the related task. Thus, it is a product of a learning journey, as shown in Figure 10.

When students are doing the summative assessment task, we give them an opportunity to choose the way of doing it or of materials. For example, when they are reading a book, if they want they draw pictures, or they can do a collage. (K-T3)

For example, when we were working on friendships, we wanted our students to make a card for a friend. Some children made this card by drawing, these were visual learners, and some of them wrote it, these were auditory learners. In both cases, we had the chance to see what friendship means to them. (K-T8)

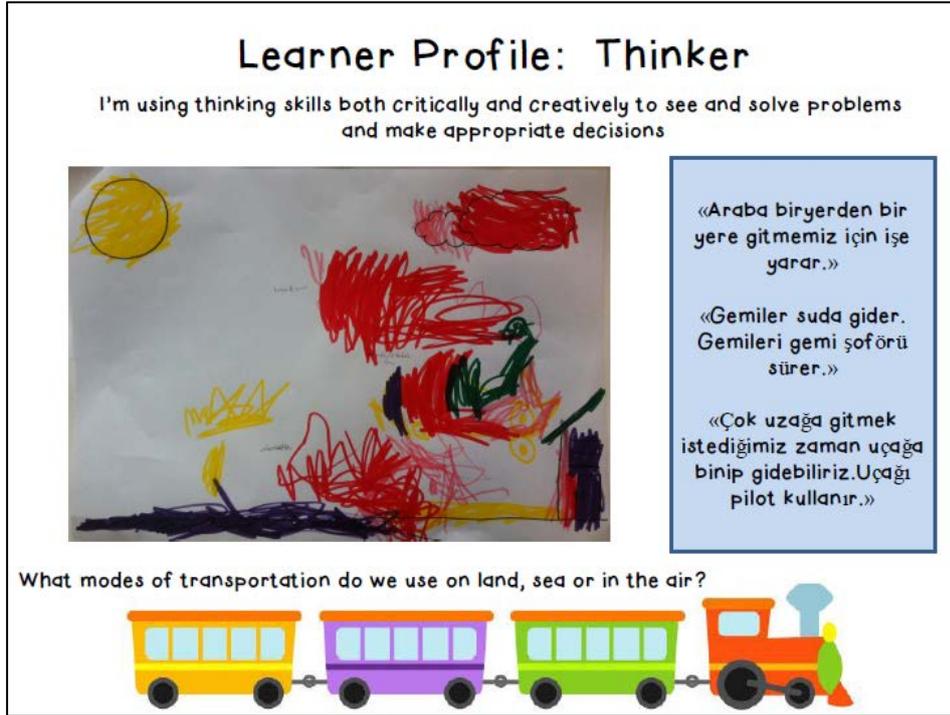


Figure 10: Student work about transportation vehicles

Teachers were asked about their assessment practices, and, through this question, the researcher found a chance to look at the common practices of the school regarding assessment and its relation to differentiated instruction. According to the answers of the teachers, the school has two types of assessment: during teaching and after teaching. During the interviews, the teachers mentioned common understandings of assessment in the school.

They have six units of inquiries for each grade level. At the beginning of each unit, the teachers assess students' pre-knowledge and skills. The school also uses portfolios to keep student products. K-T5 stated that "You can see this from portfolios. Children's products are different from each other's." Portfolios are designed according to each unit of inquiry, and they reflect student progress through that unit. Portfolios are shared with the parents at the end of each unit. As shown in figures 11 and 12, parents are informed with an introduction letter about what the portfolio is for.

Each student's portfolio may look different from each other's since the

students are free to choose how they are making the work. The portfolios are stored in the classroom and students are responsible for their own portfolio. Students can go and take their portfolios, put some products in them or change.

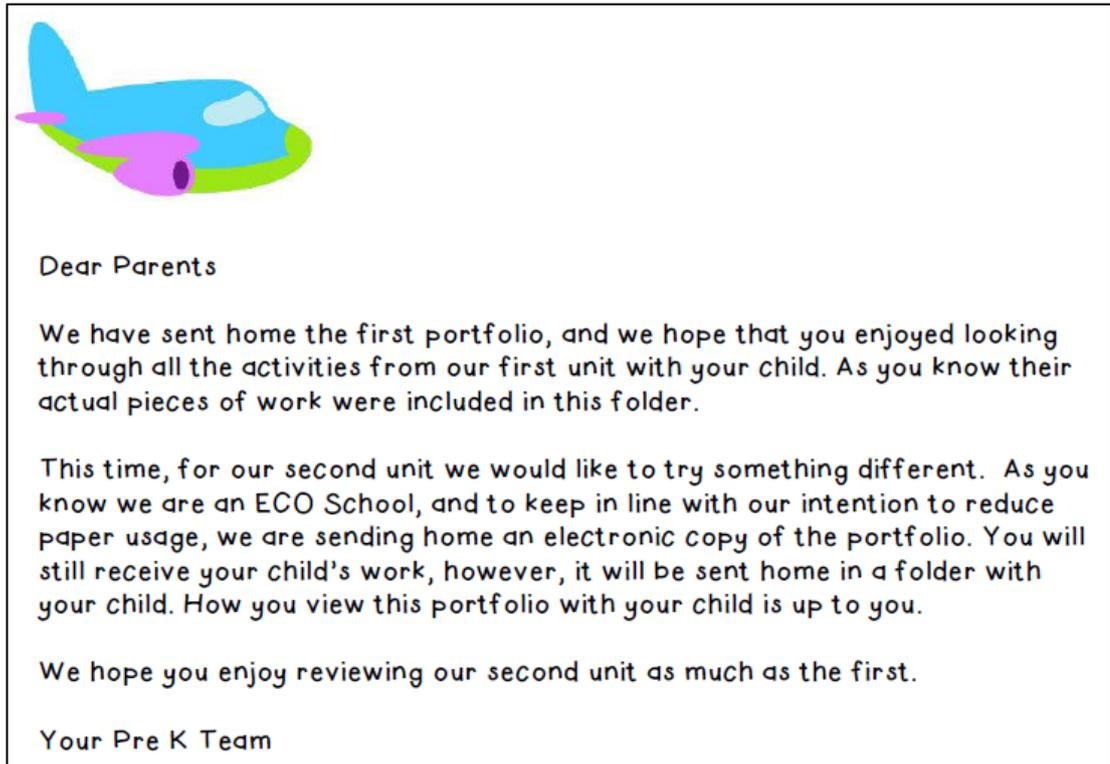


Figure 11: Portfolio parent letter written by teachers

What are Portfolios?

These are a collection of observations of "children in action" that demonstrate their growth and development over a period of time. It includes observations by the teachers in the format of a photograph with a narrative.

The primary goal of the portfolio is to indicate the level of the child's development and to plan curriculum that supports and extends development. The secondary goal is to communicate both the child's development and the subsequent progress to the parents.

Why do we need portfolios?

- To provide an overall picture of the child
- To reflect the social, cognitive, physical and emotional growth of the child
- To show change over time
- To provide a basis for planning curriculum
- To involve the child and the family
- To create memories for reflection



Figure 12: Portfolio information letter written by teachers

Process:

Learning more about the process of teaching and learning in the classrooms gave an inside view of the teachers' understanding of differentiation. This one is the most differentiated aspect in the school for 14 teachers. They believe that this one is both easy to do and also the most beneficial for the children.

The teachers stated that their learning engagements address the different needs of the children.

We usually do three groups, and while two of us are working on one group, the third group does independent work. The groups might be according to their learning style or performance level...so the activities are changed. For example, when we were working on patterns, our aim was to show them how to make patterns. While on one table

the visual group worked with pictures, the kinesthetic learners were making patterns with big blocks. (K-T2)

During the classroom visit to a pre-kindergarten class, the objective was to find the places where different transportation vehicles are used. The two teachers were in the classroom together and working with children. The children were working in two different groups. In one group, the English teacher was looking at different books on vehicles and she was asking the students what they see. The other group was doing a matching activity on a big picture and trying to put vehicles in the correct places. In the second group, there was minor teacher support for children. At the end of the activity all students used the same worksheet, as shown in Figure 13, as a summary of their learning. The teacher used this worksheet to sum up the lesson and also they had chance to see if the children learned well or not in their groups.

Name: _____		
Land 	Air 	Water 

Figure 13: Sample worksheet

Affect:

According to the answers of some teachers, they believe young children's affective domain should have the most emphasis in the early childhood classrooms.

PK-T8 stated that “For this year, because of the dynamics of this class, I try to group them according to who gets along best with each other socially and emotionally.” She described her classroom as having “lots of mood changes.” Furthermore, PK-T6 also mentioned how emotional features affect her teaching:

We take a lot of time on settling, keeping their hands to themselves, eliminating interruptions throughout the day...like this...it affects what they are learning but mostly what they are not learning. I need to deal with this to keep them engaged in activities.

Not only prekindergarten teachers, but also kindergarten teachers emphasized the effect of children’s emotions on their learning. K-T3 believed that if she can understand what a child feels in that day, she will be able to help that child learn better. In the same direction, K-T7 also mentioned that if children are not happy in the classroom, it would be hard to teach something to that child.

Learning environment:

Similar to process, learning environment was also very familiar to and easy to define by early childhood teachers. “Where learning happens,” said K-T8 while defining learning environment. Teachers believe that the classroom, corners, garden, play areas, and activity areas are the examples of learning environment in that school.

Furthermore, seven teachers also mentioned materials in the classrooms, which are seen as a significant part of the learning environment. “We cannot think of an empty room as a learning environment; all the materials here are a part of our environment,” said PK-T10. The teachers believe books, art and craft materials, games, manipulatives, and toys are a part of the learning environment.

According to the participant teachers, learning environment can be easily differentiated due to the nature of early childhood classrooms.

We have many areas in our classrooms. The block area, fantasy play area.. We can direct the kids to these areas according to our aim for the activity. (PK-T8)

This happened to me recently. We were doing some visual reading activities, and three of my students told me they needed a silent place to work. So I put them next to the teacher desk, which is a little bit away from the other tables. (K-T6)

Four teachers stated that learning environment is also differentiated unconsciously. That is, students go to different areas according to their needs.

During free play time, we give many opportunities to children in the classroom, and they choose the places they want to play. Also, they choose their groups, or maybe sometimes they prefer to play alone. I think this is a natural differentiation. (PK-T4)

According to the participants, the materials in the classrooms also help them in differentiation. "It depends on how rich your materials are," said PK-T10 and believed that if there are variety of materials in the classroom, it will enhance the quality of differentiation.

With regards to the focus of this question, teachers were asked to define indicators of a differentiated early childhood classroom environment. The teachers' answers were about both the physical and affective environment of the classroom.

Most of the teachers stated that student work displayed is a real clue for what is happening in the classroom. PK-T6 said that "The classroom walls are the mirror of that class. Basically, children's work on the walls gives

information about the educational philosophy of the teacher.” Furthermore, according to K-T8, “If you see very well ordered, well cut and painted student work on the walls, it means that the teacher is at the center in that class.” This means that the teacher of that class mostly does the activities instead of the students.

The teachers were asked how student work can be an indicator for differentiation and what meanings it gives. K-T8 continued, “If all student work is similar to each other’s, than it means that they do not have the chance to choose.” Teachers believe that since differentiation is being respectful to children’s needs, their work also reflects their individual differences.

The teachers mentioned that different corners or areas in classrooms are also indicators of a differentiated classroom. As is the nature of early childhood classrooms, there are learning areas in classrooms for blocks, dramatic play, table games, books, etc. in all classrooms. “If you are differentiating, then you need to give students the chance to choose where to work in, and you need to have areas for it.”

“A differentiated classroom should have rich materials,” said K-T7 when defining the indicators of a DI classroom. In addition to this, other teachers’ related replies were also grouped under materials. They were, for example, books at different levels, graded readers, different size blocks, and puzzles.

Aside from physical environment, teachers also mentioned the affective environment of the differentiated classroom. The affective environment reflects the social and emotional values of a classroom. The teachers mentioned that a classroom should have a respectful environment in which people listen to each other, try to know each other, and be sensitive to the differences. Also, they stated that there are some children who need more help and are below average at some areas, so teachers and other

students should be tolerant of these students. Finally, the success of every child should be appreciated in terms of their individual success.

4.3. Early Childhood Teachers' Challenges with Differentiated Instruction

According to the findings of the study, this theme came out with three main subthemes, including "teacher education," "classroom environment," and "planning for differentiation."

Teacher education:

Although most of the teachers have a positive impression about differentiated instruction, they stated some challenges about understanding the approach and implementing it in the classroom. All of the teachers except two stated that they did not get any special training on differentiated instruction during their university education. Only two teachers attended some private sessions on differentiation during their undergraduate education.

Seventeen of the teachers stated that they got their experience in differentiated instruction in this school with the IB-PYP. One teacher stated that "I did not know anything about differentiated instruction before coming to this school."

Six of the teachers stated that at the beginning, they used to think DI was something related to inclusion and that it was for special education.

I had heard about differentiation, but I was thinking that it was all about students who have some learning deficiencies. In my previous school, we had such children, and we used to have a special inclusion program for those children. When I came to this school, I thought that would be doing something for special needs children. (PK-5)

When I first started at this school, I knew that we would not have any special needs children. So I could not understand why we were using differentiated instruction.
(K-T9)

Two teachers who had worked outside of Turkey had had experience in differentiated instruction. One of them who had worked in the States for a long time stated that "Differentiated instruction used to be our daily teaching routine. It was our teaching approach." Another teacher who had IB-PYP teaching experience in another country stated that "My teachers in my own elementary education treated us according our individual needs. So, I am familiar with the system from my childhood."

Having had experience with differentiated instruction in the teacher's own childhood, or not, was one of the factors that affected their adaptation to this approach. One teacher (K-T2) stated that "I was not familiar with something like this, because I did not see it from my teachers." In accordance with this idea, two teachers mentioned that in traditional education, people do not have time to adapt their teaching for each child; it might be seen as time-consuming.

Two of the teachers had attended a workshop or training on differentiated instruction. Furthermore, 17 of the teachers stated that they learned DI through their teaching experience. This shows that differentiated instruction was a new topic for most of the teachers when they first began teaching in an IB-PYP school. Especially Turkish teachers stated that they needed more examples and resources on differentiated instruction in Turkish.

Classroom environment:

Learning more about the challenges of early childhood teachers while implementing differentiated instruction helped the researcher to relate them

to the literature and thus have suggestions for the field. The answers are grouped under four areas.

Teacher number, teacher/student ratio:

In the school, each class has two teachers, one is a Turkish homeroom teacher and the other one is the English teacher; they cooperate with each other and are both responsible from all duties of that class. These two teachers are assigned by the school administrators in accordance with mixed teaching experiences. They call each other as partners. The average student number for each class is 15.

The teachers stated that having a partner in the classroom is an advantage to doing differentiated instruction. Through working with partners, teachers can manage the classroom in terms of keeping the children focused on the task and observing them efficiently. Due to the fact that young children need more attention, early childhood teachers can share the role in the classroom with the other teacher. Thus, working alone would be a challenge for these teachers. During the observations it was found that usually one teacher is more active than other teacher in an activity. It seems as collaboration between the two teachers. While one teacher is leading or facilitating the learning engagement, other teacher acts as supporter.

Nine of the participants mentioned working collaboratively during the interviews. "Although we work in pairs, being alone in the classroom is hard for me while doing differentiated activities, since I need to manage 16 young children at the same time," said PK-T7. Thus, the teacher believed that teacher to student ratio is a significant factor for implementing DI.

Class/classroom size:

The school's pre-kindergarten classes were using another facility within the campus during the data collection period of this study because of school building renovation. The classrooms of the pre-kindergarten were

different than those of the kindergarten in terms of size—they were smaller. The materials and school furniture were the same for both pre-kindergarten and kindergarten. The sketches of both classrooms were given in method chapter with Figures 14 and 15. Both classrooms have mainly two parts. One section has tables, chairs, and a white board and mainly seems designed for table activities as writing, math, and manipulatives. The other part is “carpet” part mainly for role play, drama, motor activities. Both kindergarten and prekindergarten classrooms look similar to each other in terms of furniture and materials- not the size.

Consequently, classroom size was mentioned by seven pre-kindergarten teachers during the interviews. According to them, if the classroom is small, it is challenging to make different groups and give students enough space to work on their own. “If you have a small classroom, then you should have fewer students,” said PK-T10 and mentioned that it is also hard to manage too many students in a single classroom. Concordantly, during the observations it was seen that teachers give breaks for children to go outside or bathroom frequently. Of course these children are younger and they may need more breaks for bathroom but teachers do it on purposefully to make students change the environment and relax.

In addition to this, only one kindergarten teacher also mentioned classroom size: “for effective differentiation, you need fewer students and a bigger classroom, because you need many different stations and corners.” The other eight kindergarten teachers did not mention class size; this is probably because of the big classrooms they already use. The kindergarten classes are big, have bigger windows so they have more light. The corridors in kindergarten building are wider than prekindergarten building, so this also makes students move in the school conveniently.

Clear directions:

According to the participant teachers, one of the challenges they face in the classrooms is the level of difficulty of the directions they give to the students. They believe that during differentiated activities, they need to give more than one task to different groups of children, and each task has different directions, which might be misunderstood or forgotten by the students.

Seven of the English teachers and four of the Turkish teachers emphasized that the misunderstanding or lack of understanding the directions given to the children during differentiated activities is an important challenge for them. Especially the English teachers mentioned this challenge; this might be because of the fact that most of the students in the school are Turkish, and English is a second language for them.

When I divide them into groups, I try to keep each group away from the others in order not to disturb each other. But at such times, it might be a little bit chaotic because the kids may not understand their group's task the first time...so I have to be running from group to group. (PK-T4)

Moreover, the teachers stated that during differentiated activities, the children might be working without the supervision of a teacher or adult. So their task should be given to them clearly, and also the directions should be appropriate to their language capacities. Supporting this idea, "If you tell a child six steps of an activity at the same time, she or he will only remember the first and maybe the last one," said K-T6. During the classroom observations, it was seen that students can forget what to do on the task and need repetition for the directions.

Time management:

During the interviews, the teachers also mentioned time management as a challenge during implementing differentiated instruction. Twelve teachers mentioned that if a teacher cannot manage the allocated or planned time for an activity, this affects the effectiveness of differentiation. Time management was also mentioned by the teachers during the defining of indicators of an early childhood teacher who implements differentiated instruction.

Sometimes I plan an activity for two different groups, and one group finishes early while the other group is in the middle of their task. This is a nightmare for me! (K-T3)

During classroom observations, it was seen that in one class teachers give play doughs or paints for the groups that finish early. However, this makes other children to want to finish the activity to get play dough without concentrating on the task. One teacher (PK-T1) gave students who finished early additional prompts about the same activity as "Look at the vehicles you draw and think about their drivers. What could be the names of the drivers? How do we call them?". This was not planned by the teacher but made students work on the task a few more minutes without changing the focus.

Parents and community:

For a few of the participant teachers, the attitudes of parents might be a challenge for implementing differentiated instruction. Four teachers mentioned the need of informing parents on differentiated instruction and its benefits for their children. This way, parents will understand what it is and why it is happening in the classroom. "Since we are a private school, our parents want to learn more about what is happening inside, so during parent meetings we share our practices with them. But it hard for them to understand differentiation," said PK-T3.

We have twins, sisters, brothers, relatives in the school, and their parents are tracking what is being done in the school. If one of them is different from the other, then the parents come to the school and ask for it. They wonder about our education. (PK-T6)

I think it is something cultural. If we do something different for a child, his or her parent might think 'Is there something wrong with my child?' They really should be taught what differentiation is, why we are doing this.

Although the number of the teachers who thought this is low, they believe that giving different tasks and assignments might be misunderstood by the parents.

Planning for differentiation:

One of the interview questions was about planning for differentiated instruction. This question was significant for the researcher since it will help practitioners in the field in terms of suggesting how to plan differentiation; meanwhile, it revealed some challenges for the teachers.

The school has a Programme of Inquiry (POI) in which core information about four units of inquiries for each grade level is written. The central idea is a concept-driven sentence to be inquired through the unit; inquiry lines, which are the separate components of the central idea, are stated in the Programme of Inquiry. The Programme of Inquiry (POI) was defined by K-T6: "It is our outline for the whole year. We can see general information about our units." During the classroom and school observations, it was noticed by the researcher that teachers post the Programme of Inquiry on the wall of each classroom. Figures 10 and 11 are the POIs for pre-kindergarten and kindergarten for the 2013-2014 academic year. Also K-T6

who is the grade level team leader for kindergarten stated that they revise the programme of inquiry at the beginning of each academic year and do relevant changes “The big change was done this year, because now we have a new grade level”. The school team developed new units of inquiry for younger students and updated kindergarten’s accordingly.

Grade	An inquiry into: Who we are	An inquiry into: Where we are in time and place	An inquiry into: How we express ourselves	An inquiry into: How the world works	An inquiry into: How we organise ourselves	An inquiry into: How we share the planet
	An inquiry into the nature of the self, beliefs and values; personal, physical, mental, social and spiritual health; human relationships including families, friends, communities, and cultures; rights and responsibilities; what it means to be human	An inquiry into orientation in place and time; personal histories; homes and journeys; the discoveries, explorations and migrations of humankind; the relationships between and the interconnectedness of individuals and civilizations, from local and global perspectives.	An inquiry into the ways in which we discover and express ideas, feelings, nature, culture, beliefs and values; the ways in which we reflect on, extend and enjoy our creativity; our appreciation of the aesthetic;	An inquiry into the natural world and its laws; the interaction between the natural world (physical and biological) and human societies; how humans use their understanding of scientific principles; the impact of scientific and technological advances on society and on the environment.	An inquiry into the interconnectedness of human-made systems and communities; the structure and function of organizations; societal decision-making; economic activities and their impact on humankind and the environment.	An exploration of our rights and responsibilities as we try to share finite resources with other people, with other living things; of communities and of the relationships within and between them.
PRE K	<p>Unit 1 Title: I'm Special! Central Idea: I am special because of my friends and family.</p> <p>Inquiry Lines:</p> <ul style="list-style-type: none"> • Myself • My Family • My Friends <p>Learner Profile(s):Balanced Attitude(s):Curiosity</p>	Theme will not be covered at this grade level.	<p>Yearlong Unit Title: Look what I can do! Central Idea: Awareness of different cultures allows us to express ourselves through the Arts.</p> <p>Inquiry Lines:</p> <ul style="list-style-type: none"> • How we express ourselves through the Arts • Uses of the Arts in different cultures • How we respond to the Arts in different cultures <p>Learner Profile(s):Open-minded Attitude(s):Appreciation, Confidence</p>	<p>Unit 3 Title: Animal Kingdom Central Idea: The role of animals in our lives influences how we treat them.</p> <p>Inquiry Lines:</p> <ul style="list-style-type: none"> • Animal Classification • How people raise animals • Reasons for raising animals • Living with animals <p>Learner Profile(s):Inquirers Attitude(s):Empathy</p>	<p>Unit 2 Title: Going Places Central Idea: The transportation choices people make depend on what kind of journey they will take.</p> <p>Inquiry Lines:</p> <ul style="list-style-type: none"> • Different kinds of transportation • How they are similar and different • Why people choose different kinds of transportation <p>Learner Profile(s):Thinker Attitude(s):Cooperation</p>	Theme will not be covered at this grade level.

Figure 14: Programme of Inquiry for the pre-kindergarten

Grade	An inquiry into: Who we are	An inquiry into: Where we are in time and place	An inquiry into: How we express ourselves	An inquiry into: How the world works	An inquiry into: How we organise ourselves	An inquiry into: How we share the planet
	An inquiry into the nature of the self, beliefs and values; personal, physical, mental, social and spiritual health; human relationships including families, friends, communities, and cultures; rights and responsibilities; what it means to be human	An inquiry into orientation in place and time; personal histories; homes and journeys; the discoveries, explorations and migrations of humankind; the relationships between and the interconnectedness of individuals and civilizations, from local and global perspectives.	An inquiry into the ways in which we discover and express ideas, feelings, nature, culture, beliefs and values; the ways in which we reflect on, extend and enjoy our creativity; our appreciation of the aesthetic.	An inquiry into the natural world and its laws; the interaction between the natural world (physical and biological) and human societies; how humans use their understanding of scientific principles; the impact of scientific and technological advances on society and on the environment.	An inquiry into the interconnectedness of human-made systems and communities; the structure and function of organizations; societal decision-making; economic activities and their impact on humankind and the environment.	An exploration of our rights and responsibilities as we try to share finite resources with other people, with other living things; of communities and of the relationships within and between them.
K	<p>Unit 1 Title: Let's Be Friends Central Idea: Our friends may have different beliefs and values, yet we respect and value them.</p> <p>Inquiry Lines:</p> <ul style="list-style-type: none"> • Friends' different beliefs and values • How we respond to our friends • How we value our friends <p>Learner Profile(s):Caring, Principled Attitude(s):Empathy</p>	Theme will not be covered at this grade level.	<p>Unit 3 Title: Stories Around Me! Central Idea: When a story is written affects its meaning and content.</p> <p>Inquiry Lines:</p> <ul style="list-style-type: none"> • Comparison of old and new children's stories • The relationship between when a story is written and its content. <p>Learner Profile(s):Open-minded, Communicator Attitude(s):Appreciation, Integrity</p>	<p>Unit 4 Title: Little Scientists Central Idea: Science shapes the world we live in.</p> <p>Inquiry Lines:</p> <ul style="list-style-type: none"> • The importance of science • Scientific method • Interactions in our world and science <p>Learner Profile(s):Thinker Attitude(s):Curiosity</p>	<p>Unit 2 Title: Jobs! Central Idea: Jobs that we see in our community.</p> <p>Inquiry Lines:</p> <ul style="list-style-type: none"> • Different types of jobs • Job descriptions • How different jobs help us <p>Learner Profile(s):Inquirer Attitude(s):Cooperation, Commitment</p>	Theme will not be covered at this grade level.

Figure 15: Programme of Inquiry for the kindergarten

The participants use unit planners for each unit of inquiry. This unit planner was developed by the IB and is mandatory for IB World Schools to use. PK-T6 stated that “We have a unit planner for each grade level. All five classes at the same grade level use the same planner.” Teachers plan the unit together and document the plan on a unit planner together with collaborative planning. The unit planner consists of nine sections as designated by the IB.

Stage 1. What is our purpose?

Teachers write the central idea and summative assessment task here. As can be seen from the central ideas given below, teachers decide them through brain storming during the beginning of academic year. K-T9 stated that “We usually do not change central ideas every year, because new children come to our classes and we have to keep the continuum in the school with upper grade levels”. Furthermore, teachers also mentioned that they may do minor changes on the content of units according to the feedback from the previous year.

Central ideas of each grade level:

Prekindergarten Unit-1:

I am special because of my friends and family.

Prekindergarten Unit-2:

Awareness of different cultures allows us to express ourselves through the arts.

Prekindergarten Unit-3:

The transportation choices people make depend on what kind of journey they will take.

Prekindergarten Unit-4:

The role of animals in our lives influences how we treat them.

Example summative assessment task from kindergarten planner:

Students have been asked to bring in pictures of their families and of the rooms in their homes. They will be preparing a small project where they will be making a house (some will be given a house model; some will draw their own). They will place the pictures of their families and homerooms in this house. The teachers will be asking questions about which senses can be used in each room.

In this summative assessment task, children were given option to choose how to make this product according to their learning preference. So that children would show what they had learned from the unit on their own way of showing it. It is an example for differentiating the *product*. Students are given opportunity to show their understanding in different ways which are appropriate to student needs.

Stage 2. What do we want to learn?

In accordance with the central idea, teachers write the concepts and the teacher questions that will drive the unit for this section. As can be seen from the kindergarten's example below, the teachers defined inquiry lines and teacher questions for the unit. The teachers stated that they also use these questions to assess student learning during the unit. This is part of their formative assessment practices.

Connection: How is it connected to other things?

Perspective: What are the points of view, interpretations, understandings?

What lines of inquiry will define the scope of the inquiry into the central idea?

- Stories come from around the world
- Stories have form

- Stories can be told in many ways
- Everyone is a storyteller

What teacher questions/provocations will drive these inquiries?

1. What are some different stories from around the world?
2. What makes a story a story?
3. What are some different ways we can tell a story?
4. What special language do we hear in a story?
5. How are we all story tellers?
6. How do you respond to stories—How does it make you feel? What does it remind you of? What do you think about it?

This section can be seen as the *content* part of their curriculum. Teachers define knowledge and understanding through concepts while keeping objectives of national curriculum and developmentally appropriate practices. Having a good quality curriculum is a principal for differentiated instruction and it requires well defined knowledge, understanding and skills, so that teachers can formatively assess these and plan differentiation accordingly for their students.

Stage 3. How might we know what we have learned?

This section is for pre- and formative assessment. Teachers write the strategies and tools that will be used at the beginning and during the unit of inquiry. As can be seen from the example of kindergarten below, the teachers plan many formative assessment tasks for children to get information about their learning during the unit.

Pre-assessment: Children brought their favorite books and we interviewed as a whole group. We asked what do you

like about this story, why is it your favorite part? Can you tell the story? (use who, where, why prompts as needed)

Formative assessment:

Suggestions for formative experiences and group or individual assessments:

- Retell a familiar story orally using memory, pictures or props using the special language and repeating lines, including key characters.
- Dramatize, mime, use puppets etc. to tell a story in proper sequence with key events—beginning, middle and end.
- Contribute to a group project: class discussion, compare and contrast, create a graphic organizer, poster, or other product.
- Create art work representing the elements of the story structure, story wall, props for a play, costume design etc.
- Draw/write a journal response reflecting feelings, thoughts, connections, understanding of point of view.
- Reflect on a performance or other story-telling event with personal interpretations.
- Create a new variation of a story by changing the characters or events.

Assessment is one of the essential principles of differentiation and it required to be tightly aligned with “objectives” and focuses on understanding. Due to the nature of the PYP planner, teachers plan assessment tasks with regard to the learning objectives.

Stage 4. How best might we learn?

This section is for the inquiry-based learning engagements. Teachers write the transdisciplinary activities under this section. As can be seen from the example before, all activities will be done during a unit written here by the teachers are not structured and not defined in detail. There are some opportunities for differentiation, but they are not written in detail. As one teacher (K-T6) stated during the interviews “It is impossible to plan differentiation in advance, it might be surprising how young children’s

learning is". Teachers define learning engagements in a general manner here and then they use a weekly plan to define all activities in detail. According to the researcher, all of the learning engagements given below can be differentiated if there will be a need for.

- Name Game – Pass the ball and find out each other's names and information about each other
- Students draw friendship pictures to go on a Bulletin Board of Friendship Tree
- Students art work a self-portrait.
- Teacher will allow space and time for dramatic play and the acting out of teacher-initiated experiences
- Buddy drawing
- Write a Friends poem or song
- Role playing on different ways for children to solve conflicts, meet new friends, etc.
- The teacher will provide a variety of media for expressing feelings about friendship
- Create a friendship collage by looking through pictures in books and magazines for picture of people acting like friends
- The teacher will initiate small group discussions about friends and why we need them.
- What I like doing our friends -- books, songs, videos
- Create a card for a friend
- Videos from BrainPop
- Friends' portraits during a buddy interview (Students will be paired and then asked to ask each other questions about their likes and dislikes).
- Role playing on different ways for children to solve conflicts, meet new friends, etc.
- Discuss and act out what it means to be principled & caring in a small group and then share in large group (also in the circle time).
- Draw a picture of being caring and pick out pictures of people being caring.
- Friends Do/Don't Card Game where kids chose cards representing both sides of behavior.

- Create a hand print (trace each other's hand, cut/FMS), chain together to form a garland to frame Unit Bulletin Board.
- Work with a partner to trace their foot, color, name and but, then paste to create a graph on Small, Medium, Big sizes of friends, talked about differences in shoe sizes.
- Read a book "It's not fair?" and had a class discussion on mind map on the different behaviors, appropriate vs not and the cause/effect, etc.

Stage 5. What resources need to be gathered?

The primary and secondary resources that will be used during the unit of inquiry are written under this section. Below is an example written by the teachers including many different types of books.

'Everybody's best friend' by Larry Dane Brimmer, 'The Dearest Little Mouse in the World' by Antonie Schneider, 'Will I have a friend?' By Miriam Cohen Best Friends by Nicole Marie Draz, The Rainbow fish by Marcus Pfister, Arkadasim ve Ben by Mercer Mayer, A pocket for corduroy by Don Tressman, Clifford by Norman Bridwell, Biscuit finds a friend by Alyssa Satin Capucilli - Rainbow , Big Al, Arkadaşlık, How to be a friend, Chrysanthemum, A Special Friend Indeed, My friend, All kinds of people, Fox makes friends. 'Friends' by Helme Heine , 'My Best Friend'; It's not Fair' by Brainpop Friendship video
Field Trip – Botanik Park , a sensory walk

The first five sections are completed before the unit starts; sections 6-9 are for the reflective thinking of teachers; these sections are completed after the unit finishes.

Stage 6. To what extent did we achieve our purpose?

Since the overall aim of that unit is to make students understand the central idea, this section is for reflecting on students' understandings of the central idea. The example below is taken from a completed unit planner of kindergarten. There are some notes on differentiated activities in this section, but not in detail.

Assess the outcome of the inquiry by providing evidence of students' understanding of the central idea. The reflections of all teachers involved in the planning and teaching of the inquiry should be included.

Students were successful in their groups telling stories orally, composing stories, illustrating stories and completing a book and participating in the final performance.

All agree to scratch the inquiry line about stories around the world—this was too abstract.

How you could improve on the assessment task(s) so that you would have a more accurate picture of each student's understanding of the central idea.

Opportunities for observation and collection of work were very satisfactory.

The integrated arts performance was the culmination demonstrating children's abilities to coordinate roles.

Parents were invited to help children write stories about our class pets, to come to school to read a favorite book, and by helping to support our performance with needed items and rehearsal assistance.

What was the evidence that connections were made between the central idea and the transdisciplinary theme?

Teachers felt that students were inspired to stretch their wings with drama, music, dance and movement, telling stories, creating new original stories from real life and their imaginations.

Stage 7. To what extent did we include the elements of the PYP?

In this section, teachers assess the unit of inquiry in terms of PYP elements. That is, the teachers give examples about the learning engagements that develop understanding of the concepts, demonstrate the learning and application of particular transdisciplinary skills, and develop particular attributes of the learner profiles and attitudes. In the example of prekindergarten's unit planner given below, teachers mentioned about a differentiated activity that they did in this unit and its relation with the developed skills.

What were the learning experiences that enabled students to: develop an understanding of the concepts identified in "What do we want to learn?"

Causation:

Field Trips: They used observational skills to realize similarities and differences of different transportation vehicles and understanding reasons differences among them.

Sorting and grouping activities: Children worked on similarities and differences of land, water, and air transportation within each group.

Self-Management Skills

Safety: Engaging in personal behavior which avoids placing oneself or others in danger or at risk both in transportation related situations and in general. Seatbelts and fire drill practices.

Communication Skills

Nonverbal communication: Reading environmental signs, traffic signs, and safety visuals in the classroom and immediate environment.

Thinking Skills

Analysis,: Seeing relationships and unique characteristics of vehicles with histograms and comparisons.

Learner Profile

Thinker: They exercise initiative in applying thinking skills critically and creatively to make sound decisions and to solve complex problems.

Stage 8. What student-initiated inquiries arose from the learning?

During the units, the teachers record the questions coming from the students and student-initiated inquiries. These are written under this section.

Student questions:

- Who can be a friend? Can my mother/father/pet be my friend?
- How can we approach a new friend? What can I say to this new friend so he/she will be my friend?
- Who is the best friend?
- Can I have one friend?
- What if I don't want to play with my friend?
- How can you talk with your friend if he is far away?
- If my friend hurts me what can I do?

Teacher questions/provocations

How do we act with friends?

What are nice words we can use with friends?

How do we share our feelings with our friends?

Why can't we call friends names? How about if it's just a joke?

Is another student from another class also a friend? But he/she is not a friend because we are not in the same class.

If we are different in the way we look (eg. Blond vs black hair), why should I be his/her friend?

What student-initiated actions arose from the learning?

Record student-initiated actions taken by individuals or groups showing their ability to reflect, to choose and to act.

I noticed children to communicate to each other instead of complaining.

He/She is my friend because he/she gave me this drawing/item.

Kids started to share their materials with friends. Kids started to talk about their feelings with their friends; look for each other in the playground.

New friends' names have started to appear on children's pictures during the unit.

Some Parents mentioned noticing their children making friends outside in the park.

Stage 9. Teacher notes

All teachers' notes about the unit of inquiry are written here. As seen from the prekindergarten's example below, teachers wrote some notes for the next year. There is not any note on differentiated instruction here in this section.

- Teachers brought of that the unit needed more time to run its process smoothly. Due to the Pre-K starting up late and the routines starting late as well, the PYP unit unfortunately had to be integrated in the program later than the planned beginning time. Because of this, the given time got shorter and some topics, like "home" didn't have enough time to research and fully work.
- Also because of this unit being the first unit and starting late, teachers feel that English vocabulary for the unit wasn't focused on enough. It could have been planned out better.
- The timing of the unit, it being the first unit, was found very appropriate. Teachers say that the unit went along with the children's natural adaptation process.
- Teacher recommends that parents should be more involved in the family part of the unit.

The teachers stated that they do not use a specific planner for differentiated activities. They write all learning engagements on the PYP unit

planner. Moreover, also in partners they write what is to be done in the following week on their planning notebooks, but these are weekly plans according to the schedule consisting of all activities that will be done, not a detailed differentiation plan. "Me and my partner, we do not have a planner for differentiated activities. We usually think of an activity during planning and take notes about it for ourselves" said PK-T5. Below is an example from prekindergarten teachers' weekly plan on transportation unit. According to this plan, children will be divided into two groups, one group will have more teacher support, and the other group will work independently. There is not any planning notes what will be differentiated and according to what students will be grouped in this activity.

(Small group work) — WEDNESDAY-FRIDAY

Teacher Directed: Talk about the different types of vehicles that go on or under the water. Show the pictures of each type and discuss their uses. While making boats out of fruits talk about their opinion about the preference of the vehicles on or under water.

Apple Boat

Children work alone- minor teacher help. Core the apple, do not slice. Slice the apple into 4 quarters. Slice cheese into 4 triangles.

Have children place a pretzel stick into the apple quarter. Wrap a cheese triangle around the top of the pretzel for a sail.

Banana Boats

Help children to cut the banana in half both lengthwise and widthwise. They should spoon yogurt into their cup and then place 2 pieces of banana on each side of the cup.

In accordance with this, K-T6 also stated that “when planning, we think about our students and do some modifications to the activity to be differentiated.”

The participant teachers agreed on the fact that they have challenges regarding how to plan differentiated activities. “The planning for differentiated activities is a mysterious thing for me. We have learned how to do it in the classroom from books or seminars, but we did not learn how to plan effectively.”

The teachers believe that they know what differentiation in practice is, but what they’re doing might not be the same with what they had planned, since they do not use a detailed planner. PK-T7 stated that “I know that I need to differentiate, but I do not know where to start the planning of it...Should I think of what to differentiate or the students first?”

K-T9 gave an example about this: “Yes, we know how to plan a unit, because we have a guide and we follow it; but we do not know what to do with differentiated activities.”

For some teachers, if a teacher has more experience, she or he will learn how to overcome this challenge.

Because I know and have done differentiation before this school, I have a portfolio in which I keep good examples; I have a starred web sites list on my browser where I put the good readings or samples on. Even I do not use a planner; I have such experiences to be used later. (PK-T8)

4.4 Summary

To sum up, in this chapter, the findings gathered from 19 participants on early childhood teachers’ views, practices, and challenges with differentiated instruction were reported. In order to represent the participants’ feedback about the topic, detailed descriptions were provided.

The findings from the interviews, observations, and documents were analyzed and described through comparing and integrating them. The findings of the study indicated that early childhood teachers use differentiation as their teaching pedagogy and have a positive attitude towards differentiated instruction. They believed that through differentiation students can reach their highest potentials. Having experience on differentiation has both positive and negative effects on teachers' views. For example, the teachers who have more experience in differentiation can show what they define in place in their classrooms, but at the same time they define more challenges compared to less experienced teachers. Being a IB-PYP teachers and using differentiation as a required practice of the programme become a force for teachers to implement differentiation.

CHAPTER V

DISCUSSION

The purpose of this study was to investigate IB-PYP early childhood teachers' views about and practices with differentiated instruction. In this chapter, the major results of the study are discussed and then the implications and recommendations for future research are presented in accordance with the three research questions and the three main themes: views, practices, and challenges.

5.1. Discussion

The results of this qualitative case study indicated that early childhood teachers in IB-PYP have a positive attitude toward differentiated instruction in early childhood education. Most of the teachers thought that a teacher can ensure that each child in the class can learn in a way, if this way is chosen correctly by the teachers; some teachers also believed that children may not learn as teachers expected—they may need extra support for learning.

The roots of differentiated instruction start with diverse classrooms in which children's diversity is considered by the teachers (Bearne, 1996). Supporting this idea, all teachers believed that students in their classrooms are different from each other and this enriches their classroom environment. This was one of the important findings of this study, since teachers' initial thoughts would affect their views on and practices with differentiated instruction. They mostly relate this difference with the readiness of children, and what they mean by readiness is mostly the skills that they have

acquired. However, teachers should consider not only the readiness of their students, but also interest and learning profile. Otherwise, differentiation would only be done for *growth*, not for effectiveness or motivation which young children need for learning..

Some of the teachers believed that the student variance comes from heritage and some teachers relate this difference to the family backgrounds of the children. Early childhood classes are the first educational intuitions for children after spending time with their families at home. Thus, it can be concluded that most teachers believe the input of families on their children has an impact on the children's school life. Furthermore, the teachers also emphasized that the children's experience in early childhood education also has an impact on their readiness and that this is an important factor in terms of children in a class having different levels of capabilities.

The findings of this study indicated that early childhood teachers' self-definitions of differentiated instruction include the variety in the classroom and were mostly affected by the teachers' own experiences in teaching in the IB's Primary Years Programme, not from their graduate or undergraduate studies. Teachers mainly mentioned tailoring or changing the way of teaching for children according to their different needs. These are ways of how differentiated instruction is being implemented in classrooms. But there are more strategies that can be used to differentiate. Furthermore, some teachers saw differentiation from the students' perspective and defined it as being sensitive or respectful to children's differences.

In addition to these, teachers also emphasized the importance of grouping in differentiated instruction. This is directly connected with the literature in this field, since grouping is one of the most significant components of differentiated instruction. Students are grouped according to their similarities to fulfill the same task, or mixed groups are formed to support each other (Tomlinson & McTighe, 2006). It was seen that teachers

need to learn more about grouping strategies and how to use formative assessment data for grouping.

While defining differentiation, a few teachers mentioned the changes that they make or the school makes. They expressed that through differentiation, teachers make significant changes to their teaching and learning routines in the classrooms; differentiation requires teachers to change their thinking about how children learn. This idea is consistent with the fact that they had been educating children before this program in a different way, and now they have changed their practices through IB-PYP. Tomlinson, Brimijoin, and Narvaez (2008) mentioned in their book, "*The differentiated school: Making revolutionary changes in teaching and learning*," which is the result of a longitudinal study of two schools starting to implement differentiation, the changes through differentiation and concluded that it requires changes in the school's leadership structure, professional development activities, and classroom practices.

A misconception about differentiated instruction was raised during one interview; a teacher believed that using variety of teaching strategies but for the whole class was also a means to achieve differentiation. However, differentiated instruction is a systematic approach in which teachers decide on the different level of tasks for the students who are in groups (Tomlinson, 1999). Of course, whole class activities are also a part of differentiation, but if all children are doing the same activities one by one in different stations, it shows that student variance is not being considered at all.

The teachers who had less experience in teaching and hence in differentiation were not able to define differentiated instruction in a clear way, since they believed that they needed more practice on it. Their reflection on their practices through this study, help them to think about new actions for professional development. It shows that when teachers have more experience in doing differentiation, they are able to express their practices and their implications on children. They believed that any teaching

skill or pedagogy, including differentiation, develops through time and experience. This finding was consistent with the literature; some researchers found that teachers in their first years of teaching or in pre-service find it difficult to focus on differentiating instruction to meet student needs (Lidstone & Hollingsworth, 1992; Tomlinson et al., 1994). It can be concluded that the teachers who are not sure about the definition have less experience in their profession and in the IB-PYP. Their experience while working with experienced partners or supporting new teachers with a well-established mentoring system in the school would be beneficial for new teachers to learn.

In order to understand the participant teachers' views toward differentiated instruction, teachers were also requested to compare it with other traditional approaches to education. The findings showed that teachers find differentiated instruction different from traditional approaches, and the answers of the teachers were turned into statements.

- DI is more children centered—that is, children's initiation for teaching and learning is considered.
- DI supports children's variety and responds to the variance.
- In DI, children are more engaged in the learning process, so it increases student motivation.
- DI requires more teacher effort in planning and implementing.
- In DI, the content is flexible and can be shaped according to students' needs.
- In DI, the teachers' role is different in terms of being a facilitator for student learning.
- In DI, the process and assessing the process is more important than the end result.

The findings showed that IB-PYP early childhood teachers believe in the benefits of differentiated instruction for children, thus they agree with

the idea that differentiation has a positive effect on children's success. The stated benefits come from the teachers' lived experiences and observations and include social-emotional development, performance of skills, and understanding of and involvement in school.

The literature showed that a teacher's background education affects his or her views and implications on differentiated instruction (Hollingsworth & Lidstone, 1992; Tomlinson et al., 1994). With regard to this, teachers' educational backgrounds were investigated, and the findings showed that although all of the teachers have at least a bachelor's degree in education, only two of them had a session on DI during their undergraduate education. However, Brimijoin (2002) found that if university instructors model or teach how to differentiate, novice teachers would be able to manage differentiation better. Thus, differentiated instruction such as the pedagogy of teaching could be a part of educational models or approaches in courses in universities, since differentiation can be adapted to any modern educational system or program.

Also, Brimijoin (2002) stated that if the teachers who have less experience with differentiation work or cooperate with experienced colleagues, this will also help them to better implement differentiation. In accordance with this, the findings showed that teachers gain in-school training from experienced colleagues or leaders about differentiated instruction. The school's way of matching teachers as partners to teach a class is based on mixing them according to their experience with the IB-PYP. Getting training from experienced teachers and being partners according to mixed experience level of teachers might be considered as helping less experienced teachers through mentors. In schools that want to implement differentiated instruction, these two practices would be an effective way for the teachers' professional development. Moreover, a peer-observation system could be established in the school, and teachers could observe each other's classrooms to see different examples and adapt them accordingly.

Supporting new teachers and helping them to have a growth mindset towards differentiation would be the core for school leaders who want to establish differentiation.

The findings showed that teachers have opportunities for professional development, including in-school seminars and workshops, IB official workshops, and other trainings on early childhood education. The teachers believed that attending professional development activities helped them improve their teaching practices in the classroom. Supporting this idea of the teachers, Paben (2002) stated that educators' professional learning is most effective when it is integrated with school objectives and the educators' performance expectations. Since most of the teachers do not have background information about differentiation from their teacher education, developing a sustainable professional development system for teachers and administrators in terms of training, professional reading, mentoring would create effective implementation of the approach. In addition to this, the findings also showed that although most of the teachers learned differentiation through the trainings in this school with the IB-PYP, they need more specific training on differentiated instruction in early childhood education. Ayers (2008) conducted a study in two rural elementary schools and found that the effect of teacher attitudes on differentiated instruction was directly affected by continuous staff learning and growth, which builds the capacity to support high student achievement. Thus, the participants agreed that the professional development activities that they do or attend are quite beneficial for their teaching in the classrooms and should be increased and should be grade level specific. Furthermore, apart from the trainings that teachers attend and receive, they believed that obtaining and using resources on differentiated instruction also enhance their views on and practices with differentiated instruction.

The teachers identified the qualifications of an early childhood teacher who implements differentiation; these findings are derived from their

reflections on their practices. The findings from this theme revealed 11 qualities of an early childhood teacher and they have been summarized and rewritten as statements by the researcher below.

- Teachers should collaborate with colleagues and plan and share the best practices in differentiation.
- Teachers should have in-depth content knowledge on early childhood education and differentiated instruction.
- Teachers should think creatively to be able to respond student variance in the classrooms.
- Teachers should have good communication skills in order to interact with students effectively and inform parents about the process.
- Teachers should be good observers in order to collect assessment data from students to inform their teaching.
- Teachers should be flexible in terms of thinking, doing, and decision making.
- Teachers should be lifelong learners in order to develop their teaching practices.
- Teachers should be positively motivated toward reaching each child's potential and responding to children's needs.
- Teachers should have good organization skills with regards to classroom management.
- Teachers should reflect on their practices in order to enhance their practices.
- Teachers should be risk takers and not hesitate to try new strategies and widen their perspective towards finding solutions for student variance.
- Teachers should use time effectively while planning and implementing differentiation.

Besides teachers' views on differentiated instruction, this study revealed valuable information about how IB-PYP early childhood teachers' views are in placed through their practices.

As indicated in Tomlinson's map of differentiated instruction (2010), grouping is one of the essential elements of differentiated instruction. Teachers also mentioned the significance of grouping in early childhood classrooms while defining differentiated instruction. In order to get more in-depth information on their practices of grouping, teachers' answers and practices were analyzed, and it was seen that they use flexible groupings almost every day in their classrooms.

The findings showed that as young children are social learners, making groups by teachers or by students on their own is natural in early childhood classrooms. Also, they believed in the effectiveness of group work in children's learning. Supporting this idea, according to Gibson and Hasbrouck (2008), grouping is an essential part of differentiated instruction, and it helps encourage the active involvement of students, asking more questions and getting feedback.

Tomlinson (2010) stated that grouping should be flexible, and children's groups should be changed when needed. In accordance with this, teachers change the groups according to their aim of differentiation. For example, in a math activity a child can be in a group, but the same child can be in another group for a reading activity. It was found that teachers usually put children that are of a similar level of ability, a similar level of interest, or have a similar learning profile to work together. However, the theory of differentiated instruction supports mixed groups, too. This is one of the reasons why the grouping is called flexible. A few teachers used mixed ability groups in their practices, and they are mostly foreign language teachers. The mixed ability groups were those which are very obviously working on "speaking a language," and this might be the reason for teachers prefer mixed groups.

As mentioned before, individual differences of children and their variety were emphasized by the teachers many times during the data collection period. And the findings show that they drew attention to these differences and their effects on teaching and learning. As Tomlinson (2006) stated, in differentiated classrooms students' interests, readiness, and learning styles may differ, and this diversity affects how teachers teach.

The findings of this study on the idea that the "learning profile includes the ways a child learns best" revealed that early childhood teachers in IB-PYP believe in the effects of learning profiles on their teaching and children's learning. This is supported by the idea of Tomlinson (2001) that if teachers understand students' differences in learning, the common needs of the students will be better addressed.

The findings showed teachers also mentioned that young children's learning profiles are dynamic and can even change across different subjects. Supporting this idea, Tomlinson (2001) also stated that individual learners are rapidly growing and changing, and the learner profile needs to be dynamic. From the idea that learner profile might be affected from students' gender, culture, learning style and intelligence preference; teachers need to assess especially learning style frequently during learning process in order to assign respectful tasks to individual students. That is it is recommended to the teachers not to use single instrument that is applied single time to define learning styles of children. A child might need to *listen* from someone while learning a new concept on the other hand, the same child might need *visuals* to use new learning in different conditions. In such a case we cannot label this child as a visual or auditory learner; learning style may change according to subject or lesson. Thus the teachers should be offering different options to the students in order to make them work on the one that really suitable to that child's learning style.

Furthermore, according to the literature, learning style, intelligence preference, gender, and culture are the main indicators of the learning

profile of students. The findings showed that teachers mainly value and address students' learning styles in terms of differentiating by learning profile. In order to address children's different learning styles, teachers use a variety of teaching methods and strategies so that children can learn better. Orfield (2001) also stated that during the implementation of differentiated instruction, learning styles should be the focal point in order to create a democratic environment for children. In order to define the learning styles of children, the teachers mainly used Neil Fleming's VAK (Visual, Auditory, and Kinesthetic) model. These findings might be directly linked to the idea that Neil Fleming's VAK is the most commonly used learning style descriptor (Cerbin, 2011). However, there are different approaches that can be used to refer students' learning style, teachers need to consider those, too.

According to the findings of this study, gender was the second most mentioned learning profile aspect for children in differentiated instruction. How gender affects their learning preferences was significant to the teachers. Tomlinson (2001) also stated that there are learning patterns for each gender, and these patterns influence how children learn. The significant point for gender that should be considered is to use it as an indicator for making both homogenous and heterogeneous groupings and also considering gender needs equally while planning tasks.

It was seen that students' personal and family backgrounds are also significant for some early childhood teachers in terms of differentiated instruction. This idea was linked to the "culture" aspect of learning profiles. Tomlinson (2001) emphasized that there is not a specific way to emphasize cultural aspects; they should be used to create a flexible classroom environment. Especially in today's diverse cultural backgrounds of people would affect their kids, too. This might cause bigger difference in public schools in Turkey, since in public schools students are coming from more diverse families in terms of socio status.

In terms of learning profile as defined in the literature, teachers use learning style, gender, and culture while deciding how children learn best. None of the teachers mentioned intelligences during the data collection period. Furthermore, the findings of the study showed that teachers experience confusion over learning styles and intelligences; some teachers believed that multiple intelligences is another type of learning styles.

The findings of this study indicated that teachers use observation in order to decide on the learning profiles of children. On the other hand, they emphasized the need for more information about how to define the learning profiles of children. There is a need for more resources in this regard that could be implemented for young children.

The findings of this study showed that teachers see interest as children's preference, and the teachers consider student interests. Supporting this idea, the literature also shows that since children come from different backgrounds, it is unlikely for them to have the same interests, thus educators need to address these varied interests (Tomlinson, 2001). For this, learning environments should be enriched to refer different interest areas. Also while curriculum is being designed, the balance between different subject areas should be established and instead of being topic/fact based curriculum, it should be more skill and concept based. As in IB-PYP, instead of working on facts, if the students are given chance to work on concepts and big ideas, they can transfer these to their interest ideas. For example, working on "polar bears and polar" might not be enough appealing for all children in the classroom. If they work on the conceptual big idea of "living things and habitats", children would find personal connections and interests areas on it. Turkish National ECE Program also supports this area while not having pre-defined units and having skill based learning objectives- instead of topic based.

It was observed that teachers commonly give different options to children in order to allow them to choose their own. The findings showed

that the teachers mostly use interests during the individually chosen play times both in pre-kindergarten and kindergarten. According to the early childhood teachers, when the activities are planned considering student interest and giving chance to children to choose, the children's engagement increases toward school and learning. This is in line with Renninger's (1990) idea that there is a short- and long-term positive effect when students are interested in their work in the school.

With regard to the readiness of children, the findings showed that it is the most used individual difference for the early childhood teachers in IB-PYP. Readiness in the literature is defined as a student's current level of specified knowledge, understanding, and skills (Edwards, Carr, & Siegel, 2001). Skills including motor, cognitive, and self-care were the first aspect for the early childhood teachers when they think of readiness. This is related to the fact that IB-PYP is a curriculum framework in which skills are the one of the essential element of the curriculum (IBO, 2009). Furthermore, understanding on a topic or subject is also mentioned by the early childhood teachers but not as much as skills—the reason for this is they think early childhood education is the first step for schooling, and the students will gain much understanding and knowledge through time.

The findings showed that the early childhood teachers mostly used observation and student work samples for assessing their readiness, and through assessment they find the chance to both gain in-depth information about the child and also inform their teaching and learning. This idea is also supported by the literature. Carr (2001) mentioned that authentic assessment in which children are asked to perform a real-world task in order to show skills, knowledge, and understanding helps educators in describing, documenting, discussing, and deciding on children's learning.

Regarding teachers practices with what they differentiate, the findings showed that teachers place more emphasis on some areas according to the needs of the early childhood period.

The findings of the study indicated that content constitutes the learning objectives, skills, and concepts that are targeted to be gained by the children in that grade level. Supporting this idea, Tomlinson (2001) also define content as the input of teaching and learning that is what educators teach. Furthermore, it was seen that early childhood teachers place importance upon developmentally appropriate content for their students.

With regards to how the early childhood teachers differentiate the content, they usually adapt the objectives according to the children's needs. That is, if a child is not able to do something, they place that child one step behind and try to make his or her readiness reach the further step. As Tomlinson (2001) defined the two ways of differentiating content, teachers are usually "adapting or modifying how we give students access."

Product is another aspect which teachers differentiate and consider as a form of assessment. The findings showed that teachers see products as outcomes of the learning process and evidence of student learning. Supporting this idea, Tomlinson and Imbeau (2010) define product as how educators expect the students to demonstrate what they have learned. From the findings, teachers give opportunities to students to show their learning on a given task. This enables students to be more flexible and comfortable with their work.

Teachers define process as learning engagements, and similarly Tomlinson (2001) stated that in the language of school, process is activities. The findings of this study showed that early childhood teachers mostly prefer process to be differentiated since they find it easier to plan and implement in the classroom, and also they believed that students are more engaged in the activities that they match with. Furthermore, it was found that while differentiating the process, teachers mostly prefer that the learning profiles of children be considered.

Similar to process, the findings of this study showed that learning environment is another frequently differentiated aspect for early childhood

classrooms. It might be because of the fact that early childhood classrooms are more flexible and have many materials to address the different needs of young children. Teachers stated some indicators for a differentiated early childhood classroom, and these have been grouped and summarized by the researcher below.

The physical environment of a differentiated EC classroom:

- Variety of student work displayed on the walls
- Authentic student work
- Different work areas/corners
- Rich materials including manipulatives, toys, and books

Affective environment of a differentiated EC classroom:

- Being respectful to each other
- Being tolerant to those who are behind
- Appreciating individual success
- A feeling of safety and supportiveness

In order to offer effective implications for the field, one of the aims of this study was to gain in-depth information about early childhood teachers' challenges in implementing differentiated instruction. The findings showed that they do indeed experience challenges in some aspects of DI in early childhood education.

Although teachers have had previous experiences in other schools, they learn more about differentiated instruction in school than through their experiences. This is an outcome of working in an IB-PYP world school, since using differentiated instruction is a part of IB standards and a requirement (IBO, 2014). Furthermore, the teachers also emphasized that they did not get enough training on DI during their undergraduate education in universities. Supporting this, Holloway (2000) also stated that reports show

that teachers are seldom prepared to differentiate instruction in their graduate education programs. Also, Tomlinson and Allan (2000) found that “education professors, university supervisors, and master teachers rarely encouraged them to actively differentiate instruction” (p. 1). Although the early childhood teachers have positive attitudes towards differentiation, some researchers found that if a teacher resists implementing differentiation, it might be because of a lack of training and administrative professional development on DI (Edwards, Carr, & Siegel, 2006). Thus, in order to effectively implement the approach, designated school teams should be well trained on differentiated instruction.

The findings of this research showed that classroom management is another challenge for the early childhood teachers regarding differentiated instruction. The number of teachers and collaborative work in the classroom affects better implementation of differentiation in an early childhood classroom. Due to the need for special attention for young children, differentiation requires more attention since the children are grouped in certain ways and working differently in these groups. As Villa et al. (2004) stated, co-teaching implications help teachers to be able to respond to the broad range of student needs better. With regards to teacher number, teacher/student ratio was also mentioned as a challenge for teachers. The findings of this study also showed that each teacher needs to have an acceptable number of students in order to effectively manage the classroom in early childhood education. The literature also shows that in order to enable a more individualized focus on students and enrich the instructional implications, the teacher/student ratio should be increased (Santamaria & Thousand, 2004).

Giving clear directions and using simple language by teachers for children’s understanding in differentiated learning engagements is another challenge experienced according to the findings of this study. Especially the children whose mother tongue is different from the instruction language

need more attention in terms of directions. Calleja (2005) also mentioned that young children need clearly presented expectations by the teacher in differentiated activities.

The findings of this study also indicated that early childhood teachers experience some challenges in terms of time management while implementing differentiated instruction. The literature also confirms that time is one of the central reasons that teachers have trouble while implementing differentiated instruction (Tomlinson et al., 2008). Although it was not found directly in this study but rather was mentioned by the teacher in terms of planning, other studies have shown that teachers also face a challenge in finding time for assessing, planning, and designing for differentiation (Corley, 2005).

Although parents are a significant part of early childhood education, it was found during this study that the misconceptions of parents regarding differentiated instruction present a challenge for the teachers. It is important to inform parents about the approach and how it is implemented in the classroom. Thus, parents would be trained and included in the teaching and learning process of differentiation. Also, it is suggested that teachers consult parents for defining children's individual differences and preferences.

The final challenge that was revealed in the findings of this study relates to planning. With regards to written curriculum documents, teachers use an annual overview, unit plans, and weekly activity plans, but they do not use a specific planner for differentiation. It was seen that the teachers do not know where to start planning for differentiation. Tomlinson and Allan (2000) stated that differentiated instruction in any classroom can be a challenge without the right planning. It is obvious that when teachers differentiate without right planning, they lose the essence of their objectives. Through the findings of this study and review of related literature, a guideline for planning the differentiated activities has been developed by the researcher. This guideline aimed to be used while thinking, planning and

reflecting on differentiation by early childhood teachers. The researcher believes that starting point for differentiation will reflect the end. If the teachers start from keeping students in mind and developing activities purposefully towards their needs, then the effectiveness would be inevitable.

Guideline suggestion for planning differentiated instruction in ECE:

1. Grade level/age group of students : _____
2. Focus subject or subjects of the activity : _____
3. Estimated duration of the activity : _____
4. Define the objective of the learning engagement in three aspects:
 - Knowledge: What will students know?
 - Understanding: What will the students understand?
 - Skills: What will the students able to do?

5. Define the assessment tasks. Formative and summative (if needed)

Tip: Which tools and strategies will be used for ongoing learning?

6. Define the possible ways to assess the students' prior knowledge, understanding or skills.

Tip: What is the pre-assessment task for this lesson?

7. What do your students need for these objectives? Choose one or more.

- Motivation for engagement (Interest)
- Growth (Readiness)
- Efficiency (Learning profile)

Tip: This step should be considered together with step 8.

8. Student diversity:

How do students differ in that area you have chosen in step 7?

How many groups will you have?

What will be the grouping strategy? Homogenous Mixed

Tip: Fill this step in accordance with the given information on step 7.

9. Through what will the lesson be differentiated?

- Content (What the students will learn?)
- Process (How the students will learn?)
- Product (How the students will show what they have learned?)
- Learning Environment (Where the students will learn?)
- Affect (How do their feelings and emotions affect their learning?)

Tip: This step should be thought together with step 6.

10. Define the beginning of the activity.

Tip: How the teacher will start the lesson? What will be the initiations by teacher and students? How the content will be introduced?

11. Define the tasks that the groups/individuals/pairs will be doing.

Tip: What will be the differentiated learning engagements for children?

12. Define the closure of activity.

Tip: How the lesson will be ended?

13. Define the resources and materials of the activity.

Tip: Which primary and secondary resources will be used for this learning engagement?

14. Reflections:

Tip: Assess the outcomes of this activity. What would be changed for the next time?

5.2. Potential Implications of the Study

As mentioned in the growth statistics of the IB for Primary Years Programme, it is obvious that the International Baccalaureate Primary Years Programme is becoming popular among primary schools all over the world. When the program was first established in 1997, only six schools became authorized PYP schools in the world, and then 10 years later in 2007 the number of authorized PYP schools was up to 92; as of September 2014, there are 990 authorized IB-PYP schools in the world (IBO, 2014). It is obvious that, investigating an insight study into to the programme's one of the significant aspects will provide valuable information for prospective schools, school leaders, and school reformers about the implementation and possible outcomes of the program. Although this study focuses only on differentiation, which is a part of PYP's educational pedagogy, it provides information on what is taught, how is taught and how is assessed, since differentiation is interwoven with all aspects of curriculum. Moreover, beyond providing information to school leaders and reformers, the findings could suggest best practices for differentiated instruction for educators whether their school is an IB school or not. In addition, schools exploring the implementation of IB-PYP and differentiated instruction would have valuable information to share with teachers, parents, administrators, and school stakeholders about the benefits of reform as related to the PYP.

There are valuable studies which have focused on differentiated instruction in elementary and higher grades. However, there is limited information on early childhood teacher's views and practices in terms of what is important about education, the need for individual development for all students, and differentiating instruction. Differentiated instruction can be seen as a complex process since planning and implementing it in order to meet the needs of all students in a classroom might be challenging for some early childhood teachers. But it is important to remember that each child is an individual with his or her own needs, interests, and capabilities. In order

to be committed to achieving each child's own potential and success for all children, such challenges can be overcome, and through the support from local authorities, school administrators, and parents, teachers can effectively implement differentiated instruction.

Since the study has been conducted in Turkey, Turkish ECE program and its essential elements were compared to the general principles of differentiated instruction in order to provide feedback for the field. In chapter two, general characteristics of the program were presented with the conformity with differentiated instruction. Although differentiation by itself is not mentioned or addressed throughout the program, the program pedagogy is suitable for implementing general principles of differentiated instruction.

The national program defines itself as child centered and flexible in terms of being adapted to different needs of students. Also, the defined learning objectives are for 36 to 72 months old children. Namely, there is an age range for the objectives and while teachers planning they can choose objectives and their descriptors according to their children's needs. Also, if needed teachers have opportunity to add or change some objectives (MEB, 2013). As mentioned throughout the dissertation, for a good practice of differentiation high quality curriculum becomes a requirement. In order to establish this, teachers should define their objectives well in terms of skills, understanding and knowledge using the defined objectives. Also, considering zone of proximal development of children, teachers need to plan towards teaching up instead of keeping children at their level of accomplishing by themselves.

Furthermore, this study has been done in a private IB World School, since all PYP schools are private schools in Turkey. However, this does not mean that differentiated instruction can only be implemented in this type of schools. That is, it is not a necessity to be a private or IB world school to use differentiation as pedagogy for teaching and learning. Especially, in this changing world, student variance is becoming more obvious in all grade

levels and all children deserve being respected to their needs and differences. Differentiation does not require any specific resource, material or book for children. Even with limited resources, teachers can create a learning environment with growth mindset and high teacher-student interaction in order to become a *learning community* and create the base for differentiation.

In order to give children respectful tasks teachers can use formative assessment data and plan accordingly. It is important to provide a quality curriculum in terms of well defines objectives which are developmentally appropriate to that class and well established scope and sequence of the year. Meanwhile, having assessment tied to these objectives is also significant. In the Turkish national EC program, assessment is defined for the teachers and some examples are shared. Teachers can increase assessment tools and strategies aligning with the program. Furthermore, teachers are suggested not to prepare an annual plan in the program, instead they are asked to define learning objectives for the upcoming month in advance. This will help teachers plan respectful tasks for children in dynamic curriculum. In addition to this, teachers may also asked to use more flexible daily plans and add differentiation tasks to these daily plans. In order to do this, the plan format teachers may add some other details to their daily plan or the daily plan format might need to be changed. In the program, small or large grouping of children is mentioned but there is not any mention about flexible grouping or how to do the groupings.

It can be concluded that differentiation can be integrated to Turkish National Early Childhood program. Proper professional support to early childhood teachers by trainings, resources and mentoring activities may create a significant difference for classrooms.

5.3. Recommendations

The researcher would like to put forth certain suggestions based on the results of this study. This study was conducted with only one school's early childhood teachers. Replication of this study might be done with different teacher groups in order to see a broader range of early childhood teachers' views about and practices with differentiation. Also, this study was done in an international school in which half of the teachers are not from Turkey and had prior differentiation experiences in other schools outside Turkey. In order to see Turkish teachers' views about and practices with differentiation, another study might be conducted in national schools.

Furthermore, since most of the participants of this study were quite experienced teachers in the PYP and differentiation, another study with freshman teachers could be conducted to see the challenges they face while implementing differentiated instruction in early childhood classrooms.

In addition to these, although this study used different data sources to get in-depth information, interviews were the main data source. Thus, more observational data could be gathered through long-term classroom observations to have a broader picture of the differentiated instruction practices of early childhood teachers and their effects on children's

Finally, for this study, an authorized IB-PYP school was chosen for investigation into the research questions since differentiated instruction is the core pedagogy for the International Baccalaureate Primary Years Programme, and schools which are authorized to implement that program ensure its requirements. However, in order to see the views and practices of early childhood teachers in other schools with other educational programs, future studies can be designed. Also future studies may include training about differentiation for new teachers or schools and pre- and post-analysis of practices can be investigated. So that, from beginning to the end the difference in school culture, teacher practices and viewpoints after using

differentiation as a pedagogy can be seen. This information would enlighten prospective schools and teachers more clearly.

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APPENDICES

A. GÖRÜŞME PROTOKOLÜ / INTERVIEW PROTOCOL

Sayın Katılımcı,

Ben Özden Özer. Orta Doğu Teknik Üniversitesi Eğitim Fakültesi İlköğretim Bölümü'nde doktora öğrencisiyim. Doktora tezim kapsamında Uluslararası Bakalorya İlk Yıllar Programı'nda görev yapan öğretmenlerin farklılaştırılmış öğretim ile ilgili inanç ve uygulamalarını araştırıyorum. Yapacağımız bu görüşme bu çalışma kapsamında gerçekleşecektir. Çalışma için gönüllü olduğunuz halde şu anda görüşmeyi yapmak istemiyorsanız lütfen belirtiniz. Gönüllü olmanız görüşmeyi mutlaka tamamlamanız gerektiği anlamına gelmez, istediğiniz zaman görüşmeyi bitirebilirsiniz. Görüşme sırasında cevaplandırmak istemediğiniz bir soru olursa lütfen belirtiniz. Kimliğiniz ve bu görüşme sırasında sağladığınız analiz edilmemiş bilgi okulunuz, idarecileriniz veya diğer kuruluşlarla paylaşılmayacaktır. Bana sağladığınız bilgilere sadece benim erişimim olacaktır. Bu araştırma ile ilgili herhangi bir yayında kimliğinizi ortaya çıkaracak hiçbir bilgi verilmeyecektir.

Bu görüşmede 19 temel soru vardır ve bu soruların doğru ya da yanlış olarak nitelendirilebilen bir cevabı yoktur. Eğer izin verirseniz bu görüşmenin ses kaydını almak istiyorum. Görüşmenin ses kaydının alınmasını istemiyorsanız ya da belli bir kısmının ses kaydının alınmasını istiyorsanız lütfen çekinmeden belirtiniz. Bu görüşmenin yaklaşık olarak 60 dakika süreceğini düşünüyorum.

Teşekkürler.

INTERVIEW QUESTIONS

Demographic Information

1. Which school/department did you graduate from? (Mezun olduğunuz okul, bölüm nedir?)
2. How long have you been teaching? (Kaç yıldır öğretmenlik yapıyorsunuz?)
3. How long have you been teaching in this school? (Kaç yıldır bu okulda çalışıyorsunuz?)
4. How long have you been implementing IB-PYP? (Kaç yıldır Uluslararası Bakalorya İlk Yıllar Programı'nı uyguluyorsunuz?)

Classroom Practices

5. Describe an activity that you have done recently and give details about following. (Son zamanlarda yaptığınız bir etkinliği aşağıdaki detayları da vererek anlatın)
 - What was your content? (İçeriğiniz neydi?)
 - What was your learning engagement/s? (Öğrenme deneyimleri/niz nelerdi?)
 - What materials did you use (book, worksheet)? (Hangi materyalleri kullandınız? Kitap, çalışma kağıdı gibi)
 - How did you group the students? (Öğrencileri nasıl grupladınız?)
 - Did you make any assessment? How? (Ölçme yaptınız mı? Nasıl?)
6. How do you assess student learning in any activity, day, unit, or semester? (Öğrencilerin öğrenmelerini bir etkinlikte, günde, ünite veya sömestrde nasıl ölçersiniz?)
7. How do you group your students? According to what? (Öğrencileri nasıl gruplarsınız? Neye göre?)
8. How do teachers assure that each student in the class learns? (Bir konuyu tüm öğrencilerin öğrenmesini sağlamak için nasıl planlarsınız?)
9. In your own words, what is differentiated instruction? (Kendi cümlelerinizle sizce farklılaştırılmış öğretim nedir?)
10. What are the benefits of differentiated instruction for students? (Farklılaştırılmış öğretimin öğrencilere faydaları nelerdir?)

11. How do you define the content of your lesson? According to what? (Öğrenme hedeflerinizi ve içeriği neye göre belirliyorsunuz?)
12. Do individual differences affect learning? How? (Sizce öğrencilerin bireysel farklılıkları öğretimi etkiler mi? Nasıl?)
- Do all of the students learn in the same way? How learning profiles are affected? (Tüm öğrenciler aynı şekilde öğrenir mi? Öğrenme profilleri nelerden etkilenir?)
 - How student interests affect teaching? How do you define interests? (Öğrencilerin ilgileri öğretimi nasıl etkiler? İlgiyi nasıl belirlersiniz?)
 - How student readiness affect teaching? How do you define readiness? (Öğrencilerin hazır bulunuşlukları öğretimi nasıl etkiler? Bunu nasıl belirlersiniz?)
13. How do you plan? Which documents do you use for planning? (Planlama uygulamalarınızdan bahsedebilir misiniz? Hangi dokümanları kullanıyorsunuz? Nasıl?)
14. Which challenges do you have during differentiation? (Farklılaştırılmış öğretim uygulamalarınızda karşılaştığınız zorluklar nelerdir?)
- What would make it difficult to use differentiated instruction while planning a lesson? (Planlamada yaşadığınız zorluklar nelerdir?)
 - What would make it difficult to use differentiated instruction during a lesson? (Ders esnasında yaşadığınız zorluklar nelerdir?)
15. What are the qualifications of a teacher who implements differentiated instruction? (Farklılaştırılmış öğretim yapan bir öğretmenin özellikleri nasıl olmalıdır?)
16. What does a differentiated classroom look like? (Farklılaştırılmış öğretim için sınıf ortamı nasıl olmalıdır?)
17. What is the difference between differentiated education and traditional education? (Farklılaştırılmış öğretim ile geleneksel yöntemlerin ne farkı vardır?)
18. What do you do for your professional development? (Uygulamalarınızı desteklemek adına kendinizi nasıl geliştiriyorsunuz?)

- a. Which trainings have you attended? What were the topics?
(Katıldığınız hizmetiçi eğitimler nelerdir? Konu başlıklarını belirtin.)
- b. Have you had any official IB trainings? What benefits did you get from them? (IB eğitimi aldınız mı? Bu eğitimin sizi geliştirdiğine inanıyor musunuz? Nasıl?)
- c. Have you had any training in differentiated instruction? What were the benefits? (Farklılaştırılmış öğretimin nasıl yapılacağı ile ilgili eğitim aldınız mı? Bu eğitimin size neler kattığını düşünüyorsunuz?)
- d. Can you transfer your understanding to your implementation? Examples? (Aldığınız eğitimleri uygulamalarınıza yansıttığınızı düşünüyor musunuz? Örnekler verebilir misiniz?)

19. What is your overall impression of differentiated instruction?
(Farklılaştırılmış öğretim hakkında genel fikriniz nedir?)

B. GÖZLEM PROTOKOLÜ / OBSERVATION PROTOCOL

Date (Tarih):

Subject (Ders):

Teachers (Öğretmenler):

Age group (Sınıf yaş grubu):

Observer (Gözlemci):

Start time (Gözlem Başlama Saati):

End time (Gözlem Bitiş Saati):

Gözlemci için Yönlendirici Sorular

1. How many students are there in the classroom? (Sınıfta kaç öğrenci var?)
2. Sketch the classroom and specify your location. (Sınıfın bir krokisini çizerek kendi yerinizi belirleyin.)
3. Define the classroom environment. (Sınıf ortamını tasvir edin.)
4. What is the objective of the activity? (Etkinlikte hedeflenen kazanım nedir?)
5. Define the activity. (Etkinliği tanımlayın.)
6. What are the assessment practices? (Ölçme için neler yapılıyor?)
7. Who has the initiation? The teacher or students? (Etkinlik öğretmen tarafından mı yönlendiriyor, öğrenciler tarafından mı?)
8. Is there any group work? (Grup çalışmaları yapılıyor mu?)
9. Is there any whole class work? How frequently? (Tüm sınıf çalışmaları yapılıyor mu?)
10. Which resources are used by the children? (Çocuklar hangi kaynakları veya materyalleri kullanıyor?)

11. How does the teacher end the activity? (Öğretmen etkinliđi nasıl bitiriyor?)
12. What does the student who does not want to join do? (Sınıfta etkinliđe katılmayan öğrenciler ne yapıyor?)
13. How are the students grouped? (Öğrenciler nasıl gruplanmış?)
 - a. Learning profile (Öğrenme profili)
 - b. Readiness (Hazırbulunuşluk)
 - c. Interest (İlgi)
14. Did the teacher plan the activity? How is the plan implemented? (Öğretmen etkinlik planını önceden hazırlamış mı? Etkinlik planını nasıl uyguluyor?)

C. CONSENT FORM

Dear _____,

I am a PhD student at Middle East Technical University, Department of Education. I am conducting a dissertation research study entitled: **Early Childhood Teachers' Views about and Practices with Differentiated Instruction in the Primary Years Programme**. The purpose of the research is to explore IB-PYP teachers' perceptions and lived experiences of carrying out differentiated instruction with different aspects of the approach.

Your participation has no foreseeable risks and you are under no obligation to participate. Also, if you consent to participate, you may withdraw at any time without consequence. To withdraw, contact me by email or phone and let me know. Your participation in the study involves an audio-recorded interview, which will be transcribed and returned to you for verification of accuracy and a classroom visit, in which no student information will be recorded. I will not ask any personal identifiers to ensure your anonymity. Please feel free to say as much or as little as you want. You can decide not to answer any question, or to stop the interview any time you want. The tapes and transcripts will become the property of the project.

You will have complete confidentiality, and when the research study will be published, your name will not appear or be used and your results will remain in confidence. There may be no direct benefit to you, but the results of your participation may provide an opportunity for early childhood educators to acquire a better understanding of the obstacles and enablers of differentiated instruction in the Primary Years Programme.

If you have any questions concerning the research study, please feel free to contact me at ozdenozer@yahoo.com

By signing this form, you acknowledge that you understand the study's objective, your role in participating in the study, and that your identity is confidential to the researcher. Your signature indicates that you are 18 years of age or older and that you voluntarily consent to serve as a participant in the study described above.

Sincerely,

Özden Özer _____

Name of Participant _____

Signature of Participant _____

Email _____

Date _____

Private Contact Phone Number _____

D. CURRICULUM VITAE

PERSONAL INFORMATION

Surname, Name: Özkanoglu, Özden
Nationality: Turkish (TC)
Date and Place of Birth: 24 November 1982, Ankara
Marital Status: Married
email: ozdenozkanoglu@gmail.com

EDUCATION

Degree	Institution	Year of Graduation
PhD	METU Elementary Education	2015
MS	METU Elementary Education	2010
BS	METU Early Childhood Education	2004
High School	Ayrancı High School, Ankara	1999

WORK EXPERIENCE

Year	Place	Enrollment
2015-Present	International Baccalaureate, The Hague-NETHERLANDS	Online workshop facilitator
2011-Present	International Baccalaureate, The Hague-NETHERLANDS	IB-PYP School Visit Team Member
2009-Present	International Baccalaureate, The Hague-NETHERLANDS	IB-PYP Workshop Leader
June 2013- January 2015	EduNet Educational Software, Ankara-TURKEY	Academic Consultant
June 2013- January 2015	YÜCE Schools, Ankara- TURKEY	Head of R&D Team
September 2011- September 2013	YÜCE Schools, Ankara- TURKEY	Assistant General Manager, IB-PYP Coordinator
September 2008- September 2011	YÜCE Primary School, Ankara-TURKEY	Vice Principal, IB-PYP Coordinator

August 2006- September 2008	YÜCE Primary School, Ankara-TURKEY	Early Childhood Teacher
June 2003-July 2006	SMG Publishing , Ankara- TURKEY	R&D, Publishing Coordinator

FOREIGN LANGUAGES

Advanced English, Elementary Spanish

PUBLICATIONS

Learning books ECE:

- Özer, Ö & Ovacık, M. (2007) Patlamış Mısır Eğitim Seti (6 books). Gendaş Publishing: Istanbul.
- Özer, Ö & Ovacık, M. (2008) Sıra Bende Eğitim Seti (4 books). Gendaş Publishing: Istanbul
- Özer, Ö & Ovacık, M. (2008) Meraklı Tırtıl Eğitim Seti (6 books). Gendaş Publishing: Istanbul
- Özer, Ö & Ovacık, M. (2009) Haydi Düşün Bakalım. İlkadım Publishing: Istanbul
- Özer, Ö & Ovacık, M. (2009) Matematik Adası. İlkadım Publishing: Istanbul
- Özer, Ö & Ovacık, M. (2009) Renkler ve Şekiller Ülkesi. İlkadım Publishing: Istanbul
- Özer, Ö & Ovacık, M. (2009) Kavramlar Gemisi. İlkadım Publishing: Istanbul
- Özer, Ö & Ovacık, M. (2009) Görsel Algılama Şenliği. İlkadım Publishing: Istanbul
- Özer, Ö & Ovacık, M. (2009) Zebranın Çizgileri. İlkadım Publishing: Istanbul
- Özer, Ö & Ovacık, M. (2009) Tatil Rüyası. İlkadım Publishing: Istanbul

Learning resources for early years: Cut- fold-paste project activities for ECE

- Özer, Ö & Ovacık, M. (2007) Beceri Dünyası. Gendaş Publishing: Istanbul
- Özer, Ö & Ovacık, M. (2007) Beraber Yapalım Beraber Öğrenelim. Gendaş Publishing: Istanbul
- Özer, Ö & Ovacık, M. (2008) Becerikli Eller . Gendaş Publishing: Istanbul

Picture books:

- Özer, Ö (2008) Saklambaç – Benekli Arı. Gendaş Publishing: Istanbul
- Özer, Ö (2008) Saklambaç – Ormandaki Heyecan. Gendaş Publishing: Istanbul
- Özer, Ö (2008) Saklambaç – Kutup Ayısının Güneş Gözlüğü. Gendaş Publishing: Istanbul
- Özer, Ö (2008) Saklambaç – Meraklı Maymun ve Yunus Balığı. Gendaş Publishing: Istanbul

Özer, Ö (2008) Saklambaç – Sevimli Sincap Minik. Gendaş Publishing: Istanbul

Özer, Ö & Ovacık, M. (2008) Elim Sende Hikaye Seti (20 books). Gendaş Publishing: Istanbul

Teacher resource books ECE:

Özer, Ö & Ovacık, M. (2007) Patlamış Mısır Eğitim Seti Öğretmen Kaynak Kitabı. Gendaş Publishing: Istanbul

Özer, Ö. (2008) Okul Öncesi Eğitim Kurumları için Yıllık ve Günlük Planlar. Gendaş Publishing: Istanbul

Özer, Ö & Ovacık, M. (2008) Bilim Seli. Gendaş Publishing: Istanbul

Family involvement books:

Özer, Ö. (2004) Neler Öğrendim? SMG Publishing: Ankara.

Özer, Ö & Ovacık, M. (2009) Ailemle Öğrenyorum. İlkadım Publishing: Istanbul

HOBBIES

Archery, photography, books, handmade art and craft.

E. TURKISH SUMMARY

İlk Yıllar Programında okul öncesi öğretmenlerinin farklılaştırılmış öğretim hakkında görüş ve uygulamaları

1. GİRİŞ

Günümüzde dünyanın hızlı değişimi ve ihtiyaçları göz önünde bulundurulduğunda, ülkelerin eğitim sistemlerinde de bir reform yapılması gerekliliği oluşmuştur (OECD, 2015). Bu değişim kuşkusuz eğitim sistemlerinin önemli bir parçası olacak ve birçok yönünü etkileyecektir. 19. yüzyıldan önce örgün eğitim için herhangi bir sistem bulunmamaktaydı (Mulhern, 1959). Günümüz eğitim sistemi de, 19. yüzyılda endüstri devriminin ihtiyaçları doğrultusunda tasarlanmış ve yapılandırılmıştır. Ancak, yaşamın ve şartların değişmesi ile birlikte 19. yüzyıl ihtiyaçlarına göre yapılandırılmış bu eğitim sistemi 21. yüzyıl çocukları için uygun görünmemektedir. Bu nedenle çocukları 21. yüzyıla hazırlamak için birçok eğitim modeli ve programı geliştirilmekte ve uygulanmaktadır. Bu ortak amaç doğrultusunda eğitimcilerin amacı kültürleri, becerileri, yapabilirlikleri ne kadar farklı olursa olsun tüm çocuklara karşı eşit olmaya çalışmak ve onların eşit şartlarda eğitim alabilmesini sağlamaktır. Bu eşitliği sağlamak için ülkeler arasında değişiklik göstermekle birlikte ders, düzey bazında tasarlanmış öğretim programları, standartları, ulusal müfredatları ve ortak öğrenme çıktıları bulunmaktadır. Ancak düşünülmesi gereken bu eşitliğin aynı zamanda adil olup olmadığıdır (Wortham, 2006).

Bir okul öncesi öğrenme ortamında her çocuk kendi öğrenme tercihleri, ihtiyacı ve kapasitesi ile eşsizdir. Okul öncesi eğitimin genel tanımı

düşünüldüğünde her çocuğun bireysel özellikleri ve farklılıkları ile becerilerini geliştirme ve öğrenme hakkı vardır. Farklılaştırılmış öğretim geleneksel eğitim yöntemlerinden farklı olarak her bir öğrencinin ilgi, öğrenme tercihi ve performansının diğerlerinden farklı olabileceğini savunur ve bu farklılık doğrultusunda hareket eder. Farklılaştırılmış öğretim müfredatın içine yerleştirilmiş ve ilişkilendirilmiş bir öğretim yaklaşımıdır yani günlük işleyişin bir parçasıdır.

Farklılaştırılmış öğretimi öğretme ve öğrenme sürecinin bir parçası olarak kabul eden müfredat çerçevelerinden birisi de Uluslararası Bakalorya Organizasyonu'nun İlk Yıllar Programı'dır. İlk Yıllar Programı'nın (PYP) öğrencilerin öğrenmeleri hakkındaki tanımına göre, öğrenme deneyimleri öğrencilerin çeşitli yetenekleri ve öğrenme biçimleri keşfedilerek ve bunlar göz önünde bulundurularak farklılaştırılır (IBO, 2009). Uluslararası Bakalorya, 1968 yılında kurulmuş kar amacı gütmeyen bir eğitim organizasyonudur ve 3-18 yaş aralığındaki öğrenciler için 2015 yılı başı itibari ile 146 ülkede 3,676 okulda uygulanan dört program sunmaktadır. Bu programlar, İlk Yıllar Programı, Orta Yıllar Programı, Diploma Programı ve Kariyer Programı'dır. Okullar, IB programlarını "Program Standart ve Uygulamaları" doğrultusunda uygular ve bu standartlar her program için yönetim, kaynaklar, planlama, uygulama, geliştirme ve ölçme boyutlarında önemli bilgiler sağlar. Okulları IB programlarından herhangi birini ya da birilerini uygulamak için aday olarak başladıkları bir uygulama sürecinden geçer ve gerekli değerlendirmeler sonucunda uygulama yetkisi alırlar (IBO, 2008).

Bu çalışmanın merkezinde olan İlk Yıllar Programı 3-12 yaş grubundaki öğrencilerin bir sorgulayan olarak okul içinde ve dışında bütünsel gelişimlerinin sağlanmasını hedefler (IBO, 2009). Disiplinlerüstü bir müfredat çerçevesi olan IB-PYP, farklılaştırılmış öğretimin yazılı, öğretilen ve ölçülen müfredat ile bütünleştirilerek uygulanmasını destekler.

Farklılaştırılmış öğretim özellikle Lev Vygotsky'nin çalışmaları ile ilişkilendirilmiş ve öğrencinin öğrenme kapasitesinin sadece tek başına

yapabildiği değil, aynı zamanda dışarıdan bir destekle yapabilecekleri arasında olması gerektiği fikri benimsenmiştir (Elliott et al., 2000). Aynı zamanda Benjamin Bloom'un temel beceriler için belirmemiş olduğu taksonomi de farklılaştırılmış öğretimin başka bir temeli olarak kabul edilebilmektedir. Hecox'a göre (2002), öğrencilere sunulan öğrenme deneyimleri taksonomide belirlendiği gibi farklı düzeylerde olabilmekte ve öğrenci ihtiyaçlarına göre bu bağlamda farklılaştırılabilmektedir. Beyin araştırmaları ve bunun eğitime yansması da farklılaştırılmış öğretim ile ilgili kavramlardan bazılarını desteklemektedir. Öğrencinin öğrenme ortamında güvenli hissetmesi için onun başarısızlık duygusundan uzak olması ve bir öğrenme deneyiminin zorluğunun öğrencinin düzeyine uygun olması oldukça önemlidir (Tomlinson & Kalbfleisch, 1998).

Farklılaştırılmış öğretim temelde öğrencilerin ihtiyaçlarına cevap veren sistemli bir yaklaşım olarak tanımlanmaktadır. Tomlinson ve Imbeau'a (2010) göre içerik-ne öğrenildiği, süreç-nasıl öğrenildiği, ürün-öğrenilenin nasıl gösterildiği, öğrenme ortamı-öğrenmenin gerçekleştiği yer ve duyuş-duygu ve hislerin öğrenmeyi etkileyişi farklılaştırılabilmektedir. Bunlar, öğrencilerin farklılık gösterdiği alanlar olan öğrenme profilleri, hazırbulunuşlukları ve/veya ilgilerine göre farklılaştırılmaktadır.

Öğretmenler, tüm öğrenme süreçlerinin ayrılmaz bir parçasıdır. Stronge (2002) tarafından yapılan bir araştırmada etkin öğretmenlerin özellikleri belirlenmiş ve bunlardan bir tanesi de etkin öğretmenlerin öğrenci farklılıklarının göz önünde bulundurularak sınıf düzeni oluşturması olarak belirlenmiştir. Bu da öğretmenlerin farklılaştırılmış öğretim uygulamalarına göstermeleri gereken eğilimi işaret etmektedir. Ayrıca öğretmenler öğrencilerinin farklı ihtiyaçlarına cevap verebilmek için yenilikler denemekte ve bu da onları farklılaştırılmış öğretim uygulamalarına yönlendirmektedir. Ancak, eğitim eksikliği ve idari destek gibi durumlar öğretmenlerin farklılaştırılmış öğretim uygulamalarına karşı bir direniş göstermesine sebep olabilmektedir.

Farklılaştırılmış öğretim hakkında öğretmenlerin inanç ve uygulamaları ile ilgili yapılan çalışmalarda çoğunlukla öğretmenlerin yaşadıkları zorluklar üzerine bulgulara rastlanmıştır. Tomlinson'a göre (2000) öğretmenler hakkında yeterli eğitim almadıkları için farklılaştırılmış öğretimin uygulanmasının kolay olmadığını düşünmektedirler. Ayrıca, öğretmenler programın anlaşılmasının karmaşık olduğunu da düşünmektedirler (Tomlinson and Allan, 2000).

Bunların dışında, farklılaştırılmış öğretimin etkinliği ile ilgili sonuçlara ulaşan çalışmalar da vardır. Tomlinson, Callahan ve diğerlerinin (1997) yaptığı çalışmaya göre çoklu zekayı odakta tutam öğretmenlerin öğrenci merkezli çalışmalarsa daha esnek olduğu bulunmuştur. Ernest (2010) tarafından yapılan bir durum incelemesinde farklılaştırılmış öğretimin öğrencilerin öğrenme süreçlerinde pozitif etki sağladığı bulunmuştur.

Uluslararası Bakalorya İlk Yıllar Programı Figür 1'de gösterildiği gibi bilgi, beceriler, tutumlar, kavramlar ve eylem olarak adlandırılan 5 temel öğeden oluşmaktadır. Öğrenilenler, disiplinlerüstü temalar altında belirlenen sorgulama üniteleri kapsamında ele alınmakta ve her ünite bir sorgulama döngüsü şeklinde işlenmektedir (IBO, 2009). Disiplinlerüstü bir yaklaşımı belirleyen PYP'de altı meke ders alanı belirlenmiştir. Bunlar dil, matematik, fen, sosyal bilimler, fiziksel, kişisel ve sosyal eğitim ve sanattır. Her bir disiplinlerüstü tema altında oluşturulan ünitelerde belirlenen ana fikirler bu derslerin bütünleşik çalışması ile sorgulanmaktadır.



Figür 1: PYP Programme model (Turkish)

Farklılaştırılmış öğretim IB-PYP'nin öğretme ve öğrenme konusundaki yaklaşımının temellerinden birini oluşturmaktadır (IBO, 2009). Bir okulun yetkili olarak IB programlarını uygulayabilmesi için takip etmesi gereken standart, uygulama ve gerekliliklerde de (IBO, 2014) farklılaştırılmış öğretim vurgulanmış, özellikle aşağıda verilen uygulamalar ile okulların farklılaştırılmış öğretimi bir felsefe olarak belirlemesi istenmiştir (pp. 9-14).

B2-8 : Okul, özel öğrenim veya eğitim gereksinimi olan öğrencilerine ve onların öğretmenlerine destek sağlamaktadır.

C1-6 : Ortak planlama ve dönüşümlü düşünme öğrencilerin öğrenme ihtiyaçlarını ve biçimlerini içermektedir.

C2-3 : Yazılı müfredat, öğrencilerin geçmiş öğrenim deneyimlerinin üzerine kurulmuştur.

C3-3 : Öğretme ve öğrenme, öğrencilerin bildikleri ve yapabildikleri üzerine kuruludur.

C3-3-a : Öğretme ve öğrenme, öğrencilerin yeteneklerine, deneyimlerine, öğrenme gereksinimlerine ve öğrenme şekillerine değinir.

C3-6 : Öğretme ve öğrenme insanların ortak noktalarına, farklılıklarına ve farklı bakış açlarına değinir.

C3-10 : Öğretme ve öğrenme, öğrencilerin öğrenim gereksinimlerini ve stillerini karşılamak için farklı eğitim yöntemleri kullanmaktadır.

C3-10-a : Okul, çeşitli öğrenim amaçları doğrultusunda öğrencileri farklı şekillerde gruplamakta ve tekrar gruplamaktadır.

C3-14-a : Okul, öğrencilerin hem bağımsız hem de işbirliği içinde çalışabilecekleri ortamlar sunmaktadır..

C3-15 : Öğretme ve öğrenme, öğrencilerin öğrendiklerini çeşitli yollardan göstermelerini teşvik eder.

C4-7 : Okul, öğretme ve öğrenimi bilgilendirmek için ölçme verilerini analiz eder.

C4-7-a : Okul, yeni öğrenmeden önce öğrencilerin bilgi ve anlayışlarının değerlendirildiğini taahhüt eder.

IB, bir okulun program için yetkilendirmesi ile bu standartların uygulanmakta olduğunu onaylamış olur (IBO, 2014). Dolayısıyla, IB-PYP uygulayan bir okul, öğrencilerin öğrenmeye yönelik ihtiyaçlarına duyarlı bir yaklaşım sergileyerek farklılaştırılmış öğretim uygulamaktadır.

Farklılaştırma her ne kadar IB-PYP okullarında bir gereklilik olarak görünse de, bu çalışma için yaklaşımın farklı ortamlarda uygulanabilirliği de oldukça önemlidir. Çalışmanın Türkiye’de yapılması nedeni ile farklılaştırmanın Türk Milli Eğitim Bakanlığı Okul Öncesi Eğitim Öğretim Programı ile birlikte

kullanılabilirliği de incelenmiştir. Güncel program, 2013 yılında yayınlanmış ve 2013-2014 öğretim yılı itibari ile kullanılmaya başlanmıştır (MEB, 2013). Programın temel özellikleri çocuk merkezli, esnek, sarmal, eklektik, dengeli, oyun temelli, yaratıcılığı geliştiren, öğretim sürecinde günlük yaşam ve çevresini kullanan, öğrenme merkezleri içeren, çok yönlü ölçme-değerlendirmeyi destekleyen ve özel gereksinimi olan çocuklar için adapte edilebilir olan bir program olmasıdır. Aynı zamanda program (MEB, 2013) öğrencilerin bireysel farklılıklarını vurgulamakta ve öğretmenlerin bu farklılıkları göz önünde bulundurması gerektiğini savunmaktadır. Tomlinson (2010) tarafından tanımlanan farklılaştırmanın temel prensipleri de öğrencilerin ihtiyaçlarına duyarlı olunması, kaliteli bir müfredat sunulması, öğrencileri daha ileri götürecek öğretim yapılması, esnek gruplama, sürekli ölçme ve sınıf içinde bir öğrenenler topluluğu oluşturmaktır. Bu prensipler göz önüne alındığında birçok ortak özellik gözlemlenmektedir.

Özetle, farklılaştırılmış öğretim öğrencilerin özellikleri ve farklılıklarının eşleştirilerek öğretimin öğrenme hedefleri, gruplama, öğretim yöntem ve teknikleri, sınıf kaynakları gibi birçok alanında değişiklikler yapılmasını gerektiren bir süreçtir (Tomlinson & McTighe, 2006). Heacox'a (2002) göre farklılaştırma öğrenci farklılıklarının kabul edilmesini destekler ve bu sayede tüm öğrencilerin öğrenme alanında güçlü oldukları yönler ortaya çıkartılır. Uluslararası Bakalorya İlk Yıllar Programı farklılaştırmayı öğretme ve öğrenme süreçlerinin merkezinde bulunduran bir müfredat çerçevesidir. PYP'ye göre öğrencilerin öğrenmeleri önceki deneyimleri ile bağlantılıdır ve bu deneyimler öğretim sürecini farklılaştırılmak için kullanılmalıdır (IBO, 2009).

2. YÖNTEM

Bu çalışmanın amacı Uluslararası Bakalorya İlk Yıllar Programı yetkili okulunda çalışan okul öncesi öğretmenlerinin farklılaştırma hakkında görüş ve uygulamalarının incelenmesidir. Çalışma kapsamında, öğretmenlerle

görüşmeler yapılmış, sınıfları gözlemlenmiş ve yazılı müfredat dokümanları incelenmiştir.

2.1. Araştırma Soruları

Bu çalışma kapsamında üç araştırma sorusu geliştirilmiştir.

1. Öğretmenlerin okul öncesi eğitimde farklılaştırılmış öğretim ile ilgili görüşleri nelerdir?

İlk araştırma sorusu ile öğretmenlerin farklılaştırılmış öğretim tanımlarının nasıl benzerlik ve farklılık gösterdiği ve öğretmenlerin farklılaştırılmış öğretime yönelik tutumlarının nasıl etkilendiği hakkında bilgi edinmek hedeflenmiştir.

2. Okulöncesi öğretmenleri farklılaştırılmış öğretimi PYP sınıflarında nasıl uyguluyorlar?

Bu soru ile öğretmenlerin öğretim süreçlerinde kullandıkları yöntem ve tekniklerin ve bunların farklı öğrenciler ve öğretmenler için etkisinin ne olduğu araştırılmak istenmiştir. Bu soru ile özellikle öğretmenlerin eğitimin hangi bölümlerini neye göre farklılaştırdıkları görülmek istenmiştir.

3. Öğretmenlerin okulöncesi eğitimde farklılaştırılmış öğretim uygulamalarında karşılaştıkları zorluklar nelerdir?

Bu sorunun araştırma sorusu olarak alınmasının en önemli sebebi okul öncesi öğretmenlerinin farklılaştırılmış öğretim hakkında yaşadıkları zorlukları belirleyerek bu zorlukların alana etkileri ve olası öneriler sunulabilecektir.

2.2 Araştırmanın Kapsamı

Bu çalışma okulöncesi öğretmenlerinin farklılaştırılmış öğretim hakkında görüş ve uygulamalarını incelemek için, hali hazırda farklılaştırılmış öğretim uygulamakta olan bir okulun öğretmenleri ile yürütülmüştür.

Ankara'da bulunan bu okul 2009 yılında Uluslararası Bakalorya Organizasyonu İlk Yıllar Programı uygulama yetkisi almıştır. Okulun eğitim dili İngilizce'dir ve her sınıfta biri İngilizce, biri Türkçe konuşan olmak üzere iki okulöncesi öğretmeni bulunmaktadır. Okulun beş hazırlık (5-6 yaş) , beş ön hazırlık (4-5 yaş) sınıfı bulunmakta ve bu sınıfların ortalama öğrenci sayısı 15'tir. Çalışmaya 9 hazırlık, 10 ön hazırlık öğretmeni katılmıştır. Öğretmenlerin IB-PYP deneyimleri tablo 1'de paylaşıldığı üzere farklılık göstermektedir.

Tablo 1: Öğretmenlerin PYP deneyimleri

Yıl	Öğretmen sayısı
1-3 yıl	9
4-6 yıl	5
7-10 yıl	4
10 yıldan fazla	1

Tablo 2'de gösterildiği üzere, öğretmenlerin tamamı en az lisans diplomasına sahiptir ve bunları 8 tanesi okul öncesi öğretmenliği mezunu, 5 tanesi ilköğretim öğretmenliği mezunudur.

Tablo 2: Öğretmenlerin son üniversite dereceleri

Derece	Öğretmen sayısı
Okul öncesi eğitim lisans	8
İlköğretim lisans	5
Okul öncesi eğitim yüksek lisans	2
Eğitim yüksek lisans	4

Okulun okulöncesi sınıfları ilkokul müdürlüğüne bağlıdır ve idari işlemler için müdür yardımcısı, öğretim programlarının uygulanması için de PYP koordinatörü öğretmenlere pedagojik liderlik yapmaktadır. Okul IB-PYP'yi Milli Eğitim Bakanlığı müfredatı ile birlikte ilişkilendirerek kullanmaktadır.

Okulda görev yapan öğretmenler okul içi eğitimler, IB eğitimleri, öğretmen kaynak kitapları gibi seçeneklerle profesyonel gelişim açısından desteklenmektedir. Okulun bitiş ve başlangıç dönemlerinde öğretmenlerin ortak planlamasına fırsat veren ve her iki dönem içinde yaklaşık iki hafta süren hizmet içi eğitim dönemi bulunmaktadır. Okula yeni başlayan öğretmenler "PYP'yi gerçekleştirmek" konulu eğitime katılmakta ve programın uygulamaları hakkında detaylı bilgi almaktadırlar. Ayrıca, öğretmenlerin sene içinde ortak planlama ve çalışmalarına fırsat vermek amacıyla haftalık toplantı zamanları kullanılmaktadır.

Çalışmanın yürütüldüğü akademik yıl için, ön hazırlık sınıfları ve hazırlık sınıfları okul kampüsü içinde farklı binaları kullanmakta ve ön hazırlık sınıflarının kullandığı derslikler diğerlerine göre daha küçüktür. Buna rağmen her iki grubun dersliklerinde de kitap, oyuncak, sanat malzemeleri, bilişsel oyunlar gibi eğitim materyallerinden yeterince vardır. Her iki yaş grubu için de geniş bahçe ve oyun malzemeleri bulunmaktadır.

2.3 Araştırma Yöntemi

Bu çalışmada okul öncesi öğretmenlerinin İlk Yıllar Programı'nda farklılaştırılmış öğretim hakkında inanış ve uygulamaları hakkında derin bilgi ve anlamalara ulaşmak hedeflenmiştir. Bu hedef doğrultusunda, niteliksel araştırma yöntemlerinden örnek olay incelemesi tercih edilmiştir. Cresswell'e (2007) göre örnek olay incelemesinde araştırmacı sınırlı bir sistemi (bir durumu) çok kaynaklı derin sorgulama yolu ile inceler ve bulguları betimleyici olarak raporlar.

Bu çalışmada daha önceden öngörülmeleyen çıktıları olan bir durum seçilmiş ve veriler açık uçlu sorular yardımı ile toplanmıştır. Cresswell'e (2007) göre niteliksel çalışmaları niceliksel çalışmalardan ayıran özellik de değişkenlerin önceden tam olarak belirlenemiyor olmasıdır. Bir örnek olay incelemesi araştırma sorularının belirlenmesi ile başlar (Merriam, 1998).

Araştırma soruları belirlenirken araştırma konusunun ana alanları ile ilişkilendirilmiştir.

2.4 Veri Toplama Süreci

Niteliksel araştırmalarda araştırmacının çalışmada önemli bir veri toplama aracı olması nedeni ile rolü oldukça önemlidir. Çünkü insanlar durum ile ilgili ipuçları toplamaya çalışırken ortam ile etkileşim kurar ve durumları daha bütünsel olarak algılayabilirler (Fraenkel & Wallen, 2006). Wiseman'ın (1999) belirttiği gibi niteliksel araştırmalarda veri toplama süreci uzun bir zamana yayılır ve farklı veri kaynakları kullanır. Tablo 3 bu çalışmada yapılan veri toplama sürecinin zaman akışını özetlemektedir. Araştırma sorularının geliştirilmesinden sonra görüşme soruları ve gözlem protokolü hazırlanması ile süreç başlamıştır.

Tablo 3: Veri toplama zaman çizelgesi

Tarih	Tamamlanan çalışma
Haziran 2013-Eylül 2013	Görüşme soruları ve gözlem protokolünün hazırlanması
Kasım 2013	Görüşme sorularının pilot çalışması
Aralık 2013	Görüşme sorularının düzenlenmesi
Ocak 2014-Mayıs 2014	Görüşme ve gözlemler Doküman analizi
Mayıs 2014-Ağustos 2014	Veri temizleme, düzenleme, kodlama
Ağustos 2014-Kasım 2014	Veri analizi

Tablo 4: Veri toplama teknikleri

Veri kaynakları	Katılımcılar	Amaç
Görüşme	Öğretmenler	Farklı boyutlarda öğretmenlerin farklılaştırılmış öğretim hakkında inanışları
Sınıf ziyaretleri	Öğretmenler	Sınıf ortamı ve öğretmenlerin uygulamaları
Doküman analizi <ul style="list-style-type: none">• Ünite planları• Haftalık etkinlik planları• Sorgulama programı		Yazılı müfredat hakkında detaylı bilgi

Araştırma sorularına yanıt bulabilmek için farklı veri kaynaklarının kullanılması da niteliksel araştırmaların gereği olduğu göz önünde bulundurularak 3 farklı kaynak üzerinden veri toplanmıştır. Tablo 4 veri toplamada kullanılan yöntemleri ve amaçlarını özetlemektedir.

Görüşmeler:

Okul öncesi öğretmenlerinin farklılaştırılmış öğretim hakkında inanışları ile ilgili detaylı bilgi edinmek için araştırma soruları doğrultusunda açık uçlu sorular içeren görüşme protokolü geliştirilmiştir. Görüşme protokolü uygulanmadan önce pilot olarak farklı IB-PYP öğretmenleri ile denenmiş de gerekli değişiklikler yapılarak yeniden düzenlenmiştir. Pilot uygulamada dört öğretmen ile yapılan görüşmeler sonucunda soruların açık, net, anlaşılır olması sağlanmıştır.

Veri toplama sürecinde görüşme sorularının son hali kullanılarak öğretmenlerin inanışları ve uygulamaları hakkında daha amaca uygun hale

getirilmiştir. Görüşmeler öncesinde katılımcılara bir onay formu paylaşarak okumaları ve imzalamaları istenmiştir.

Görüşmeler her öğretmenle bireysel olarak yapılmış, ve ses kayıt cihazı ile dijital olarak kaydedilmiştir. Görüşmelerin bitiminde tüm ses kayıtları metinleştirilerek katılımcılarla paylaşılmış ve gerekli düzeltmeleri yapmaları istenmiştir. Görüşmeler yaklaşık 35-85 dakika arasında sürmüştür ve ortalama görüşme süresi 50 dakika olmuştur.

Gözlemler:

Öğretmenlerin sınıf ortamlarını görmek ve uygulamaları hakkında daha derin bilgi sahibi olmak için bu çalışma kapsamında sınıf gözlemleri yapılmıştır. Sınıf gözlemleri görüşmelerle aynı zaman periyodunda sınıf bazında yapılmış ve bu sayede bir sınıfta derse giren her iki öğretmenin uygulamaları eş zamanlı olarak görülme fırsatı edinilmiştir. Gözlemlerin temel amacı yaklaşımın sınıfta uygulanmasını incelemek olmuştur. Gözlemler açık uçlu sorular doğrultusunda yapılarak hem yapılan öğrenme deneyimini hem de öğrenme ortamını inceleme fırsatı vermiştir.

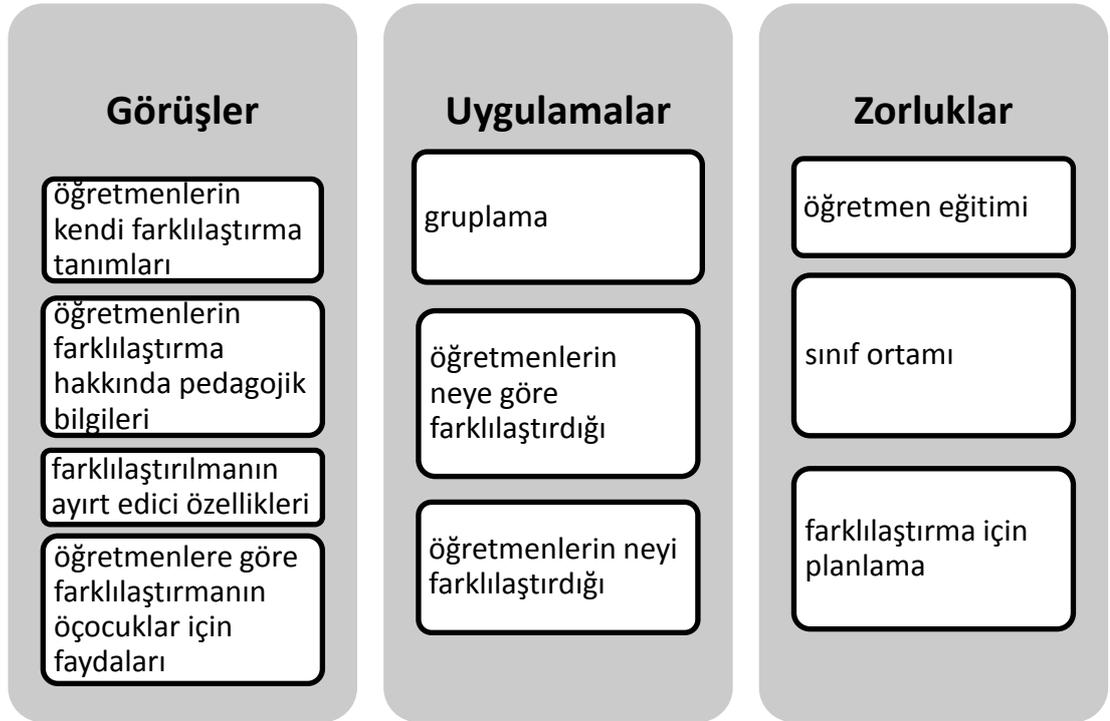
Doküman İncelemesi:

Freebody'e (2003) göre dokümanlar değer verilen ya da yapılan hakkında bilgi verdiği için araştırmancının önemli bir parçasıdır ve doğal ortamda gerçekleştiği için yüksek geçerliliğe sahiptir. Öğretmenlerin kullanmakta olduğu ünite planları, haftalık planlar, sorgulama programı önemli bir veri kaynağı olarak kullanılmış, aynı zamanda öğretmenlerin kişisel portfolyoları da öğretmenler hakkında demografik bilgi edinmek amacıyla incelenmiştir.

2.5 Verilerin Analizi

Eğitim araştırmalarında veri analizi anlam bulmak için yapılan sistemli bir araştırmadır yani veriyi diğerleri için anlaşılır hale getirmek için işlenmesidir (Fraenkel & Wallen, 2006). Bu çalışmada toplanan verilerin

anlamli şekilde tanimlanmasi icin Miles ve Huberman (1994) tarafından tanimlanmis adimlar takip edilmiştir. Veriler metinleştirildikten sonra araştırma sorulari doğrultusunda temalar ve kodlar belirlenmiştir. Daha sonra bu temalar ve alt temalar arasındaki bağlantılar belirlenmiş ve ortak konu kapsamaları tanımlanmıştır. Son olarak bunların sonunda bazı anlamalar oluşturularak literatür ile birlikte tartışılmıştır. Çalışma sonucunda elde edilen temalar ve alt temalar literatür ile ilişkilendirilmiş ve Figür 2’de gösterilmiştir.



Figür 2: Çalışmada elde edilen tema ve alt temalar

2.6 Çalışmanın Kalitesi

Geçerlilik ve güvenilirlik algısı niteliksel çalışmalarda niceliksel çalışmalara göre farklı anlamlara gelmektedir. Çünkü veri toplama araçları ve yöntemleri oldukça farklıdır. Niceliksel çalışmalarda olduğu gibi tek bir doğru sonuç bulmayı hedeflemeyen niteliksel çalışmalarda bir gerçek ile ilgili farklı bakış açılarından veri toplama hedeflenmiştir (Winter, 2000). Bir niteliksel çalışmanın kalite göstergeleri inandırıcılık (credibility), aktarılabirlik

(transferability), tutarlılık (dependability) ve teyit edilebilirlik (confirmability) olarak kabul edilmektedir (Lincoln & Guba, 1985).

Bir niteliksel çalışmanın inandırıcı olması bulguların doğru olması anlamına gelmektedir (Lincoln & Guba, 1985). Çalışmada bu ölçütü karşılamak ve herhangi bir veri kaybı eksikliği olmaması için ses kaydı kullanılmıştır. Aynı zamanda okulun kültürünü ve sosyal ortamını tanımak için okulda yeterli zaman geçirilmiştir. Son olarak bir başka uzman eğitimci akran değerlendirme yapmış ve çalışma ile ilgili dışarıdan değerlendirmelerde bulunmuştur.

Lincoln ve Guba'ya göre (1985) aktarılabilirlik nitel bir çalışmanın bulgularının farklı durumlara uygulanabilir olmasıdır. Bunu sağlayabilmek için çalışma kapsamı ve içeriği detaylı biçimde verilmiştir. Aynı zamanda bu çalışmanın bulgularının okulöncesi eğitimde farklılaştırılmış öğretimin uygulanması ile ilgili diğer durumlara aktarılabilmesi için okul ile ilgili tüm bilgiler detaylı olarak paylaşılmıştır.

Bir çalışmanın tekrarlandığında tekrar aynı sonuçları bulabilmesi o çalışmanın tutarlılığını göstermektedir (Lincoln & Guba, 1985). Çalışmanın tutarlılığını sağlamak adına, bir dış denetimci tüm çalışma boyunca verilerin tutarlılığı, çalışmanın yöntemi, bulgu ve yorumlar konusunda denetimleri gerçekleştirmiştir.

Son olarak çalışmanın kalitesini artırmak adına teyit edilebilirlik de kontrol altında tutulmuştur. Creswell'e (2007) göre teyit edilebilirliği artırmak için dış denetim yöntemi kullanılmıştır. Çalışma sürecine dahil olmayan bir eğitiminin çalışmanın farklı boyutlarına dahil olması sağlanmıştır. Aynı zamanda, çıkarımları veri kaynağına kontrol ettirme ile katılımcılara mülakat metinleri gönderilerek onaylamaları istenmiştir. Bunların dışında da veri kaynakları çeşitlendirilerek çoklu verilerden aynı konu üzerinde veri toplanmış ve farklı kaynaklar karşılaştırılmıştır.

3. BULGULAR VE TARTIŞMA

Bu çalışmada okulöncesi öğretmenlerinin İlk Yıllar Programı'nda farklılaştırılmış öğretim hakkında görüş ve uygulamaları örnek olay yöntemi ile incelenmiş ve görüşmeler, sınıf gözlemleri ve dokümanlar yolu ile konu hakkında detaylı veriler toplanmıştır. Yetkili bir Uluslararası Bakalorya İlk Yıllar Programı okulundan 19 öğretmenin katılımı ile gerçekleşen bu çalışmada elde edilen bulgular ve tartışma araştırma soruları doğrultusunda bu bölümde sunulacaktır.

Çalışma bulguları üç araştırma sorusu altında gruplanmış ve temalar araştırma sorularına göre belirlenmiştir. Çalışma sonucunda ortaya çıkan üç ana tema görüşler, uygulama ve zorluklar olmuştur.

3.1. Okulöncesi Öğretmenlerinin Farklılaştırılmış Öğretim Hakkında Görüşleri

İlk araştırma sorusu doğrultusunda oluşan bu ana temada öğretmenlerin kendi farklılaştırılmış öğretim tanımları öğretmenlerin farklılaştırma konusunda pedagojik bilgileri, farklılaştırmanın ayırt edici özellikleri ve öğretmenler açısından farklılaştırmanın öğrenciler için faydaları olmuştur.

Bu nitel çalışmanın bulguları IB-PYP'de okul öncesi öğretmenlerinin farklılaştırılmış öğretime karşı olumlu tutuma sahip olduklarını göstermiştir. Öğretmenlerin çoğu sınıftaki her çocuğun eğer uygun bir yöntem seçilirse öğrenebileceğini düşünmektedirler ayrıca bazı öğretmenler bazı öğrencilerin öğretmenlerin beklediği gibi öğrenemeyeceğini, bu öğrencilerin daha fazla desteğe ihtiyaçları olduğuna inanmaktadırlar. Öğretmenlerden altı tanesi "Çocukların aynı düzeyde öğrenmesini beklemiyorum" bildiriminde bulunmuşlardır. PK-T4 aşağıdaki şekilde açıklamıştır:

Aktiviteleri planlarken tipik bir çocuęu göz önünde bulunduruyorum. Yani bazıları bu çocuktan altta veya üstte olabilir. Herkesin aynı düzeyde öğrenmesinden emin olamayabilirim ama eęer ben nasıl öğreteceęimi bilirim, onlar da öğrenebilir.

Farklılaştırılmıř öğretimin temelleri öğrenci çeşitlilięinin öğretmenler tarafından gözetildięi farklılıklara sahip sınıflarla başlar (Bearne, 1996). bu görüş ile bağlantılı olarak çalışmaya katılan tüm öğretmenlerin sınıflarındaki öğrencilerin birbirinden farklı olduęunu kabul ettikleri belirlenmiştir. Öğretmenlerin iç düşüncelerinin onların farklılaştırılmıř öğretim hakkında görüş ve uygulamalarını etkileyeceęi düşünöldüğünde bu bulgu çalışma için önem taşımaktadır. Öğretmenler, bu farklılıęı çoęunlukla öğrencilerin hazır bulunuşluęu ile ilişkilendirmekte ve bu hazır bulunuşluęun da öğrencilerin kazanması beklenen beceriler olarak tanımlamaktadırlar. Bazı öğretmenler bu farklılıkların doğuştan geldięine inanırken kimileri de aile geęmişlerinin bu farklılıklarda önemli bir etken olduęunu düşünmektedir.

Okul öncesi sınıfları çocuklar için aileleri ile evde geęirdikten sonra geldikleri ilk eğitim kurumu olarak kabul edilebilmektedir. Bu durumda öğretmenlerin çocukların okul yaşantısında ailelerinin önemli bir payı olduęunu düşünmelerine yol açtıęı kabul edilebilir. Ayrıca öğretmenler çocukların okulöncesi eğitimin daha erken yıllarında edindikleri deneyimlerin de onların hazır bulunuşluklarını etkiledięini düşünmekte ve bu durumun aynı okul öncesi eğitim sınıfında farklı düzeylerde çocuklar olmasının önemli bir faktörü olduęuna inanmaktadırlar.

Öğretmenlerin tamamının en az lisans düzeyinde bir derecesi olsa da, öğretmenlerin farklılaştırma tanımları onlara öğretilen bir kavram olmaktan çok genelde sınıf uygulamalarından esinlenmiştir. Yani öğretmenlerin görüşleri direk olarak sınıf içi uygulamalarından etkilenmiştir. On altı katılımcı bugüne kadar farklılaştırılmıř öğretim konusunda özel bir eğitim almadıęını

belirtmiştir. Yurtdışında üniversite eğitimini tamamlayan iki öğretmen farklılaştırma konusunda oturumlara katıldıklarını belirtmişlerdir. Türkiye’den bir öğretmen ise üniversite eğitimi sırasında özel bir okulun farklılaştırma konusunda yapmış olduğu eğitime katıldığını belirtmiştir. Özellikler program hakkında daha detaylı bilgi edinmek için Öğretmenler profesyonel gelişimleri için okulda yapılan veya IB tarafından yapılan eğitimlere katıldıklarını belirtmişlerdir. Ayrıca öğretmenler IB tarafından sağlanan Çevrimiçi Müfredat Merkezi’ne ulaşarak hem programın resmi kaynaklarına ulaşabilmekte hem de diğer okullara ait örnekleri görebilmektedirler.

Bu araştırma sorusu ile birlikte öğretmenlerden farklılaştırılmış öğretim uygulayan bir öğretmenin genel özelliklerini tanımlamaları istenmiş ve katılımcı öğretmenlerden gelen 12 ortak özellik belirlenmiş ve aşağıdaki şekilde açıklanmıştır.

İşbirliği: Etkin bir farklılaştırma için öğretmenlerin işbirliği içinde çalışması gerekmektedir.

Alan bilgisi: Öğretmenlerin farklılaştırmanın ne olduğu, kuramsal arka planı ve uygulanması hakkında bilgi sahibi olması gerekmektedir.

Yaratıcı düşünme: Öğretmenlerin öğrencilerin farklı ihtiyaçlarına göre öğrenme deneyimleri geliştirmeleri yaratıcı düşüncelerini gerektirmektedir.

İletişim: Farklılaştırma uygulayan bir öğretmenin etkin dinleme, öğrencilerle açık ve anlaşılır bir şekilde konuşma, velileri bilgilendirmek için sunum becerileri gibi iletişim becerilerine sahip olması önemlidir.

Gözlem: Çalışmaya katılan öğretmenlere göre gözlem okul öncesi dönemde ölçme-değerlendirmede kullanılan en önemli yöntemlerden bir tanesidir. İyi bir farklılaştırma için ölçmenin ne kadar önemli olduğu göz önünde bulundurulduğunda öğretmenlerin iyi gözlem becerilerine sahip olması da önem kazanmaktadır.

Esneklik: Farklılaştırılmış öğrenme ortamlarında öğretmenler düşünme, yapma ve karar verme açısından esnek olmalıdır, bu sayede sınıfta var olan değişikliklere zamanında yanıt verebilirler.

Yaşam boyu öğrenme: Öğretmenler kendilerini profesyonel olarak sürekli geliştirmeli ve alan bilgilerini güncel tutmalıdırlar.

Motivasyon: Özellikle farklılaştırılmış öğretim konusunda yeni olan öğretmenler için süreç içinde okul idaresi tarafından motive edilmeleri önemli bir destek olarak görülmektedir.

Organizasyon becerileri: Planlama, koordinasyon, sınıf yönetimi gibi alanlar organizasyon becerileri olarak gruplanmıştır.

Dönüşümlü düşünme: Öğretmenlerin yaptıkları çalışmalar üzerine kendilerini değerlendirmeleri, yaptıklarını uygulamaları ve inanışları ile karşılaştırarak değerlendirmeleri önemlidir.

Risk alma: Bir öğretmen tarafından vurgulanan risk alma ile farklılaştırmanın daha iyi uygulanabilmesi için öğretmenlerin denemeler yapmaları ve bundan çekinmemeleri gerektiği vurgulanmıştır.

Zaman yönetimi: Öğretmenler tarafından en çok bahsedilen özellik olan zaman yönetimi ile öğretmenin hem planlama hem de uygulamada yeterli zamana ihtiyacı olduğu ve bu zamanı iyi kullanması gerektiği vurgulanmıştır.

Çalışma sonucunda elde edilen bulgulardan bir tanesi de okulöncesi öğretmenlerine göre farklılaştırılmış öğretimin diğer geleneksel yaklaşımlara göre temel farklarının olduğu olmuştur. Öncelikle tüm öğrencilerin farklılıklarının kabul edilmesi, farklılaştırma yolu ile öğrencilerin öğrenme süreçlerine daha çok dahil edilmesi, öğrenci ihtiyaçlarına göre içeriğin adapte edilebilmesi ve öğretmenin sınıf otoritesi olmaktansa daha çok öğrenme süreçlerini hızlandıran bir rol edinmesi olarak belirlenen bu ayırt edici özellikler aynı zamanda farklılaştırılmış öğretimin genel prensiplerini de yansıtmaktadır.

Çalışmaya katılan okulöncesi öğretmenlerine göre farklılaştırmanın çocuklar için birçok alanda faydaları vardır. Öncelikle çocuklar kendi ilgi ve ihtiyaçlarına göre deneyimlerle karşılaştıklarında kendileri daha güvende ve ait hissetmektedirler. Bu da onların sosyal ve duygusal gelişimlerine katkı

sağlamaktadır. Ayrıca, öğretmenler farklılaştırmanın çocukların anlama ve beceri düzeylerinde olumlu ilerlemeye yol açtığına inanmaktadır. Son olarak, okul hayatı ile yeni tanışılan okulöncesi dönemde, farklılaştırılmış öğretim öğrencilerin okula katılımlarını artırmaktadır.

3.2. Okulöncesi Öğretmenlerinin Farklılaştırılmış Öğretim Uygulamaları

Araştırmanın bulguları, ikinci araştırma sorusu ve ana tema olan öğretmenlerin uygulamaları gruplama, neye göre ve neyin farklılaştırıldığı gibi alt temalar ortaya çıkarmıştır.

Tomlinson ve McTighe'nin (2006) belirttiği gibi, farklılaştırılmış öğretimin önemli parçalarından biri de gruplamadır. Katılımcı öğretmenler her gün sınıflarında gruplama kullandıklarını ve çoğu öğretmen bunun okulöncesi dönem için doğal bir öğrenme yolu olduğunu belirtmişlerdir.

Çocukları grupluyorum çünkü işbirlikçi öğrenme onların doğasında var. Çocuklar birbirleri ile birlikte çalışmayı ve etkileşim kurmayı seviyor, üstelik onlar iletişim kurarken bana ölçme ile ilgili bilgi sağlıyorlar (K-T4)

Bazen çocuklar için birbirlerinden öğrenmek benden öğrenmekten daha kolay oluyor, birbirlerinin dilinden anlıyorlar (K-T9)

Öğretmenler gruplamayı nasıl yapacaklarının etkinliğin amacına bağlı olarak değişebileceğini vurgulamışlardır. Yani bazen benzer öğrencileri biraraya getirirken, bazen de farklılıkları eşleştirerek daha zengin öğrenme ortamları oluşturduklarını belirtmişlerdir. Bununla benzer olarak Tomlinson da (2010) gruplamam esnek olması gerektiğini ve ihtiyaç halinde grupların değiştirilebileceğini vurgulamıştır.

Tomlinson ve McTighe (2006) öğrencilerin ilgi, hazır bulunuşluk ve öğrenme profillerinin farklılık gösterdiğini ve bunların öğretmenlerin nasıl öğrettiğini etkilediğini belirtmiştir. Öğretmenlerin neyi farklılaştırdıklarını belirlemek üzere öncelikle öğrenci farklılıkları hakkında ne düşündükleri ve bunun öğretme ve öğrenme süreçlerini nasıl etkilediği incelenmiştir.

Okulöncesi öğretmenlerine göre çocukların öğrenme biçimlerindeki farklılıklar onların öğretim süreçlerini etkileyen önemli faktörlerden bir tanesidir. 15 öğretmen öğrenme stilleri olarak görsel, kinestetik ve işitsel olarak öğrencileri grupladıklarını belirtmiştir. Birkaç öğretmen ise çoklu zeka kuramından bahsetmiştir. Çalışmanın bulgularına göre öğrenme profili olarak öğretmenlerin genel olarak öğrencilerin nasıl öğrendiklerini ve bunu da öğrenme stilleri ile ilişkilendirdikleri görülmüştür. Ayrıca bazı öğretmenler öğrencileri ailevi ve kişisel geçmişlerinin de onların öğrenmelerini etkilediklerini vurgulamışlardır. Bunların dışında altı öğretmen de cinsiyetin öğrenmelerinde etkili olduğunu ve bazen gruplama çalışmalarında cinsiyeti kullandıklarını belirtmişlerdir.

Okul öncesi öğretmenlerine göre öğrencilerin ilgi alanları da onların öğrenmelerini etkileyen bir faktördür. Öğretmenlerin tanımlarına göre ilgi çocukların sevdikleri, tercih ettikleri şeylerdir ve bu kolaylıkla değişebilir. PK-T8 "Uzun zaman sevdikleri dinazorlar gibi ilgileri olsa da bazen günlük ilgileri de olabiliyor. Bunlar daha çok arkadaşlarından veya televizyondan etkilendikleri şeyler" şeklinde bahsetmiştir.

Hazır bulunuşluk da çalışmaya katılan okulöncesi öğretmenleri tarafından önemle vurgulanan bir öğrenci farklılığı olmuştur. Öğretmenler hazır bulunuşluğu tanımlarken bir şeyler yapabilme, motor beceriler, matematik, bilişsel beceriler, anadilde dil becerileri, İngilizcede dil becerileri, bir yönergeyi anlama, düşünme becerileri, öz bakım ve bir konuyu anlama olarak tanımlamışlardır.

Öğretmenlerin bu üç temel öğrenci farklılığını göz önünde bulundurarak içerik, süreç, ürün, duyuş ve öğrenme ortamını farklılaştırmak

üzere çalışmalar yaptığı belirlenmiştir. Bunların içinde çoğunlukla süreci yani öğrencilerin nasıl öğrendiklerini ve kendilerinin nasıl öğrettiklerini farklılaştırdıkları belirlenmiştir.

3.3. Okulöncesi Öğretmenlerinin Farklılaştırılmış Öğretim Konusunda Yaşadıkları Zorluklar

Çalışmanın bulguları üçüncü araştırma sorusu olan "Öğretmenlerin okulöncesi eğitimde farklılaştırılmış öğretim uygulamalarında karşılaştıkları zorluklar nelerdir?" sorusu altında öğretmen eğitimi, sınıf ortamı ve farklılaştırmayı planlama gibi alt temalar oluşturmuştur.

İki öğretmen dışında öğretmenlerin tamamı lisans eğitimleri süresince farklılaştırma hakkında özel bir eğitim almadıklarını belirtmişlerdir. Sadece iki öğretmen lisans eğitiminde farklılaştırma ile ilgili özel oturumlara katıldıklarını belirtmişlerdir. 17 öğretmen de farklılaştırma ile ilgili deneyimlerini ilk defa bu okulda IB-PYP ile çalışırken edindiklerini vurgulamışlardır.

Sınıf ortamı farklı boyutları ile öğretmenlerin yaşadıkları zorluklardan bir tanesi olarak belirlenmiştir. Öncelikle sınıftaki öğrenci sayısının öğretmen sayısına oranı öğretmenler tarafından önemle vurgulanmıştır. Çalışmanın yapıldığı okulda her sınıfta iki öğretmen vardır ve ortalama şube mevcudu 15'tir. Öğretmenler tarafından bu sayının oldukça uygun olduğu ancak bazı özel durumlarda öğretmenlerin yalnız çalışması gerektiğinde sınıf yönetiminin zorlaştığı vurgulanmıştır. Dersliğin boyutunun da öğrencilerin grup olarak çalışmalarına, alanların oluşturulmasına ve materyallerin sergilenmesine fırsat verecek şekilde büyük olmasının gerekliliği vurgulanmıştır. Okulun ön hazırlık sınıfları çalışmanın yapıldığı dönemde farklı bir bina kullanmaktaydı ve bu binadaki derslikler hazırlık sınıflarından daha küçüktü. Özellikle ön hazırlık öğretmenleri tarafından vurgulanan derslik boyutu da öğretmenlerin karşılaşılabilecekleri bir zorluk olarak belirlenmiştir. Katılımcı öğretmenler tarafından vurgulanan bir diğer zorluk da yönergelerin anlaşılması olmuştur.

Özellikle İngilizce ancak aynı zamanda Türkçe konuşan öğretmenler tarafından vurgulanan bu zorluk sınıf gözlemlerinde de belirlenen bu zorluk öğretmenlerin net, açık ve anlaşılır yönergeler vermelerini gerektirmektedir.

Tüm eğitim süreçlerinin temeli olarak kabul edilen planlama ve bu çalışmada okulöncesi öğretmenleri tarafından en çok vurgulanan zorluk olarak belirlenmiştir. Öğretmenlerin incelenen yazılı müfredat dokümanlarına göre ünite planları, sorgulama programı ve haftalık planlar kullanmaktadırlar. Bunlardan ünite planı ve sorgulama programı IB-PYP'nin gerekliliği olarak kullanılmakta, haftalık plan ise bir şubede derse giren iki öğretmenin ortak planlama notlarını ve genel aktivite planlarını içermektedir. Öğretmenler farklılaştırma için özel bir plan kullanmamaktadırlar. Tomlinson and Allan'ın (2000) vurguladığı üzere herhangi bir sınıfta doğru planlanmayan farklılaştırma bir karmaşa haline gelebilmektedir. Bu çalışma sonunda araştırmacı tarafından öğretmenlerin farklılaştırmayı planlama ve değerlendirme sürecinde yol gösterici olabilecek bir *farklılaştırılmış öğretimi planlama rehberi* geliştirilmiştir.

1. Sınıf düzeyi/öğrencilerin yaş grubu : _____

2. Odak ders veya dersler : _____

3. Ön görülen süre : _____

4. Etkinlik için üç alanda öğrenme hedeflerini yazın:

- Bilgi: Öğrenciler ne bilecekler?

- Anlama: Öğrenciler ne anlayacaklar?

- Beceriler: Öğrenciler ne yapabilecekler?

5. Süreç ölçme görevlerini tanımlayın.

İpucu: Süreçteki öğrenmeyi ölçmek için hangi araç ve yöntemler kullanılacak?

6. Öğrencilerin ön bilgi, anlama ve becerilerini nasıl ölçeceksiniz?

İpucu: Bu ders için ön değerlendirme çalışması nedir?

7. Öğrencilerinizin 4. Adımda belirlediğiniz hedefler için neye ihtiyacı var? Bir ya da daha fazla seçebilirsiniz.

- Motivasyon (İlgi)
- Gelişim (Hazır bulunuşluk)
- Etkin öğrenme (Öğrenme profili)

İpucu: Bu adım 8. Adım ile birlikte düşünülmelidir.

8. Öğrenci farklılığı:

Öğrencileriniz 7. Adımda belirttiğiniz alanda nasıl farklılıklar gösteriyor?

Kaç gruba ihtiyacınız var?

Gruplama stratejiniz ne olacak? Homojen Karışık

İpucu: Bu adım 7. Adım ile birlikte düşünülmelidir.

9. Derste ne farklılaştırılacak?

- İçerik (Öğrenciler ne öğrenecek?)
- Süreç (Öğrenciler nasıl öğrenecek?)
- Ürün (Öğrenciler öğrendiklerini nasıl gösterecek?)
- Öğrenme ortamı (Öğrencilere nerede öğrenecek?)
- Duyuş (Öğrencilerin duygu ve düşünceleri nasıl etkileyecek?)

İpucu: Bu adım 7. Adım ile birlikte düşünülmelidir.

10. Etkinliğin girişini tanımlayın.

İpucu: Öğretmen dersi nasıl başlatır? Öğrenci ve öğretmen tinsiyatifi nasıl olacak? İçerik nasıl sunulacak?

11. Grup/eş/bireylerin yapacağı çalışmaları tanımlayın.

İpucu: Farklılaştırılmış etkinlikler nelerdir?

12. Etkinliğin kapanışını tanımlayın.

İpucu: Ders nasıl bitirilecek?

13. Etkinliğin kaynaklarını tanımlayın. .

İpucu: Hangi birincil ve ikincil kaynaklar kullanılacak?

14. Dönüşümlü düşünme:

İpucu: Etkinliğin çıktılarını değerlendirin. Bir sonraki sefer neyi farklı yapardınız?

4. ÇALIŞMANIN OLASI ETKİLERİ VE ÖNERİLER

Bu çalışma ile IB-PYP’de okulöncesi öğretmenlerinin farklılaştırma konusunda görüş ve uygulamaları niteliksel durum incelemesi yöntemi ile incelenmiştir. Çalışma yetkili bir IB-PYP okulunda 19 okulöncesi öğretmenin katılımı ile gerçekleştirilmiştir.

Uluslararası Bakalorya İlk Yıllar Programı hem dünyada hem de Türkiye’de hızla daha fazla okul tarafından uygulanmaya başlamıştır. Programın ilk yılı olan 1997’de dünyada 6 okul bu programı uygularken bu sayı 2007’de 92, 2014 itibari ile ise 990 olmuştur (IBO,2014). Dolayısıyla program üzerine yapılan bilimsel araştırmalar aday ve yetkili okullara, okul liderlerine, öğretmenlere ve eğitimcilere değerli bilgiler sağlayacaktır. Bu çalışma her ne kadar sadece farklılaştırılmış öğretimi vurgulasa da, farklılaştırma ne öğretildiği, nasıl öğretildiği ve nasıl ölçüldüğü ile iç içe olduğundan müfredatın diğer alanları ile ilgili de bilgiler sunmaktadır. Ayrıca çalışma bulguları farklılaştırmada en iyi uygulamaların geliştirilmesi konusunda yol göstermekte ve bu IB okulu olsun veya olmasın farklılaştırma uygulamak isteyen tüm okullar için iyi bir referans teşkil etmektedir.

Bugüne kadar farklılaştırılmış öğretim ile ilgili ilköğretim ve üstü sınıf düzeylerinde değerli çalışmalar yapılmıştır. Ancak okul öncesinde farklılaştırılmanın uygulanması ile ilgili kısıtlı bilgi bulunmaktadır. Bu da farklılaştırılmış öğretimin planlama ve uygulama boyutunda okul öncesi öğretmenleri tarafından karmaşık bulunmasına yol açabilmektedir. Ancak öğretmenler tarafından her bir çocuğun bir birey olduğu ve potansiyeline ulaşması için onun bireysel farklılıklarının göz önünde bulunduruluyor olması unutulmamalıdır. Bu çalışmanın bulguları öğretmenlere okulöncesi düzeyinde farklılaştırma uygulamaları konusunda yol gösterecektir.

Bu çalışma ile Türk Milli Eğitim Bakanlığı Okul Öncesi Programı da incelenmiş ve her ne kadar farklılaştırma kavramsal olarak programda yer almasa da programın temel özelliklerinin farklılaştırma ile örtüştüğü belirlenmiştir. Bu çalışma her ne kadar IB-PYP uygulayan özel bir okulda yapılmış da olsa, farklılaştırılmış öğretim MEB okul öncesi öğretim programı uygulanan diğer özel veya devlet okullarında da kullanılabilir bir öğretim ve öğrenme yaklaşımıdır. Özellikle günümüzün hızla değişen dünyasında öğrenci farklılıkları daha baskın hale gelmişken tüm öğrencilerin kendi ilgi, ihtiyaç ve düzeylerini göz önünde bulunduran bir eğitim almaları gerekmektedir. Farklılaştırma özel bir kaynak, kitap, materyal gerektirmemektedir. Dolayısıyla sınırlı kaynakların olduğu durumlarda da uygulanabilmektedir. Önemli olan öğretmenlerin ve okul idarelerinin olgun bir anlayış içeren ve yüksek öğrenci-öğretmen etkileşimi olan öğrenme ortamları yaratmasıdır. Bunun için de öğretmenleri profesyonel gelişim alanında farklılaştırmaya özel destek almaları gerekmektedir.

Bu çalışma ve sonuçlarına dayanarak ile araştırmacının alana bazı önerileri vardır. Öncelikle çalışma sadece bir okulda belli bir öğretmen grubu ile birlikte yapılmıştır. Çalışmanın tekrarı farklı öğretmen grupları ile yapılabilir, bu sayede farklı bakış açılarından edinilen bulgular karşılaştırılabilir. Ayrıca çalışmaya katılan okul uluslararası bir okul dur ve

öğretmenlerin yarı kadarı farklı ülkelerden gelmektedir ve farklılaştırma ile ilgili ön deneyimleri vardır. Yaklaşımın sadece Türkiye’de uygulanması ve Türkiye’de çalışan öğretmenlerin görüşlerinin incelenmesi için ulusal bir okul ile çalışma tekrarlanabilir. Aynı zamanda daha önceden hiç farklılaştırma uygulamamış öğretmenlerin yaklaşıma karşı tutum ve bakış açıları incelenebilir ve bu sayede alana yeni başlayan okullar için bilgi sağlanabilir.

Bu çalışmanın kalitesini artırmak amacı ile farklı veri kaynakları kullanılmış olsa da temel veri kaynağı görüşmelerdir. Öğrencileri de dahil eden daha çok gözleme dayalı uzun süreli çalışmalar ile farklılaştırılmış öğretimin öğrencilerin öğrenme süreçlerine etkisi çalışılabilir.

F. TEZ FOTOKOPİSİ İZİN FORMU

ENSTİTÜ

Fen Bilimleri Enstitüsü

Sosyal Bilimler Enstitüsü

Uygulamalı Matematik Enstitüsü

Enformatik Enstitüsü

Deniz Bilimleri Enstitüsü

YAZARIN

Soyadı : Özkanoglu
Adı : Özden
Bölümü : İlköğretim EABD

TEZİN ADI (İngilizce) :

TEZİN TÜRÜ : Yüksek Lisans Doktora

1. Tezimin tamamından kaynak gösterilmek şartıyla fotokopi alınabilir.
2. Tezimin içindekiler sayfası, özet, indeks sayfalarından ve/veya bir Bölümünden kaynak gösterilmek şartıyla fotokopi alınabilir.
3. Tezimden bir bir (1) yıl süreyle fotokopi alınamaz.

TEZİN KÜTÜPHANEYE TESLİM TARİHİ: 15 Ekim 2015