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EFL INSTRUCTORS' PERCEPTIONS AND PRACTICES OF DIFFERENTIATED INSTRUCTION AT TERTIARY LEVEL

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Berrin Karasaç Horkel

June 2023

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Teaching English as a Foreign Language.

Asst. Prof. Dr. Tijen Akşit (Advisor)

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Teaching English as a Foreign Language.

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ABSTRACT

ELF INSTRUCTORS' PERCEPTIONS AND PRACTICES OF DIFFERENTIATED INSTRUCTION AT TERTIARY LEVEL

Berrin Karasaç Horkel

MA in Teaching English as a Foreign Language

Advisor: Asst. Prof. Dr. Tijen Akşit

July 2023

The purpose of this study was to investigate EFL instructors' perceptions and practices of differentiated instruction in an English language preparatory program of a state university in Türkiye. For this mixed-methods case study, the quantitative data was collected through a questionnaire, and the qualitative data was gathered through semi-structured interviews. 87 instructors participated in the quantitative part of the study, and 13 instructors participated in the qualitative phase. Descriptive and inferential analysis was employed to analyze the quantitative data, and the qualitative data was analyzed through content analysis. The results indicated that instructors' awareness of differentiated instruction is generally high, and that they are generally aware of individual differences and needs and their impact on the course achievement. On the other hand, the results of the study also showed that instructors' practices of differentiated instruction are generally not comprehensive and are not proactively based on individual student needs. However, instructors moderately practice differentiation in some parts of their instruction. The results of the study also revealed some challenges instructors face in the differentiation practice including strict syllabus, number of students, insufficient resources and exams.

Keywords: EFL, differentiated instruction, differentiated learning

ÖZET

ÜNİVERSİTE İNGİLİZCE ÖĞRETİM GÖREVLİLERİNİN
FARKLILAŞTIRILMIŞ ÖĞRETİM ALGILARI VE UYGULAMALARI

Berrin Karasaç Horkel

Yabancı Dil Olarak İngilizce Öğretimi Yüksek Lisans Programı

Tez Danışmanı: Dr. Öğr. Üyesi Tijen Akşit

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Bu çalışma, Türkiye'deki İngilizce öğretim görevlilerinin farklılaştırılmış öğretim algılarını ve uygulamalarını araştırmayı amaçlamaktadır. Bu karma yöntemli durum çalışması için, nicel veriler bir anket aracılığı ile, nitel veriler ise yarı yapılandırılmış bireysel görüşmeler ile toplanmıştır. Çalışmanın nicel kısmına 87 öğretim görevlisi, nitel kısmına ise 13 öğretim görevlisi katılmıştır. Nicel veriler betimsel ve çıkarımsal analiz yoluyla analiz edilmiş, nitel veriler ise içerik analizi yoluyla incelenmiştir. Çalışmanın sonuçları, Türkiye'deki İngilizce öğretim görevlilerinin farklılaştırılmış öğretim ile ilgili algılarının genel olarak yüksek olduğunu ve öğrencilerin bireysel ihtiyaçlarındaki çeşitliliğin ve bunun öğrenmelerine etkilerinin genel olarak farkında olduklarını ortaya koydu. Öte yandan, öğretim görevlilerinin farklılaştırılmış öğretme uygulamalarının çok kapsamlı olmadığı ve önceden planlanarak bireysel öğrenci ihtiyaçlarını hedef alacak şekilde gerçekleştirilmediği anlaşıldı. Bu çalışma ayrıca Türkiye'deki İngilizce öğretim görevlilerinin farklılaştırılmış öğretim uygulamalarında karşılaştıkları zorluklara da işaret etti. Bu zorluklar arasında esnek olmayan programlar, öğrenci sayısı, yetersiz kaynaklar ve sınava yönelik çalışmalar yer aldı.

Anahtar kelimeler: Farklılaştırılmış öğretim, İngilizce öğretimi.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1: INTRODUCTION

Introduction

It goes without saying that English language is the medium through which one can be a part of the global world. Today, it is the language of trade, research, science, popular culture, communication, and without English, it is not possible to fully benefit and be engaged in those areas. However, despite its importance and the effort and time invested in teaching English, language education is still not effective in some countries, including Türkiye which came last of the 24 European countries in 2014 English Proficiency Index (TEPAV & British Council, 2015). According to TEPAV and British Council report (2015) "English deficit is a major factor affecting the quality of higher education, restricting access to academic resources, international research publications and limiting the mobility of the staff and students" (p.14). Given that Turkish students start learning English at primary school, the problem is not likely to be related to the time spent on English teaching. However, the ways in which this time is spent seem to need more focus.

We live in an era where individual differences are more evident and promoted than ever (Dörnyei, 2006; Ehrman et al., 2003; Elyas et al., 2020; George, 2005; Hickendorff et al., 2018; Jonassen & Grabowski, 2011; McDaniel et al., 2014; Tomlinson et al., 2003; Yi Lee et al., 2014). Most normally, this reality manifests itself in today's language classrooms. It is very well acknowledged today that each learner has diverse readiness level, different cultural backgrounds and personal experiences, different interests and learning preferences, and all these have a crucial role in their learning experience, motivation to learn and success. Still, this actuality receives little consideration while planning lessons, curricula or education

policies (Leightweis, 2013; McFarlane, 2010; Subban, 2006; TEPAV & British Council, 2015; Tomlinson et al., 2003). Most of the time, the classrooms are treated as units of levels or categories assuming that one size will fit all of the individuals inside these units (Aygün, 2017; Genç & Aydın, 2017; Smets, 2017; Tomlinson et al., 2003). However, a learning environment which is not responsive to individual learner needs fails to reinforce the student engagement which is essential for learning, and it cannot help learners reach their full potential for learning and success (Landrum & Duffie, 2010; Tomlinson, 2000, 2001; Tomlinson et al., 2003).

In modern classrooms where information can be obtained as fast as a click, the primary role of teachers is not to provide information but to guide and support students to get engaged in learning which will eventually lead to success (George, 2005; The Organisation for Economic Co-operation and Development, 2016; Pham, 2012). This key role which should be perceptive to learners' diverse academic needs is as essential in university level as in primary and secondary education to have motivated learners better prepared for the modern world. Today, an issue of unmotivated college students exists around the world (Boe & Hendriksen, 2013; Hsieh et al., 2007; McFarlane, 2010; Trolian & Jach, 2020) and many research studies have been conducted to investigate student motivation at tertiary level (Altıner, 2018; Cruz et al., 2020; Genc & Aydın, 2017; Goodman et al., 2011; Ning & Hornby, 2014; You & Dörnyei, 2014). Studies at college level indicate the necessity for teaching approaches that respond to various ways of learning, different interests, goals, backgrounds and different personal conditions and experiences (Dosch & Zidon, 2014; Elyas et al., 2020; McFarlane, 2010, Leightweis, 2013; Santangelo & Tomlinson, 2009).

In Turkish setting, college classes, particularly English language preparatory school classes, do not always cater for learners' diverse needs (Aygün, 2017; Genc & Aydın, 2017; Solak, 2015; TEPAV & British Council, 2015). Most Turkish state and private universities have preparatory schools which offer one-year intensive English language learning programs for students enrolled in various fully or partly English medium programs. Preparatory schools are obligatory for students enrolled in a fully English mediated programs unless they pass the proficiency exam at the beginning of the school year. For those who are enrolled in partly English medium or Turkish medium programs, preparatory school classes are studied on a voluntary basis. Once in their programs after completing the preparatory school, students can still take more advanced English courses at various levels in their programs. Preparatory schools in Turkish context seem to have certain issues regarding meeting student needs. In the report published by TEPAV and British Council (2015) on the state of English in higher education, poor motivation of preparatory students at university level is repeatedly stressed. It is stated in the report that students and teachers consider lack of motivation as an important reason that restrains progress alongside other reasons mentioned such as lack of interest in English, unsuitable materials and unsuitable teaching. Moreover**,** some studies have revealed the perceptions of Turkish preparatory school EFL students (Aksit & Kahvecioglu, 2022; Tuyan & Serindağ, 2019; Yavuz & Höl, 2017) and Turkish senior level university students from different departments (Çelik & Çepni, 2020), and it has been indicated that students are anxious and unmotivated in English classes. Also, college students do not find themselves sufficient at most English skills (Uztosun, 2017). Another study with a focus on learners' perspectives (Aygün, 2017) revealed that various factors that lead to the demotivation of preparatory school EFL students include mismatch

between learners' needs and the teaching at the preparatory program, uninteresting lessons, teaching that is dull and ignores learners' preferences, teaching that is complicated and beyond learners' proficiency level.

Differentiated classes where teacher modifies learning process according to students' readiness levels, interests and learning profiles have been pointed out as a way to enhance learner motivation and achievement at all levels of education (Christensen, 2007; Markoglu, 2019; Ruhan & Şefik, 2010; Servilio, 2009). As Tomlinson (1999, 2001) noted, differentiated instruction (DI), also referred as differentiated learning, is mainly described as a process of adapting content, learning activities to make sense of the content, product and assessment based on learners' current knowledge and understanding of the content, interest and learning preferences to maximize everyone's learning. Due to the positive indications from the studies, DI is gaining more grounds in today's education (Bondie et al., 2019). Yet, many teachers and educators are still oblivious to differentiated instruction or they do not implement it in their classes (Lauria, 2010; Logan, 2011; Melese, 2019; Suprayogi et al., 2017; Tomlinson & Imbeau, 2010). Many studies have placed their focus on DI at K-12 both at local (Çam, 2013; Demirkaya, 2018; Gülşen, 2018; Karadağ; 2010; Karakaş; 2019; Özkanoğlu; 2015; Zoraoğlu; 2016) and global level (Burkett, 2013; Chien, 2015; Christopher, 2017; Gafi-Sharabi, 2011; Gaitas & Martins, 2017; Ismajli & Imami-Morina, 2018; Jamoliddinova & Kuchkarova, 2022; Melesse, 2015; Morrison-Thomas, 2016; Palmer, 2014; Paone, 2017; Prince, 2011; Reis et al., 2011; Richards-Usher, 2013; Shaboul et al., 2019; Shareefa et al., 2019; Suprayogi et al., 2017; Whipple, 2012). However, studies focusing on differentiated instruction at university level, particularly in EFL context, are rare in Türkiye.

Therefore, this study aims to investigate the perceptions and practices of Turkish EFL instructors at tertiary level.

Background of the Study

Learners do not learn in one same way and their needs vary considerably (Tomlinson, 2001). Studies and theories on student diversity, brain research, learning styles and multiple intelligences have revealed that every individual has diverse needs and ways of learning (Bozhovich, 2009; Gardner, 2011; Geacke & Cooper, 2003; Kolb, 1984; Lombardi, 2008; Moslemi & Dastgoshadeh, 2017; Skehan, 1989; Sternberg; 1997; Subban, 2006; Vygotsky, 1978). DI, which revolves around the core tenet that effective learning takes place when learner needs are accommodated, has emerged as a teaching philosophy that addresses this reality in modern classrooms (Tomlinson, 2001).

Following special and individualized education that aim differentiation for students with special needs, DI appeared as a more comprehensive approach based on the fact that a classroom is not a uniform entity, and each student makes meaning of what is going on in the classroom differently depending on their existing knowledge, interests, beliefs, learning styles and attitudes towards self and school (Ducey & Key, 2009; Hertberg-Davis, 2009; Landrum & Duffie, 2010; Tomlinson, 2001). Therefore, diverse student needs should be met for an effective learning to occur (Tomlinson, 2000; Tomlinson et al., 2003). DI does not offer brand new ideas. Yet, today the need for differentiation not only for learners with special needs but for all learners is strongly emphasized (Reeves & Stanford, 2009). According to Tomlinson (2001), a pioneer in this field, “in a differentiated classroom, the teacher proactively plans and carries out varied approaches to content, process, and product

in anticipation of and response to student differences in readiness, interest, and learning needs" (p. 7). Tomlinson (2001) also lists the key features of DI as follows:

> Differentiated instruction is PROACTIVE.
>
> Differentiated instruction is more QUALITATIVE than quantitative.
>
> Differentiated instruction is ROOTED IN ASSESSMENT.
>
> Differentiated instruction provides MULTIPLE APPROACHES to content, process, and product.
>
> Differentiated instruction is STUDENT-CENTERED.
>
> Differentiated instruction is A BLEND of whole-class, group, and individual instructions.
>
> Differentiated instruction is ORGANIC. (p.3-5)

The main tenet in differentiated instruction is to customize the learning process accordingly to help each student to fulfil his/her full potential by providing them with necessary support, right level of challenge, an engaging and safe learning environment (Tomlinson, 1999, 2001). Tomlinson clearly highlights that differentiated learning is not a set of rules or techniques to follow but rather an approach to teaching or a teaching "philosophy" (Tomlinson, 2001, 2005). Therefore, in a differentiated class, the main targets aimed at are necessary learning conditions for learner engagement and participation, varied and ongoing assessment, right level of challenge for everyone (Tomlinson, 2001).

DI has received a lot of attention from researchers and teachers in Türkiye and around the world for many years. It has gained grounds at primary and secondary school settings, particularly in the United States due to strong presence of linguistically and culturally diverse students, ESL learners and policies such as No Child Left Behind Act (2001) and the Individuals with Disabilities Education

Improvement Act (2004) (as cited in Stanford & Reeves, 2009). Most of the research conducted on differentiated learning has been reported in K12 education (Chamberlin & Powers, 2010; Lauria, 2010). The studies concentrated on the impact of DI on learning in various contexts (Nordlund, 2003). Great focus has been placed on DI for gifted and disabled learners as differentiation is considered essential particularly for inclusive classrooms with gifted learners and learners with learning difficulties (Broderick et al., 2005; George; 2005; Van Tassel-Baska & Stambaugh, 2005). Many research studies have been carried out at different settings on differentiated learning for gifted students (McCoy & Reader, 2008; Van Tasses-Baska et al., 2020) and students with learner difficulties (Gray, 2008; Ivory, 2007). Some other studies targeted differentiation to accommodate cultural diversity in the classroom (Gingsberg, 2005; Jackson, 2005; Herrera & Murry, 2016). Besides, a lot of research has been done to address the needs of English Language Learning (ELL) students at different settings (Artigliere et al., 2012; Bantis, 2008; Palmer, 2014; Poorandai, 2017). However, more recent studies focused on DI for all students rather than for a group of particular students in a class. Some of these studies directed their attention to the motivation of students in a differentiated class (Christensen, 2007; Houston, 2013) and some investigated student achievement through differentiation (Badgett, 2015; Magableh & Abdullah, 2020; Maxey, 2013; Patterson et al., 2009; Reis et al., 2011). All these studies indicated the effectiveness of and the need for DI multiple times.

Given that differentiated instruction is complex and very different from traditional classroom approach, some studies have aimed at providing teachers guidelines or tips to implement this approach in their classes step by step (Ducey & Key, 2009; Heacox, 2003; Pettig, 2000; Tomlinson, 2001; Watts-Taffe et al., 2012;

Wehrmann, 2000). Some teachers partially implemented DI in their classrooms as they only differentiate content and/or process or product (Bailey & Black, 2008), and some schools adopted new differentiated curricula (Fahey, 2000; Tomlinson, 2000). On the other hand, concerns about accountability obligations have risen and discussions about how to reconcile this "unconventional" approach and education standards have ensued (Brimijoin, 2005; McTighe & Brown, 2005; Tomlinson, 2000, 2001, 2005). As an essential part of the differentiation process, perceptions of teachers have been explored to find out the challenges or experiences they go through as they try to adopt this new approach (Bailey & Black, 2008; Burkett, 2013; Prince, 2011; Rouault, 2016; Tadesse, 2015). Studies revealed a need for more training and experience on DI implementation (Christopher, 2017; Gray, 2008; Richards-Usher, 2013; Sheehan, 2011; Smets & Struyven, 2020; Tomlinson et al., 2003). Some research directed attention to teacher training and the effects of the training on teachers' use of DI (Butler & Lowe, 2010; Edwards et al., 2006; Smets, 2017; Smets & Struyven, 2020; Tomlinson, 2000). As another essential component of initiating DI implementations at schools, perceptions of administrators have been explored, as well (Ruscoe, 2010; Williams et al., 2014). Tomlinson (2000, 2001) stressed the need for "high quality curriculum" and cooperation from administrations to implement differentiated instruction effectively and systematically.

While research on differentiated instruction mostly focused on primary and secondary education settings, there are also a number of studies looking into differentiation in higher education (Chamberlin & Powers, 2010; Ernst & Ernst, 2005; Santangelo & Tomlinson, 2009). Adult learners with even more life experience than younger learners are individuals with diverse interests, learning preferences, knowledge, backgrounds and motivation levels. Given that learning is

influenced by these variables (Tomlinson, 2001), an instruction that is not perceptive to different individual needs might not yield to effective learning (Santangelo & Tomlinson, 2009). As a result, more research focusing on DI at tertiary level has been carried out in many different contexts around the world (Beloshitskii & Dushkin, 2009; Chamberlin & Powers, 2010; Dosh & Zidon, 2014; Ernst & Ernst, 2005; Joseph et al., 2013). The findings of the research reported that DI at tertiary level enhanced learning and student engagement independent of the subject or the context.

Language teaching has not been oblivious to differentiated instruction (Herrera & Murry, 2016; Kashif, 2018; Kelley, 2018; Naka, 2018; Ortega et al., 2018). One method of language teaching clearly "does not fit all sizes" (Savignon, 2007). Researchers around the world studied the implications of DI in EFL classes and investigated the impact of DI on EFL learners' motivation and success at primary, secondary and higher education levels (Alavinia & Sadeghi, 2013; Cheng, 2006; Chin-Wen, 2015; Mukarapova, 2018; Tzanni, 2018; Yavuz, 2020; Yeh-uh Hsueh, 2007). However, although a vast amount of research is already available on many other subjects at various school levels, research on EFL teaching is relatively recent and rare.

At local level, although the classrooms in Türkiye are not as culturally or linguistically diverse as in the States or in Europe, "pedagogical diversity" based on readiness, interest and learning preferences can be observed in each classroom anywhere (Smets, 2017; Tomlinson, 2001). Studies addressing this diversity have been conducted from various perspectives. In Türkiye, many research studies have been carried out on DI at primary school level. The effects of DI implementation on the attitudes towards learning and the achievement of different subjects such as

maths, physics, Turkish, and social studies have been investigated (Demir, 2013; Durmuş, 2017; Ekinci, 2016; Kaplan, 2016; Karadağ, 2010; Salar, 2018; Şaldırdak, 2012; Tüfekçi, 2018; Üçarkuş, 2020; Ürek, 2017; Yıldız, 2020). The findings of the studies yielded positive results in learning and attitudes towards learning. Some researchers have focused on the teacher perspective in DI (Demirkaya, 2018; Karakaş, 2019; Özkanoğlu, 2015; Yavuz, 2020). These studies revealed that teachers need in-service training and more experience in differentiated learning.

Many researchers who conducted studies on DI at primary school level were interested in gifted learners and the impact of differentiated classes on their success, creativity, attitudes, and critical thinking and problem-solving skills. Empirical studies in various subjects such as math, foreign languages, geometry, physics, social studies and science indicated the positive impact of differentiation on learning (Abu, 2018; Çalıkoğlu, 2014; Güney, 2018; Karaduman, 2012; Karataş, 2013; Korkut, 2017; Kök, 2012; Özçelik, 2017; Umar & Reis, 2014). There also have been research studies on how to develop and design differentiated tasks and activities for gifted learners (Özdemir, 2016).

In recent years, differentiated language instruction has attracted some attention in English language teaching in the Turkish context. Several studies were conducted focusing on differentiated language instruction in primary school setting (Aras, 2018; Çoban, 2020; Gülşen, 2018; İzgi, 2014; Rasgen, 2020; Sapan & Mede; 2022). An increase in motivation and positive attitudes towards English learning were found as a result of the studies and it was indicated that differentiated instruction has a positive effect on student success. At tertiary level, there has been a study on differentiated language instruction, which concluded that students have developed positive attitudes towards language learning through differentiated

instruction and their academic achievement has been positively affected (Leblebicier, 2020; Şaban, 2020). However, there is still a need for more research on the implementation of and the perceptions on differentiated language instruction at tertiary level.

Statement of the Problem

Differentiated instruction mainly aims to address the similar issues revealed in the British Council and TEPAV report (2015) including lack of motivation and interest in English, unsuitable materials and unsuitable teaching. Although differentiated instruction has attracted many educators and researchers as an effective teaching philosophy (Benjamin, 2002; Blaz, 2006; Dixon et al., 2014; George, 2005; Gregory & Chapman, 2013; Logan, 2011; Reis & Renzulli, 2018; Roberts & Inman, 2023; Theisen, 2002; Tomlinson, 1995, 1999, 2000a, 2000b, 2001, 2005, 2014, 2017), teacher perceptions of differentiation instruction may hinder its acceptance and diffusion in the actual classroom practice. Teacher perceptions are one of the strongest facilitators for the implementation of differentiated instruction (Bondie et al., 2019; Dipirro, 2017; Korthagen, 2014; Tomlinson, 2008) as teacher perceptions directly affects their awareness of learner diversity and how to cater for these differences (Karimi & Nazari, 2020; Putra, 2023; Tomlinson et al., 2003). Positive perceptions and beliefs are the prerequisite of changing and adapting a teaching practice (Borg, 2003; Kalaja et al., 2015; Tomlinson & Imbeau, 2010). Although there is a good amount of research on teacher perceptions of differentiated instruction in primary and secondary education (Burket, 2013; Chien, 2015; Christopher, 2017; Demirkaya, 2018; Gafi-Sharabi, 2011; Gaitas & Martins, 2017; Gülşen, 2018; Jamoliddinova & Kuchkarova, 2022; Melesse, 2015; Ordover, 2012; Özkanoğlu, 2015; Paone, 2017; Prince, 2011; Richards-Usher, 2013; Shareefa at al.,

2019; Scott & Spencer, 2009; Tomlinson & Santangelo, 2012; Wai & Wan, 2016; Whipple, 2012; Zolyomi, 2022), EFL instructor perceptions of differentiation at tertiary level have received less attention (Santangelo & Tomlinson, 2009). Likewise, implementation of DI or teachers' perceived practice of DI at university level has not been the focus of most studies on DI while there is an abundance of studies with a focus on DI practice at K-12 level (Çam, 2013; Dosch & Zidon, 2014; Joseph et al., 2013; Ismajli & Imami-Morina, 2018; Karadağ, 2010; Karakaş, 2019; Melesse, 2015; Morrison-Thomas, 2016; Palmer; 2014; Reis et al., 2011; Shaboul et al., 2020; Suprayogi et al., 2017; Tomlinson & Santangelo, 2009; Yavuz, 2020; Zoraoğlu, 2016). However, differentiation practice at tertiary level should gain the same level of significance. College students are not at all less diverse with their different backgrounds, various interests and learning preferences and diverse learning experiences. In fact, preparatory EFL classes at universities might have the most learner variance in Turkish context. Students in a preparatory school are enrolled in various programs to study art, engineering, language, science and many others. Naturally they have different interests and abilities. Moreover, they have different attitudes towards language learning. Some of them are very motivated about language learning while others are highly unmotivated. Also, they have different educational backgrounds. Some of them have studied at private schools while some in state schools before university, which might have had an impact on their approach to learning in general and language learning in particular. Even if students are in the same class, their readiness level may differ a lot depending on their educational background. Furthermore, they have diverse cultural backgrounds. They come from different cities in different regions of Türkiye that have different sub-cultures. Also, they are at different ages. Some students start university at a later age or they want to

have a second bachelor degree. Considering this great variety, it can be easily said that immense diversity is present at a preparatory school at Turkish universities and DI can meet these diverse needs of students to reach equity (George, 2005) and maximize everyone's learning. Yet, implementation of DI might be complex and affected by some factors. Thus, this study aims to find out the perceptions and perceived practices of Turkish EFL instructors at university level.

Aim of the Study

The purpose of the study is to investigate Turkish EFL instructors' perceptions on and practices of DI in the context of an English language preparatory program of a state university in Eskişehir.

Research Questions

This study attempts to respond the following questions:

1. What are Turkish EFL instructors' perceptions on differentiated instruction at tertiary level?

    1a. Do their perceptions differ based on:

        i. highest degree of graduation?

        ii. teaching certifications hold?

        iii. years of teaching experience?

        iv. number of teaching hours?

2. What are Turkish EFL instructors' practices of differentiated instruction at tertiary level?

    2a. Do their practices differ based on:

        i. highest degree of graduation?

        ii. teaching certifications hold?

        iii. years of teaching experience?

        iv. number of teaching hours?

Significance of the Study

This study can be a contribution to the field in several ways. First of all, most of the studies on DI focus on the learner achievement, learner attitudes and motivation at primary and secondary school (Badgett, 2015; Christensen, 2007; Houston, 2013; Magableh & Abdullah, 2020; Maxey, 2013; Patterson et al.,2009; Reis et al., 2011). Differentiated instruction at tertiary level has received relatively less attention. Secondly, research on differentiated language teaching in general has not been vastly conducted, and the limited number of studies on differentiated language instruction are very recent (Aras, 2018; Çoban, 2020; Gülşen, 2018; İzgi, 2014; Rasgen, 2020; Sapan & Mede, 2022). In Türkiye, there are only a few studies carried out at tertiary level (Leblebicier, 2020; Şaban, 2020), and no studies focused on EFL instructors' perceptions and practices of differentiated instruction at this school level. This study might raise awareness about the importance of differentiated instruction in the classroom. Also, higher education institutions might gain insights about the experiences and challenges of instructors as well as the practices in the classroom. Certain steps, if need be, can be taken to resolve these difficulties and to encourage differentiation practice in higher education institutions which are relatively more independent when making decisions in comparison to other level institutions. Likewise, in-service trainings on differentiated instructions, if need be, might be organized for teachers at university level. Furthermore, this study might urge practitioners at English Language Teaching (ELT) field to reflect on the curriculum followed to consider whether pre-service English teachers are effectively trained to integrate differentiation into their future teaching practice. This study bears the potential to inform ELT practitioners about a need for an effective guidance to

pre-service English teacher on implementation of DI. (Fields-Homes, 2008; Scott & Spenser, 2009; Wan, 2016; Wright, 2018).

Definitions of the Key Terms

DI (Differentiated Instruction): It is an instruction based on proactively modifying content, practice and product according to learner readiness level, interests and learning profile. (Tomlinson, 2001).

EFL (English as a Foreign Language): The situation in countries (e.g., Türkiye) where English is not the mother tongue of the majority of the population and has no formal administrative role (TEPAV & British Council, 2015).

CHAPTER 2: REVIEW OF RELATED LITERATURE

Introduction

This chapter presents the review of literature relevant to this research the purpose of which is to investigate Turkish EFL instructors' perceptions and practices of differentiated instruction. In this regard, this review will cover the definitions and explanations of differentiated instruction, look at important factors that differentiation is based on, explain the theories behind them, present the literature on teachers' perceptions of and practices of differentiated instruction, demonstrate and analyze research conducted on teachers' perceptions of and practices of differentiated instruction in various contexts.

Differentiated Instruction

Students differ in many aspects including background experience, culture, language, gender, autonomy, confidence, self-awareness, readiness, interest, intelligence preferences and learning styles. All these individual differences have a direct effect on the learning process (Dörnyei, 2005; Gardner & Tremblay, 1995). In a classroom where instruction is effectively differentiated, the teacher recognizes these differences and is aware of their major impact on the way students learn and of the nature of the support students need at different points in the learning process (Tomlinson, 2010). Tomlinson (2001) defines a differentiated classroom as a classroom where "the teacher proactively plans and carries out varied approaches to content, process and product in anticipation of and response to student differences in readiness, interest and learning needs" (p. 7). In other words, a teacher who differentiates their instruction continually plans and reflects on their plans to make sure all students in the class learn the key contents, make sense of them and

demonstrate their learning in ways best suited to them in a comfortable, safe environment to maximize their learning capacity (Tomlinson, 2010).

Differentiated instruction is not a set of strategies or methods to apply in a classroom or it is not a set of activities that are occasionally brought to the class when there is extra time. Rather, it is a general approach to take to teaching and learning, and it is a set of principle about teaching and learning (Sousa & Tomlinson, 2011; Tomlinson, 2017). Differentiated instruction is not a novel approach, either. As Algozzine and Anderson (2007) put it, "differentiated instruction integrates what we know about constructivist learning theory, learning styles, and brain development with empirical research on influencing factors of learner readiness, interest, and intelligence preferences toward students' motivation, engagement, and academic growth within schools" (p.50).

Differentiation based on Student Characteristics

In the differentiated instruction framework by Tomlinson (2001), students' readiness, interests and learner profiles are the main factors that differentiation of instruction can be based on.

Readiness

Readiness is not tantamount to intellectual capability; it is rather a much more comprehensive state that is created by previous learning and life experiences, beliefs about school, besides cognitive and metacognitive proficiency (Santangelo & Tomlinson, 2009, 2012; Sousa & Tomlinson, 2011). Sousa and Tomlinson (2011) define readiness as "an individual's current proximity to, or proficiency with, a specific set of knowledge, understanding and skills designated as essential to a particular segment of study" (p. 85). The concept of "readiness level" is closely related to a learner's zone of proximal development (ZPD), a notion put forward by

Vygotsky in the 1970s as part of his social constructivist theory which puts forward the idea that learners, rather than being passive recipients of information, actively "construct" their knowledge and understanding through connections between the new input and their unique experiences and pre-existing knowledge (Bada, 2015). Vygotsky's social constructivism theory proposes that supportive, safe and cooperative social environment is crucial in the learning process, and it has a significant impact on education (Subban, 2006). The guidance and support of a more knowledgeable person is essential for learning and constructing a bridge in the ZPD which the Russian psychologist described as the distance between what learners' current knowledge, understandings or abilities and what they can potentially achieve with support and scaffolding (Vygotsky, 1978). As an implication of this theory in the classroom, teachers have a significant role of helping students by presenting them with the right amount of challenge and providing the necessary support and scaffolding to reach the target. Teachers should meet students where they are in terms of readiness level, and walk with them to their target providing support and guidance for their learning process until they achieve relative autonomy (Pham, 2012; Tomlinson, 1999). Taking student readiness level into consideration, they should provide more structured or complex activities or products, skipping or adding practice, offering more opportunities for direct instruction or discovery or chances to work at different paces (Tomlinson, 1999a). As well as teachers, peers can also help build a bridge in the ZPD in collaborative activities. Any instruction method that includes learning from others and with others is highly encouraged in differentiated instruction.

Similar to readiness level, ZDP does not refer to the same place for every learner in a classroom just as student readiness can differ depending on many

variants including attitude towards learning, past experiences at school, some environment, support provided, personal strengths and weaknesses (Sousa & Tomlinson, 2011). When appropriate level of challenge and necessary scaffolding for each student are provided through differentiation based on readiness, effective learning will take place (Vygotsky, 1978). There are studies pointing out the positive role ZPD based instruction in learning in different contexts including language learning (Alavi & Taghizadeh, 2014; Förtsch et al., 2016; Mirzae & Eslami, 2015; Nazerian et al., 2021). A research study conducted by Rezaee and Azizi (2012) that investigated the role of ZPD in learning and the importance of addressing it demonstrated that there is a significant enhancement in learning when it is cooperative and supportive.

Some researchers that work on learner motivation include the accommodation of the needs based on readiness level as an important factor in their theories to explain learning motivation. Dörnyei (1994) also puts emphasis on readiness level in his multi-level model that explains the motivation for L2 learning. The need for achievement and self-confidence to increase motivation in the learner level, which is related to the personality traits of the learners, is closely related to the readiness level of the students. Accommodation of the learner needs based on their readiness level in a differentiated classroom both aims to provide each learner with the right level of challenge depending on what they bring to the classroom and to boost students' self-confidence though sense of achievement. Besides Dörnyei's multi-level model, social constructivist model introduced by William and Burden (1997) indicated optimal degree of challenge as a factor increasing learners' motivation of learning (Şakiroğlu & Dikilitaş, 2012). When their readiness level is not taken into account and instruction is not planned accordingly, students might

have anxiety due to their lack of confidence which they relate to their perceived insufficient level of English (Öztürk & Çeçen, 2008).

Learner Interest

Individual interest of students is another significant factor that should shape the instruction in a classroom according to Tomlinson's framework of differentiated instruction. Renninger and Hidi (2002) define interest as "a psychological state of having an affective reaction to and focused attention for particular content and/or relatively enduring predisposition to re-engage particular classes of objects, events or ideas" (p. 174). Interest is defined as a very powerful tool to generate motivation and engagement, which is essential for learning to happen (Ainley, 1998; Renninger & Hidi, 2017). According to cognitive psychologists, when a person is interested in learning, their attention and concentration enhance, and persistence, energy and intensity as well as pleasant feelings and willingness in learning are displayed (Ainley et al., 2002; Sousa & Tomlinson, 2011). Individual interest is perceived as a "pre-condition of intrinsic motivation" and learning is "the outcome of intrinsic motivation" (Hidi & Harackiewicz, 2000, p. 158).

Studies on individual interest have shown that both children and adults interested in particular activities or subjects pay more attention, maintain their focus longer, learn more and enjoy the process to a greater degree than uninterested individuals (Ainley, 1998, 2007; Bhandari et al., 2019; O'Keefe et al., 2017). Likewise, studies show that academic achievement is positively affected by responding to learner interest (Fryer et al., 2021; Hidi et al., 2002; Hoffman, 2002; Jansen et al., 2016; Köller et al., 2001; Kpolovie et al., 2014; Triarisanti & Purnawarman, 2019). When students carry out tasks and activities in which they are interested, they achieve a higher degree of creativity, intrinsic motivation and

autonomy. This ultimately paves the way to efficient learning and success (Renniger & Hidi, 2002; Tomlinson, 2010).

As with readiness, learner interests vary. Therefore, it is important to find out about different interests in the classroom or create interest on numerous subjects by providing students with relevant choices regarding the topic of the materials they deal with and adapting student-centred approaches in the instruction (Jocz et al., 2014; Kang & Keinonen, 2018; Tomlinson, 2001). The interest literature usually puts forward three types of interest including individual interest, situational interest and topic interest (Ainley et al., 2002). Individual interest refers to an individual's personal proneness to response to his/her surrounding while situational interest is aroused by certain elements or structural characteristics in the environment (Ainley et al., 2002; Hoffman et al., 1998). Topic interest which is related to the interest stimulated by a specific topic, on the other hand, is considered to contain both individual and situational sides, and all these three types of interests influence learning through their interaction (Ainley et al., 2002). Therefore, teachers may foster learning for all students creating situational interest inherent in the material and mode of presentation or in the activities (Hidi & Harackiewicz, 2000). In order to elicit interest from learners, teachers can adopt various ways including modifying teaching materials and strategies, presentation of the tasks in more meaningful or personally relevant ways, promoting collaboration, adjusting the challenge of the tasks (Hidi & Harackiewicz, 2000). A sense of autonomy and being able to choose might also create interest in a subject dealt in the class (Grossmann & Wilde, 2020).

Dörnyei's multi-level model (1994) also stresses the importance of interest and relevance in the learning situation level of the model to generate motivation in

the language learner. Course specific motivational components include creating interest in the course.

Learner Profile

Addressing learners' preferred way of learning is as essential as responding to their readiness and interests to achieve a successful learning process (Dunn & Honigsfeld, 2013). Learning profile is influenced by four elements; learning style which is the preferred way of learning, intelligence preference, which is a neurologically formed way of learning and thinking, gender and culture (Tomlinson et al., 2003; Tomlinson, 2010).

Learning style is a learner's "natural, habitual and preferred way of absorbing, processing and retaining any information or skill" (Reid, 1987 as cited in Peacock, 2001). As Dunn (1983, as cited in Landrum & McDuffie, 2010) puts it "learning style comprises a combination of environmental, emotional, sociological, physical, and psychological elements that permit individuals to receive, store, and use knowledge" (p. 496). Many learning style frames that include one or more of these elements have been suggested by educators and researchers. Reid (1987 as cited in Peacock, 2001) points out six different learning styles; 1. Visual learners who prefer seeing things in writing, shapes, diagrams or images, 2. Auditory learners who favors listening, 3. Kinesthetic learners who prefer active and physical involvement, 4. Tactile learners who enjoy hands-on tasks, 5. Group learners who prefer working in groups or pairs and 6. Individual learners who prefer working alone.

Another learning styles frame was suggested by Kolb (1984) regarding how the learning happens. According to this frame, learners perceive the new information at some point on a scale from concrete experience to abstract conceptualization. The

process of the new information also takes place at some point on a scale from reflective observation to active experimentation. This frame divides the learner styles into four categories as *divergers*, *assimilators*, *convergers* and *accommodators* based on the where learners receive and process information on this scale. Divergers perceive information in concrete situations and process information in reflective observation. They need a personal meaning and personal interaction in the learning process. They need to understand why an input is important to learn. Assimilators perceive new information in abstract concepts and make sense of it through reflective observations. They are interested in the information itself and they are very good at following procedures. They like working individually. Convergers also perceive new information in abstract conceptualization and they like experimenting and trying things while processing the new information. They are active learners and they want to have hands-on experience in the learning process discovering how things work. Convergers are interested in working with things. Accommodators learn new information in concrete situations and they want to experiment things while processing the new information. They like testing and discovering things. They prefer interactions with other students in the learning process.

Other theorists that suggested a learning style model are Dunn and Dunn (1993). The model consists of five categories: environmental, emotional, sociological, physiological and psychological learning styles. The following learning preferences stem from these categories:

Lighter versus darker environments

Silence versus noise when working

Cooler versus warmer rooms

Sitting up straight versus reclining while learning

Intrinsic motivation to complete a task versus motivation through adult prompting

Completing one task at a time versus multitasking

Independence as a learner versus dependence on adult prompting/coaching

Highly structured tasks versus open-ended tasks

Working alone versus working with one peer versus working as part of a team

Predictable routines versus variation

Listening versus watching versus touching to learn

Working at one time versus another

Whole-to-part versus part to whole approaches

Moving versus remaining still while learning (as cited in Sousa & Tomlinson, 2011, p. 138-139)

Many studies reveal that a direct causal relation does not exist between particular learning styles and achievement (Desmedt & Valcke, 2003, as cited in Jayanthi et al, 2014; Inal et al., 2015; Soylu & Akkoyunlu, 2009; Stahl, 1999). Having said that, teacher-learner teaching/learning style mismatch leads to academic failure, frustration and demotivation (Reid, 1995, as cited in Peacock, 2001). There are some studies revealing a positive relationship between learning styles, student engagement and achievement in the lesson in different contexts (El-Sabbagh, 2021; Halif et al., 2020; Hein & Budny, 1999; Lee et al., 2016; Lu et al., 2007; Moenikia & Babelan, 2010; Sharp et al., 1997;). Furthermore, according to Sullivan (1993 as cited in Tomlinson et al., 2003), research analysis on learning styles reports that higher achievement and positive attitude were gained in diverse contexts through flexible teaching and counselling that address students' learning styles. Some studies

looked into whether there is a match between teaching styles and learning styles in various contexts (Abu-Asba et al., 2014; Boström, 2011; Brown, 2009; Javadi et al., 2017; Khalid et al., 2017; Övez & Uyangör, 2016) and some focused on EFL learners (Gilakjani, 2012; Karabuga, 2015; Naimie et al., 2010; Peacock, 2001). The teaching implications of the studies indicate that a more balanced address to all styles is necessary. As Tomlinson stated (2017), learners do not have a fixed learning style and different learning styles can be exploited depending on many factors such as the time of the day, content, context and the learning process.

Multiple intelligence theory, proposed by Gardner in 1983, suggests that intelligence is not "a single, all-purpose machine" that works the same for everyone (Gardner, 2000, p.32). Gardner (2000) defines intelligence as a "biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture" (p. 34). He puts forward that human mind is not a single entity but rather, it should be perceived as "a series of relatively separate faculties, with only loose and nonpredictable relations with one another" (p. 32). Gardner proposed a list of seven intelligences in his seminal book Frames of Mind: The Theory of Multiple Intelligences (1983):

> *Verbal linguistic intelligence* refers to the ability to learn languages and use language to achieve goals
>
> *Logical-mathematical intelligence* refers to the capacity to analyze problems in a logical way and examine issues scientifically
>
> *Bodily-kinesthetic intelligence* refers to the capacity to use one's entire body or parts of the body to solve problems
>
> *Spatial intelligence* refers to the ability to recognize and manipulate both the patterns of wide space and the confined areas.

Musical intelligence refers to the skill in performance and creation of musical patterns.

Interpersonal intelligence refers to the capacity to communicate and work efficiently with other people.

Intrapersonal intelligence refers to the capacity to understand oneself and effectively regulate one's own life using this information.

In his book *Intelligence Reframed* (2000), Gardner added two more intelligences to this list; naturalist and spiritual intelligences. They are defined as follows:

Naturalist intelligence refers to the skill in recognizing and categorizing various species in their environment.

Spiritual Intelligence refers to the capacity to locate oneself with respect to the furthest reaches of the cosmos.

Linguistic and logical-mathematical intelligences are most favored in a traditional school environment with traditional assessments or instruction. However, no intelligence is necessarily better or more moral than another one (Gardner, 2000). Moreover, when learners' intelligence type is responded as a student need, students get more engaged in the learning process and learning becomes more effective for them.

Sternberg's thinking styles theory or the theory of mental self-government (1997) is another important model developed to explain intelligence preferences (Sternberg & Zhang, 2005). Thinking styles refer to a "preferred way of thinking" and solving problems (Sternberg, 1997, p. 19). Grigorenko and Sternberg (1997) emphasize that one should not confuse style of thinking with ability. It is "rather a favored way of expressing or using one or more abilities" (p. 297). Thinking styles of

people vary and they do not only have one style but a profile of styles (Sternberg, 1997). People who have the same kind of abilities might still have very different thinking styles. Likewise, similar personalities do not necessitate similar thinking styles. Grigenko and Sternberg (1997) perceive thinking styles as "buffers between such internal characteristics as ability and personality, on the one hand, and the external situation, on the other" (p. 297). Thinking styles manifest themselves in all domains including learning and teaching, and unfortunately if the thinking styles of people do not match the ones valued most by the school, they usually suffer from this mismatch (Sternberg, 1997). Grigorenko and Sternberg (1997) and Zhang (2004) state that a vast variation of styles exists among teachers and students and that students' thinking styles forecast their academic achievement. Sternberg's theory of mental self-government has five dimensions reflecting 13 thinking styles (Zhang, 2004):

Functions: a) legislative style b) executive style c) judicial style

Forms: a) hierarchical style b) monarchic style c) oligarchic style d) anarchic style

Levels: a) global styles b) local styles

Scopes: a) internal styles b) external styles

Leanings: a) liberal and conservative styles

Zhang (2004) provides key characteristics for each style:

Legislative style: One prefers to work on tasks that require creative strategies; one prefers to choose one's own activities

Executive style: One prefers to work on tasks with clear instructions and structures; one prefers to implement tasks with established guidelines

Judicial style: One prefers to work on tasks that allow for one's evaluation; one prefers to evaluate and judge the performance of other people

Hierarchical style: One prefers to distribute attention to several tasks that are prioritized according to one's valuing of the tasks

Monarchic style: One prefers to work on tasks that allow complete focus on one thing at a time

Oligarchic style: One prefers to work on tasks that multiple tasks in the service of multiple objectives, without setting priorities

Anarchic style: One prefers to work on tasks that would allow flexibility as to what, where, when and how one works

Global styles: One prefers to pay more attention to the overall picture of an issue and to abstract ideas

Local styles: One prefers to work on tasks that require working with concrete details

Internal styles: One prefers to work on tasks that allow one to work as an independent unit

External styles: One prefers to work on tasks that allow for collaborative ventures with other people

Liberal styles: One prefers to work on tasks that involve novelty and ambiguity

Conservative styles: One prefers to work on tasks that allow one to adhere to the existing rules and procedures in performing tasks (p. 369-370)

These widely accepted theories indicate the necessity of differentiation of learning materials and processes according to learner intelligence types and thinking styles to support each student in their learning experience (Sternberg & Zhang,

2005). The full potential and strengths of the students can not be reached with content, materials, tasks and assessment that suits only one intelligence type. A learning environment where students' learning profiles can be matched with the presentation of content, tasks and work that students are supposed to produce is a crucial part of creating optimal learning conditions for all learners to maximize their potential (Tomlinson et al., 2003).

Culture is another dimension of learning profile and it is an important factor that influence the learning process. As Gay (2002) puts it, "culture strongly influences how we think, believe, communicate and behave, and these, in turn, affect how we teach and learn" (p. 8). Therefore, culture cannot be divorced from the learning process. Students carry different social and economic backgrounds, ethnical and linguistic differences and different sociocultural realities to the classroom with them, and responding to those cultural differences in the learning process will not only make students more self-confident but it will also make the learning process itself more meaningful to students (Griner & Stewart, 2012). Furthermore, culturally responsive teaching improves the academic achievement of the students (Gay, 2002; Ladson-Billings, 2001; Santamaria, 2009).

As well as culture-based learning preferences, they also have gender-based preferences. There are some studies that attempt to reveal some possible differences between the genders in terms of many factors including interest, learning styles, learning strategies, motivation and approaches to learning in the context of education (Ainley et al., 2002; Aslan, 2009; Daif-Allah, 2012; Greasley, 2013; Hidi et al., 2002; Hoogerheide, 2015; Philbin et al.,1995; Pica et al.,2008; Severiens & Dam, 1994; Siebert, 2003; Viriya & Sapsirin, 2014; Wehrwein et al., 2007). Teachers

should be aware of those differences and accommodate this kind of diversity in their classes to ensure maximum level of learning.

What to Differentiate

Learning Environment

Learning environment has a significant impact on the learning process and its importance should be taken into consideration in the construction of the learning process. For a learning process to exist in a classroom environment, certain physical, psychological and emotional conditions should be met in a classroom. Students should feel physically comfortable and also "safe, respected, involved, challenged and supported" for an effective learning to take place (Tomlinson & Imbedau, 2010).

As Sausa and Tomlinson (2011) put "learning environments have profound implications for learners both affectively and cognitively" (p. 31). The academic performance of the students cannot be divorced from their feelings and their socio-emotional needs such as acceptance, respect, belonging, safety and support. As it is the case in readiness, learner interests and learner profile, students' socio-emotional needs are far from identical. Therefore, teachers need to be aware of these affective needs and create a positive learning environment where they are accommodated given that "positive learning environment is a prerequisite for learning" (Sausa & Tomlinson, 2011, p. 31). According to Tomlinson (2017), the key elements in an effective learning environment should include a welcoming atmosphere, mutual respect, feeling of safety, collaboration and scaffolding. Furthermore, learning environment should be learner-centered, flexible, stimulating and rich so that it can be possible to provide the opportunity for each and every learner in the classroom to reach academic success (Tomlinson & Imbedau, 2010).

Content

Content is defined as the input of teaching and learning (Tomlinson 2001, 2010, 2017). It is the information, skills, ideas that the students are expected to learn. Differentiation in the content is usually applied to how the students get access to the content. Content itself is not generally expected to be differentiated as the same key ideas, information and tasks should be taught to every student in the classroom. Unless a student cannot learn the new content before revising a previous content, it is the ways to reach the content that is differentiated. Students need to be offered diverse approaches in the presentation of the content to meet them where they are in the learning process and provide the necessary support for further progress (Tomlinson, 2017).

Differentiation of content is carried out based on students' readiness level, interests and learning profile, or a combination of all these variants. Differentiation of the content based on readiness requires presenting students with materials or information to be learnt tailored based on their current proficiency in understanding the content (Tomlinson, 2017). Differentiating the content based on interest means materials and information prepared to present the content should include learners' topics of interest or create interest in learners. Content is also differentiated based on learner profile. It means that the content is presented in multiple ways to ensure a match between learning and students' preferred ways of learning (Tomlinson, 2017).

Process

Process refers to the activities created to provide learners with the opportunity to use key information, ideas or skills to "make sense" of the content. It starts when students completed taking input and begin to process this new input (Sausa & Tomlinson, 2010). Sausa and Tomlinson (2010) describe this process as

"the point when a student tries out ideas, compares them with what she already knows, and applies them to new settings" (p. 99). This sense making is crucial in learning as the new input cannot be owned by the students before they are involved in a process of analyses, questioning, applying or trying the new content to make sense of it (Tomlinson, 2017). According to Tomlinson (2017):

> a good differentiated activity is something students will make or do
> in a range of modes, at varied degrees of sophistication, and in varying time spans,
> with varied amounts of teacher or peer support (scaffolding),
> using an essential skill(s) and essential information,
> in order to understand, extend, or apply an essential idea or principle or answer an essential question. (p. 134)

Product

Tomlinson (1999) defines products as "vehicles through which students demonstrate and extend what they have learned" (p. 11). Through products students can exhibit what they have received and internalized at the end of the study period (Sausa & Tomlinson, 2011). Furthermore, products can be fully and directly owned by the students, which makes it crucial in the learning process and achievement (Tomlinson, 2017). Products are also the elements of the learning cycle when students can easily connect to the real word through their task or work and see the utility of the input from school in real life. Students need to be offered different product tasks where they can put into practice the skills, information and ideas they have learnt in ways that they want to work and with topics that interest them and connect them to the real life.

Practices of DI

The implementation of DI is a complex practice (Tomlinson, 2000). It is a multi-layered process and it is only normal that teachers do not know where to start. However, there is a vast amount of research and resources on practices of DI providing guidelines on where to start and what kind of activities and tasks can be exploited in a differentiated classroom (Algozzine & Anderson, 2010; Doubet & Hockett, 2015; Gregory & Chapman, 2013; Roberts & Inman, 2015; Smets, 2017; Smith & Throne, 2007; Theisen, 2002; Tomlinson 2001, 2010, 2013, 2014, 2017). These include using different texts and resources for the same outcomes, learning contracts, mini lessons, providing varied support systems such as peer support, highlighted print material, reading partners, tiered assignments, homework and assessments, independent studies, anchored activities keyed to student interests, learner centers (Tomlinson, 2017). Furthermore, "respecting individuals, owning student success, building community, providing high quality curriculum, assessing to inform instruction, implementing flexible classroom routines, creating varied avenues to learning, and sharing responsibility for teaching and learning" are considered as "the nonnegotiables" of the differentiation model (Tomlinson et al., 2008, p. 3).

It is possible for teachers to adopt this teaching philosophy through gradual implementation in their classroom. Effective practice of DI can be reached in "baby steps" (Whermann, 2000), which learners can still benefit to a great extent. Nevertheless, for systematic and full implementation of differentiation, support and cooperation from administrators and education policies are essential (Pham, 2012; Tomlinson, 2001).

As revealed by the findings of the research on DI, teachers need trainings and experience on DI. Moreover, there are studies demonstrating that there is not a big difference between novice and experienced teachers about the issue (Hilyard, 2004).

Tomlinson and Imbedau (2010) draw a frame of the essentials of differentiation instruction. For them, differentiation instruction should:

• align with essential knowledge, understanding, and skills,

• be designed with student differences in mind, including differences in learning, culture, language, and gender,

• be flexible in terms of time, materials, support systems, student groupings, instructional modes, and teaching and learning strategies,

• offer various routes to accomplishing essential learning outcomes,

• help students develop self-efficacy and independence as learners,

• help students develop proficiency in collaborative learning,

• provide classroom routines that balance student needs for guidance and freedom (p. 22)

In order to benefit differentiation on the maximum level, Tomlinson & Imbedau (2010) emphasize the interdependence of four key elements; learning environment, curriculum, assessment and instruction. All these four elements should be designed in a way that can provide learners to optimize their learning performance. As Tomlinson and Imbedau stated (2010), it is essential that these elements support the learning process in differentiated instruction to reach the maximum level of learning.

Empirical Studies on Practices of Differentiated Instruction

Multiple studies focused on differentiated practices of teachers in diverse contexts at global and Turkish level.

International Studies

Tomlinson and Santangelo (2009) conducted a study to explore the effects of differentiated instruction in an introductory-level graduate course context at a large, state- supported university. Differentiated instruction was implemented in "Education and Psychology of Exceptional Learners" class based on the readiness levels, interests and learning profile of the 25 students enrolled in the class during the semester when the study was carried out. The progress of the students based on the course objectives was recorded via performance on the pre- assessment, the primary course assignments, and other class-based activities. Each course objective was assessed through at least two sources of data. A standardized course evaluation instrument with well-established reliability and validity (Educational Testing Service, 1995), the Student Instructional Report (SIR) II, was employed to explore students' perspectives about the class. A neutral faculty member conducted The Student Instructional Report (SIR) II where students responded anonymously to 45 items using a five-point Likert scale during the last class meeting, precisely following all the prescribed procedures. The SIR II provided students an opportunity to respond. Students' perspectives about differentiation were recorded in narrative format and all the participants submitted a written reflection; responses ranged from six sentences to two pages. The findings indicated that differentiation had a positive impact on student learning. Students' class performance and their reflections on the experience showed that students were presented with appropriate levels of challenge and they found the course content and the activities relevant and meaningful.

An experimental study conducted by Reis et al. (2011) investigated how a differentiated, enriched reading program affects students' oral reading fluency and comprehension through the schoolwide enrichment model–reading (SEM-R). 63

teachers and 1,192 second through fifth grade students across five elementary schools in the USA were randomly selected for treatment and control conditions. The findings of the experiment indicated that an enrichment reading approach, with DI and less whole group instruction, was as effective as or more effective than a traditional whole group basal approach.

Another study by Joseph et al (2013) was conducted to investigate the impact of implementing a differentiated instruction to teach second year undergraduate students who take a course a tertiary institution. Four hundred and thirty-four students in two education campuses were reported to pursue the course over a period of one semester. Half of the students were exposed to differentiated instruction while the other half were taught in the whole- class instructional approach. Following an assessment of the impact differentiated instruction have on students' general understanding of the course, the researchers reported that the students were content with the differentiated instructional approach, and 90 per cent of the participants were reported to have higher levels of intellectual growth and interest in the subject. According to the study, most of the students that were taught in differentiated instruction showed deep understanding of the main concepts of the course. Nearly all students were reported to show willingness to experience differentiated instruction in subsequent courses during their tenure at university and a majority of them expressed willingness to implement differentiated instruction in their own classes when they graduate.

A qualitative study was conducted by Palmer (2014) to explore the practices of mainstream teachers to cater for academic needs of English Learners (ELs) in their classrooms on a daily basis. Semi-structured open-ended interview questions were used as data collection tool. The study sought answers for multiple questions

including how teachers used data to plan for differentiated instruction and what processes teachers go through when differentiating content, practice and product. It also aimed to explore teachers' experiences and challenges they face in the implementation of differentiated instruction, and what training they receive to help them become effective at teaching EL students? Purposive samples were selected from one school in the South-eastern United States with a high population of ELs. The results suggested that differentiation of choice as well as interest is essential for creating an environment to meet the academic needs of ELs. The study also demonstrated that although teachers think differentiation in the mainstream classroom was time-consuming, difficult to plan for, and often was met with a lack of resources, they felt that differentiated instruction was the only way to accommodate the academic needs of ELs.

Dosch and Zidon (2014) carried out a quantitative research study in higher education context to examine the implementation of DI in higher education. A differentiated (DI) classroom with 39 undergraduate students was compared to a nondifferentiated (NDI) classroom with 38 undergraduate students in two different sections of the same Educational Psychology course taught by the same instructor in a mid-sized Midwestern University to understand the impact of DI on achievement. In addition, perceptions on the DI were explored. The NDI group was significantly outperformed by the DI group on the aggregates of the assignments and the exams. The findings from the course evaluation and survey questions demonstrated that the DI group perceived differentiated methods as useful to their learning.

One other study was carried out by Melesse (2015) to examine the teachers' perceptions, practices and challenges of differentiated instruction in a primary school context in Indonesia. The study benefited a mixed-method design in which a

questionnaire, semi-structured interviews and focus group discussions were used to collect quantitative and qualitative data. Following the quantitative and qualitative analysis of the data, the results showed that most primary school teachers are not familiar with the concepts of differentiated instruction. Comparisons were made based on gender, qualification, experience and subject matter, and it was revealed that female teachers and language and mathematic department teachers practice better differentiation while qualification and experience did not create a statistically significant difference. The study overall demonstrates that majority of the teachers do not practice differentiation based on students' readiness, interest and learning profiles. Variables such as knowledge and experience, commitment and motivation, resources and time availability, class size, range of diversity in classroom, leadership and parental support and staff collaboration affect differentiation practice in a positive or negative way.

Another study conducted on the practice of differentiated instruction was carried out by Morrison-Thomas (2016) as a qualitative case study with the purpose of exploring the implementation of differentiated instruction in elementary-school classroom setting, from both the perspectives of teachers and the observation of its implementation. 10 participants were selected from a population of 42 certified teachers who had worked at the selected site for minimum three years and who practiced differentiated reading strategies in kindergarten through fifth grade. Open-ended interviews were the instrument of the study and it used field notes for the classroom observations for triangulation purposes. The study suggested that although the participant teachers have extensive knowledge about differentiated instruction and their role as a teacher, they experienced many difficulties in the implementation of differentiated instruction in their classrooms. They highlighted mainly four

challenges; “1. Differentiated instruction is time-consuming, 2. It is very difficult to find appropriate multi-level tasks and activities. 3. There is a lack of materials and sources. 4. The assessments are not differentiated” (p. 4).

One other research study conducted by Suprayogi et al. (2017) looked into any possible links between teachers’ implementation of differentiated instruction and different variables such as teachers’ DI self-efficacy, teaching beliefs, teaching experience, professional development, teacher certification and size of the classes. The study was carried out with the participation of 604 teachers in public and private school contexts in Jakarta province in Indonesia. Four types of instruments were employed to collect quantitative data from the participants; a teacher background questionnaire, a DI implementation Scale, a teachers’ DI self-efficacy scale, and a teaching beliefs scale and statistical analysis were conducted to explore the relationships between DI implementations and the set of variables. The results indicated a high rate of DI implementation although it is still under critical levels. Also, the findings showed that DI implementation can be significantly linked to the variables including DI self-efficacy beliefs, higher constructivist beliefs and higher classroom size.

A study conducted by Ismajli and Imami-Morina (2018) in Kosovian public and non-public primary schools with 200 students, 30 teachers and 30 parents aims to describe the level of implementation of differentiated instruction by the teachers based on the content, process and product for each student in addition to analyze the impact of the interactive strategies on understanding the knowledge based on the abilities and the needs of each learner. Data was collected through questionnaires with teachers and students and interviews with parents to be descriptively analyzed. The results indicated an insufficient understanding and implementation of

differentiated instruction both in public and non-public in primary schools. The study also revealed that teachers focus more on the products phase and less on the content and differentiated learning process. The study highlights the need for more effective professional development programs for teachers to understand, adopt, and successfully implement differentiated instruction in their classrooms.

Another study was carried out by Melesse (2019) in Ethiopian tertiary level education context to focus on instructors' knowledge, attitude and practice of differentiated instruction in the case of the college of education and behavioral sciences of Bahir Dar University, Ethiopia. In this qualitative research, participants were purposefully selected based on their teaching experience and experience outside Ethiopia. Data was gathered through interviews and focus discussion groups. Besides positive attitudes towards differentiated instruction, the study also revealed moderate knowledge of and poor practice of DI. The study concluded that current mode of traditional lecture method should be minimized and complemented with the implementation of other indirect instructional strategies.

A recent study carried out in Qatar (Shaboul et al., 2020) seeks answers to the questions of to what the extent primary school teachers in Qatar apply differentiation in their instruction and how experience, qualifications, grade, school subjects and training affect the implementation of differentiation. The mixed method study also examines the problems faced in the implementation of differentiation. The study was conducted with 236 randomly chosen samples representing 1,836 teachers in 99 Qatar public schools across the country. Data was collected through questionnaires and interviews. While no statistically significant differences were revealed in the degree of the implementation of differentiation based on trainings or qualifications hold, experience, grade and subject being taught led to statistically significant

differences in the extent of differentiation. Furthermore, the teaching load, the number of students and time are hindrances to teachers in implementation of differentiation.

Local Studies

At local level, Karadağ (2010) conducted action research to determine how DI can be put into practice in a 5th grade Turkish course in a primary school setting and to examine the impact of this implementation on students' language skills and attitudes about Turkish course. The implementation carried out in one 5th grade class at a primary school in Eskişehir lasted 16 weeks and the data was gathered through researcher and student journals, attitude scale, semi-structured interviews, photos, video recordings and student portfolios. The findings of the research revealed the possibility of designing learning activities based on differentiated instruction which are appropriate to learning areas and students' reading interests. The study reported that learning activities on the basis of differentiated instruction contributed to teaching-learning process. The study also suggested that differentiated instruction enhanced active student participation, individual and group work skills, high level thinking skills and autonomy. Moreover, the findings of the attitude scale revealed a positive impact of differentiated instruction on the student attitudes towards Turkish course.

One quantitative study (Çam, 2013) carried out at local level is on secondary school teachers' practice and competency levels of differentiated instruction. This survey research aimed to determine to what extent secondary school teachers are ready for differentiated instruction. 346 teachers in the city centre of Eskişehir were randomly selected as samples using stratified sampling method. The researcher developed the scale used for data collection, and data was analysed quantitatively.

The findings of the study determined teachers' practice levels as intermediate and their level of competence as high level. The total score of the current practice unchanged depending on the branch of the teacher and their educational background. Therefore, the study reveals that received education or branch is not related to differentiated instruction practice and that differentiated instruction can be practiced in every subject. However, there was a difference based on the structure and location of the school in favour of private schools. This study suggests that while teachers have similar levels of competence of differentiated instruction, their practices differ depending on the school structure and location. It indicates more differentiation practice at private schools.

Another qualitative case study (Zoraloğlu, 2016) was carried out to determine a classroom teacher's practices that can be associated to differentiated instruction approach and to provide an in-depth description of these practices. The study examined the implementations of differentiated instruction in teaching and learning process. The study also described practices that needed to be differentiated but were not differentiated in detail. The setting of the study, which was conducted in 2015-2016 academic year, was a first-grade classroom at a public school in Ankara, and the teacher was chosen according to typical case sampling model. For data collections, observations, interview, documentation and classroom artefacts were employed. The data were analyzed using content analysis. The findings reported that the instruction was differentiated in certain aspects of teaching according to certain student features such as low readiness level, learning styles, sociocultural features and special needs of some students. Differentiation to certain degree was implemented by the teacher on the content, process and learning environment. She made use of materials, assessment techniques, together with her own understanding

of classroom management, his/her classroom language, and teaching philosophy to help her differentiate instruction. The findings also report some situations where the teacher did not consider students' interest and high readiness level to differentiate instruction. The teacher was not very consistent with differentiation of product, content and process, and features of a differentiated instruction such as flexible grouping, adopted materials, differentiated homework, pre-assessment techniques were missing.

Karakaş (2019) carried out action research to examine the teaching process based on differentiation within the scope of a 7th grade mathematics course. The setting of the research was a public school in Trabzon, and the research was carried out for 7 weeks in the academic year of 2018-2019. The researcher gathered the data through video recordings, student projection papers, reflective diaries, semi-structured interviews and student product files. Content and descriptive analysis was applied to the date collected. The findings of this study indicate that differentiation had a positive impact on student's active participation, interest and self-confidence, individual and group working skills, social interactions and learning of the students at all levels. The study also noted some challenges in the implementation process and that it took some time for students to get used to the implementation process. Moreover, the study pointed out that planning of the next course and evaluation of product and process have been helpful in terms of more effective follow-up of students. The study suggests that in-service trainings for teacher on the practice of differentiated instruction may be beneficial.

An experimental study was carried out by Yavuz (2020) to examine the impact of differentiated instruction on Turkish L2 learners' L2 achievement along with the perceptions of learners and teachers at a high school context in Istanbul.

There were one control class and one DI group, with 14 and 8 students respectively. Traditional instruction was practiced in control class while DI group is exposed to DI in the frame of constructivism, multiple intelligence theory (Gardner, 1993) and differentiated instruction framework of Tomlinson (1999). Data was collected through L2 achievement tests taken by both control and DI groups. The results of the study showed that DI group fared better than the control group in overall L2 achievement. Also, data was collected through learner and teacher reflective essays to explore Turkish L2 learners' and teachers' perceptions of DI. The findings revealed that DI was found distinctive, entertaining, engaging, instructive, and interest-related by students while teachers voiced some concerns about time constraints, needs for learner awareness and training about differentiated instruction.

A recent study carried out by Sapan and Mede (2022) focused on the effects of differentiated instruction on foreign language achievement, foreign language motivation, and learner autonomy of English learners. The study also sought to investigate students' and teachers' perceptions on the implementation of DI in English language instruction. This quasi-experimental study was carried out in the context of a state secondary school in Istanbul, Türkiye. 24 students in the 8th grade and one teacher participated in the study. Tools including Foreign Language Motivation Questionnaire, pre-and post-achievement tests and the Learner Autonomy Scale were employed to collect quantitative data. Additionally, qualitative data was collected through student interviews and teacher reflective journals to explore their perceptions on the implementation of differentiated instruction. The findings of the study indicated that differentiated instruction overall improved the participants' autonomy, achievement and motivation in language learning. Moreover,

the participant students and the teacher found differentiation instruction functional and efficacious.

Although most of the studies on differentiated instruction were conducted in the K12 school setting in Türkiye, there are several studies conducted in higher education context. One recent study (Şaban, 2020) investigated the implementation of differentiated instruction in EFL classrooms in an English preparatory program. The views of instructors and students about differentiation practices, and the long-lasting effects of using differentiation on the participating instructors' classroom practices and instructional approaches were also examined in the study. 51 instructors participated in the study to identify the existing differentiation practices in the English preparatory program, and seven among these instructors volunteered to take part in an INSET training on differentiated instruction. They practiced differentiation in their classrooms for nine weeks. 103 students who were exposed to differentiation participated in the study. Qualitative and quantitative questionnaires, instructor and student interviews, lesson plans, observations, and instructor and student reflections were used as data collection tools. Based on the findings, it was revealed that the process of the instruction was mainly differentiated according to readiness level of the students especially while teaching grammar structure, reading and writing skills. Overall, differentiated instruction practices were perceived positively both by instructors and students. It enhanced student motivation and autonomy so it had a positive impact on students' attitudes towards it. The instructors expressed that the practice contributed to their professional development, increased their motivation, satisfaction and self-efficacy despite some difficulties they experienced during the differentiation process.

Another recent action research (Leblebicier, 2020) focused on differentiated instruction in the context of teaching writing at university level. The purpose of the study was to investigate the effect of differentiated writing instruction on students' writing skills and their perceptions. The study was conducted over a 10-week period and the samples were 21 second year university students who attended differentiated writing classes throughout the study. A student background and learning profile questionnaire, semi-structured interviews, after lesson questionnaires and researcher reflection notes were used to collect data for the study. The findings of the research indicate that differentiated instruction is perceived positively by students and contributed them to improve their English academic writing skills.

A recent study at tertiary level examined the impact of differentiated instruction on students' EFL speaking proficiency and self-regulated learning (SRL) during online learning at an English preparatory program in a Turkish university (Meşe & Mede, 2021). This quasi-experimental study employed a sequential explanatory mixed-methods approach. An experimental group with 16 students and a control group with 15 students were the participants in the study. A speaking proficiency test and the Turkish translation of a Likert-type Online Self-Regulation Questionnaire as pre/post-test were employed to collect quantitative data from both groups. Interviews were conducted with the participants to gather the qualitative data. As the intervention plan of the study, the process, product and learning environment of the online learners in the experimental group were differentiated based on their readiness levels and interests. The findings of the study suggested that the speaking skills of the experimental group significantly improved compared to the control group. However, the overall self-regulated learning of the both groups did not produce a meaningful difference. Help-seeking strategy use of the experimental

group developed significantly. Moreover, the qualitative data findings revealed that the students positively perceived online practices used for DI purposes such as formative assessment, differentiated speaking tasks while questioning group work arrangements. The participants also reported that their use of target setting, help seeking and self-assessment enhanced.

Perceptions of DI

In the implementation of differentiated instruction teachers play a key role since it is them who eventually produce change in the classrooms, in their students, in their colleagues and administration (Tomlinson & Imbeau, 2010). As Korthagen (2004) puts forward, "a teacher's competencies are determined by his/her beliefs" (p. 80). Therefore, perceptions of teachers are essential to make decisions and practice differentiation in schools although cooperation of all stakeholders is necessary. In fact, some studies indicated teacher perception is as one of the strongest factors that affect whether or not differentiated instruction will be practiced in a classroom (Bondie et al., 2019; Dipirro, 2017; Dixion et al., 2014; Goddard & Kim, 2018).

Teachers and students have a set of perceptions on the how to teach and learn, and most of the time these beliefs about school and classroom are very rigid (Tomlinson & Imbedau, 2010). Thus, many teachers may consider differentiation as a mission impossible for reasons such as not having enough time, teaching too many students, using only one coursebook and standardized exams and tests (Tomlinson & Imbedau, 2010).

As they might have a negative impact on the perceptions of teachers and administrators, Tomlinson (2001, 2008, 2010) often highlights the misunderstandings about the practice of DI. It is equally important to draw the

attention to what differentiated instruction is not as well as what it is. As Tomlinson (2001) stated:

> Differentiated instruction is NOT the Individualized Instruction of the 1970s. Differentiated instruction does NOT mean a separate instruction for each student in a class of 30+ students, but rather offering multiple avenues to meaningful learning that all students can benefit
>
> Differentiated instruction is NOT chaotic. The student movements and talking in a differentiated classroom is purposeful and disciplined
>
> Differentiated instruction is NOT just another way to provide homogeneous grouping. There is a flow of different grouping configurations based on student needs and interests in a differentiated classroom
>
> Differentiated instruction is NOT just "tailoring the same suit of clothes."
>
> Differentiated instruction is NOT only about adjusting the complexity level of a task according to students' level (p. 1-3)

Tomlinson et al. (2008) further clarifies what differentiation is and what it is not:

> Differentiation is not just for students with labels but for every student.
>
> Differentiation is not something extra in the curriculum but at the core of effective planning.
>
> Differentiation is not an approach that mollycoddles students but is teaching up; supporting students in achieving at a level higher than they thought possible
>
> Differentiation is not incompatible with standards but a vehicle for ensuring student success with standards

> Differentiation is not use of certain instructional strategies but use of flexible approaches to space, time, materials, groupings and instruction.
>
> Differentiation is not all or mostly based on a particular approach to multiple intelligences or learning style preferences but it is systematic attention to readiness, interest and learning profile.
>
> Differentiation is not synonymous with student choice but a balance of teacher choice and student choice
>
> Differentiation is not individualization but it is focused on individuals, small groups, and the class as a whole
>
> Differentiation is not more problems, books, or questions for some students and fewer for others but it is varied avenues to the same essential understandings
>
> Differentiation is not something a teacher does because it's the thing to do but it is something a teacher does in response to particular needs of particular human beings
>
> Differentiation is not something a teacher does on the spot when it becomes evident that a lesson isn't working for some students (reactive or improvisational) but it is something a teacher plans prior to a lesson based on assessment evidence of student needs (proactive)
>
> Differentiation is not something that happens all day every day but it is something that happens when there is a need for it (p. 4-5)

As Tomlinson et al. (2003) stressed, teachers' beliefs and attitudes should be investigated if effective learning is targeted in a classroom consisting of academically diverse students. To this end, research on teachers' perceptions on differentiated learning have been receiving more attention in recent years (Burkett,

2013; Christopher, 2017; Özkanoğlu, 2015; Rouault, 2016; Shehaan, 2011; Yavuz, 2020).

Empirical Studies on Perceptions of Differentiated Instruction

Many empirical studies focused on teachers' perceptions about DI in Türkiye and around the world.

International Studies

At the global level, a qualitative case study by Prince (2011) directed its attention to one suburban middle school context with the purpose of exploring the perceptions of teachers with regard to differentiated instruction, how teachers implement differentiation, what problems they experience, and the training they need on differentiated instruction. Interviews, observations, and artefacts were the data collection tools in the study. The findings showed that teachers were aware of the textbook definition of DI and they practiced student grouping as a way of differentiation. However, they believed DI to be time-consuming and difficult to practice due to a lack of materials and diversity of the students. As a result of this research, it is recommended that school leaders benefit this study to develop a training program that trains teachers for differentiate instruction.

A qualitative phenomenological study conducted by Gafi-Sharabi (2011) explored perceptions and experiences of 20 secondary education English Language Arts teachers in New York City regarding practice of differentiation. The study specifically investigated teachers' self-perceptions as instructional leaders, teacher practice of differentiated instruction and challenges and enablers of practice. The results of the study indicated a positive attitude towards differentiation. However, most of the teachers were reported to believe that it is not feasible due to the time and workload involved. The findings also revealed that teachers cannot collect data

about student potential and they do not possess knowledge about the implementation of differentiation. Some challenges were also reported to identified by the teachers regarding the implementation of the approach such as administrative mandates and ineffective professional development as well as some enablers including administrative accountability measures and support.

Tomlinson and Santangelo (2012) conducted a study to explore teacher educator's perceptions and use of differentiated instruction practices. The study was carried out in the College of Education with the participation of 70 teacher educators at a public university in the USA with an enrollment of approximately 9000 undergraduate and 1200 graduate students. A cross-sectional survey design was employed in the study and data was collected through a questionnaire designed based on Tomlinson's differentiation model. The study demonstrated that teacher educators' beliefs and practices align with Tomlinson's model, yet teacher educators do not seem to practice differentiation comprehensively.

Another research to explore teacher perceptions of differentiated instruction was carried out by Ordover (2012) in traditionally-structured public high school context. In a framework of organizational change, this study gathered data from an online questionnaire and by interviewing focus groups and individuals. The analysis of the data suggests that teachers resist to change when their environment and their personal preferences do not provide them with the opportunity to observe, work with and learn from their colleagues. Raising public school administrators' awareness of the negative role teacher isolation might have in preventing the implementation of differentiated instruction is an implication from the study for positive social change.

A quantitative study that was conducted by Whipple (2012) in the context of K-6 (in grades kindergarten through sixth) in a southeast Massachusetts school

district aimed to explore teachers' "understanding" of differentiated instruction and their perceptions of their capability to "implement" the differentiated instruction with its components (student interest, assessment, lesson planning, content, process and product) in the framework of Carol A. Tomlinson. The data was collected through an online survey with a Likert scale and 141 participants responded the questionnaire. The researcher reported that the participants displayed a better understanding of DI than the competence to implement it.

Burkett (2013) carried out a qualitative study to explore teacher perceptions related to DI and the influence of these on instructional practice. 11 intermediate elementary school teachers were interviewed for the study. The themes that the data analysis revealed in this study were;

- DI is essential in a successful classroom
- DI is a natural process
- In-service professional development affects the implementation of DI
- Early schooling has an impact on DI
- Pre- service professional development affects the implementation of DI
- DI is common
- Classroom environment promotes learning

The study also pointed out the positive influence of professional development on teachers' use of DI.

Another study (Richards-Usher, 2013) focused on teachers' perception and implementation of differentiated instruction, the difference between novice and experience teachers' perception on differentiate instruction, and the predictive relationship between teachers' perceptions and teachers' implementation of differentiated instruction. A quantitative research methodology was applied to the

study and data was collected through a descriptive survey from a group of teachers teaching in grades 1 through grade 8. The study aimed to explore teachers' perceptions of differentiated instruction among grade one through grade eight private school teachers and whether there was a difference among novice and experienced teachers' perception of differentiated instruction. It also sought an answer to the question of whether there was a predictive relationship between teachers' perception and implementation of differentiated instruction. The study indicated that teachers who understood and had intense training in differentiated instruction through professional development had high perceptions of implementing differentiation in the classroom. The results also suggested that differentiation practice in the classroom is correlative with both the teacher's understanding of the philosophy of and the increase of professional development in the instruction.

In another study conducted in Taiwanese elementary school context, Chien (2015) analyzed teachers' perceptions of, designs of, and knowledge constructed about DI in an intensive summer course. The study revealed that although teachers thought highly of DI before the intensive summer course, they used the same textbook and did not implement differentiated instruction in their classroom practice. Their lack of competence in DI, absence of time, and missed opportunities on collaborative planning were reported to be the reasons for not implementing DI.

A mixed method study was carried out in a primary school context to explore teachers' perceptions, practices and challenges of differentiated instruction by primary school teachers (Melesse, 2015). 232 primary school teachers participated in the study and the data were collected from randomly selected via questionnaire, semi-structured interview and focus group discussion. The quantitative and qualitative analysis of the data revealed that most of the primary school teachers are

not very familiar with differentiated instruction and its elements and as a result they have relatively lower conceptions. Melesse (2015) also reported that the majority of the primary school teachers did not have sufficient knowledge of the main instructional strategies of differentiated instruction. The study did not indicate a statistically significant difference in differentiation practices in terms of qualification (degree and diploma) and experience (in service years). As for departments, Language and Mathematics department teachers performed differentiation better than Natural Science and Social Science department teachers. The most important finding of the study was that majority of the teachers did not differentiate their instruction based on their students' diverse readiness levels, interests and learning profiles. Different factors such as knowledge and experience, commitment and motivation, availability of materials/resources, availability of time, class size, range of diversity in classroom, leadership and parental support and staff collaboration were reported to be enablers or obstacles in the implementation of differentiated instruction.

Another study was conducted in Macedonia at tertiary level context to investigate teachers' level of knowledge and implementation of DI to respond to students' diverse needs for reading (Bajrami, 2015). Teacher questionnaires and classroom observations were employed to collect data. The results of the study indicated a disparity between that teachers' responses regarding the application of DI strategies and the researcher's observations. The results also revealed that some teachers failed to provide examples of differentiated tasks although in the questionnaire they claimed to have implemented DI strategies.

Wai and Wan (2016) conducted a study focusing on the prospective teachers' teaching beliefs toward differentiated instruction and teaching efficacy. A sequential mixed methods pre-and post-test research design was applied to observe any possible

change in pre-service teachers' teaching beliefs and teaching efficacy level at the end of a course called Differentiated Instruction, a 13-session Bachelor of Education elective module in the academic year 2012–2013 in a local university. Data in the pre-test was collected with a questionnaire, and in the post-test, participants were asked three open-ended questions to explore their understanding of learner diversity, readiness for differentiated instruction as well as concerns upon the use of differentiation. Moreover, focus group interviews and individual interviews were used to obtain further information. The results indicated positive changes in teaching beliefs and teaching efficacy regarding differentiated teaching.

A qualitative case study conducted by Paone (2017) sought to explore teachers' perceptions of differentiated instruction (DI) at a middle school in the USA. The researcher used an anonymous online survey to invite general education teachers in Grades 6 through 8 to participate in the study and six of them responded the survey. The results suggested that participants seem to have a general knowledge about DI and have a high perception of DI. They both saw their students as individuals and as a unity. The study also revealed how their perceptions of DI impact their implementation of DI and what kind of barriers emerge while implementing it. Teachers highlighted lack of professional development and lack of resources as two challenges they face during the implementation of DI.

Another study carried out by Gaitas and Martins (2017) analyzed teacher perceived difficulties in the implementation of differentiated instructional strategies in regular classes. 273 Portuguese primary school teachers with teaching experience with a scope of 1 to 33 years participated in this study. A questionnaire with 39 items was employed to explore teacher perceived difficulty in relation to different instructional strategies. Factor analysis applied to teacher responses produced five

different domains: (1) activities and materials; (2) assessment; (3) management; (4) planning and preparation; and (5) classroom environment. Results revealed that all the instruction practices in these domains were considered to be challenging except for the classroom environment domain. In particular, activities and materials domain were considered to include the most difficult practices and were associated with the adaptation of curricular elements (content, process, and product) based on student characteristics (readiness, interest, and learning profiles). The findings also showed a strong correlation between the activities and materials domain and the assessment domain.

A qualitative research study with a phenomenological design conducted by Christopher (2017) explored teachers' perceptions of differentiated instruction and their implementation of DI in an elementary school in the state of Maryland, USA. Classroom observations and interviews were used to collect data to understand teachers' perceptions of DI and their resistance to its implementation. The participants were 4 mathematics teachers who were purposefully chosen to talk about their lived experiences. The study showed that participants were aware of differentiated instruction and its potentials to increase student achievement. The study also pointed out to the barriers in the regular implementation of DI such as lack of professional development, lack of materials, pacing through the curriculum and lack of administrative support.

In another study, Tzanni (2018) explored teachers' beliefs and practices of differentiated instruction in Greece. Data was collected from 234 participants who responded to an online questionnaire with 42 items. The descriptive analysis of the data indicated positive teacher beliefs towards differentiation but relatively weaker practice of differentiated instruction.

Another mixed method research study was conducted in one of atolls of Maldives with 101 elementary teachers by Shareefa et al. (2019) with the aim of investigating their perceptions about differentiated instruction based on qualification and experience. The data was gathered through a Likert type questionnaire and open-ended interview questions. The findings from the study revealed a high perception on DI. However, their experience and qualification did not seem to have a statistically significant impact on the perceptions. Moreover, some challenges such as lack of resources, time, support, knowledge and class size were uttered regarding the implementation of DI.

A recent study by Jamoliddinova and Kuchkarova (2022) in secondary school context in Uzbekistan examined English language teachers' beliefs and perceptions in understanding the notion of differentiated instruction strategy. A questionnaire with three parts, semi-structured interviews and observation were employed in the study. 100 teachers from 10 public schools in Namangan city participated in the survey. 20 of them also volunteered for the interviews and 10 of them agreed to class observations. The findings of the study revealed different vantages on differentiated instruction strategies based on their experience. It also pointed out at a big difference among questionnaire and interview responses in comparison to the class observations in terms of differentiating content and practice part of the classes. The results also indicated statistically significant differences in the familiarity with DI depending on age, working experience, and grade currently teaching.

Local Studies

At local level, while most studies on differentiated instruction concentrated on the effects of differentiated instruction, there are several studies that investigated teachers' perceptions. Özkanoğlu (2015) conducted a qualitative study to investigate

the views and practices of early childhood teachers on differentiation. The researcher interviewed 19 pre-kindergarten and kindergarten teachers of an International Baccalaureate (IB) world school in Türkiye about differentiation, and analysed their written curriculum documents and made observations the classrooms. 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 collection was completed in a natural setting and over five months. This study revealed positive attitudes of teachers as well as some challenges about planning, time and classroom management. It also indicated a need for more training on and experience with differentiated instruction for a more effective implementation.

Another research was carried out by Demirkaya (2018) at local level to determine the elementary school teachers' perception on differentiated instruction competency and implementation levels as well as the factors that prevent teachers from differentiating instruction. 1078 elementary school teachers were selected as research sample through stratified sampling method. Differentiated instruction teacher competency and implementation perception scales and interviews were employed as data collection tools. The findings of the study showed that teachers perceive their differentiated instruction implementation level as good and their competencies as very good. The study also indicated insufficiency of schools' physical attributes, lack of teachers' competencies and experiences in differentiated instruction, insufficient support from families, limitations and inadequacies of educational policies, and overloaded curricula as the most uttered factors limiting differentiated instruction. Finally, the study revealed the need for theoretical and practical training for teachers on differentiated instruction, and the need for

improvement of the school physical conditions and educational policies to better implement differentiated instruction.

Gülşen (2018) conducted a study in an EFL context to find out about Turkish EFL teachers' perceptions on the advantageous sides of DI and the obstacles in its implementation. Ten primary school Turkish EFL teachers who had been implementing DI in the same school for a period of time were interviewed to collect written data on their views about DI. Phenomenological study techniques were used to analyze the data. Heeding learners' needs, boosting learner confidence, establishing better rapport, promoting involvement and interaction, experiencing difficulties in implementation and confronting mandatory interventions were the six themes that were derived from the analysis. The researcher states that these themes can be of help to gain insights about the contextual problems teachers face in the implementation of DI.

CHAPTER 3: METHODOLOGY

Introduction

The purpose of this study is to investigate Turkish EFL instructors' perceived practices and perceptions of differentiated instruction at tertiary level. This research aims to address the following questions:

1. What are Turkish EFL instructors' perceptions on differentiated instruction at tertiary level?

   1a. Do their perceptions differ based on:

      i. highest degree of graduation?

      ii. teaching certifications hold?

      iii. years of teaching experience?

      iv. number of teaching hours?

2. What are Turkish EFL instructors' practices of differentiated instruction at tertiary level?

   2a. Do their practices differ based on:

      i. highest degree of graduation?

      ii. teaching certifications hold?

      iii. years of teaching experience?

      iv. number of teaching hours?

This chapter aims to inform the reader in detail about the methodology of the current study. First, the research design will be explained briefly. Then, the setting and the participants will be described. Lastly, detailed information will be provided regarding data instrumentation, method of data collection, and data analysis.

Research Design

In this research study, a mixed method research design was employed. Both quantitative and qualitative methods are involved in a mixed method research design to obtain "a more complete understanding of research problems than does the use of each approach alone" (Fraenkel & Wallen, 2009, p. 557). As Creswell and Clark (2018) state, such studies present multiple means to investigate a research problem, which contributes to a thorough understanding of the focus of the research. Moreover, mixed methods research provides a way to compensate the weaknesses of both quantitative and qualitative research (Creswell & Clark, 2018). Quantitative method alone might be considered weak in understanding the context or setting in which people live and making the voices of participants directly heard while qualitative research alone might be seen as insufficient due to the possible bias that may emerge due to the personal interpretations made by the researcher, and due to the challenge in ensuring the external reliability of findings as the number of participants studied are limited (Creswell & Clark, 2018). Therefore, this study could benefit the strong sides of each method through a mixed method research design.

The type of mixed-methods design that this study benefited is explanatory sequential mixed method research design. As it is noted by Creswell (2008), the rationale for this method is that the analysis of quantitative data provides a broad understanding of the research problem, and the analysis of the sequential qualitative data is to expand and elaborate the statistical data through more in-depth exploration of participant views.

Firstly, a quantitative method was conducted through a three-part questionnaire with Likert-scale items, and subsequently a qualitative method was used through individual interviews with semi structured questions to pursue and

clarify the quantitative findings (Fraenkel & Wallen, 2009). The qualitative phase of the study followed the quantitative phase as the former connected to the results of the quantitative phase (Creswell, 2008). After implementing the quantitative phase, the researcher identified quantitative results that needed further explanation, and they informed how the qualitative phase would be carried out (Creswell & Clark, 2018).

Setting

The data was collected at the school of foreign languages of a state university in Türkiye in the 2020-2021 academic year. This university had been divided into two separate universities in 2017. However, students registered in these two different state universities study in the English preparatory program at the school of foreign languages of the original university.

Students study at a one-year intensive English preparatory program before they begin their studies at their departments. The program is compulsory for those students who have English medium instruction at their departments. Some students, however, attend the program on a voluntary basis although their departments have mostly Turkish medium instruction. At the beginning of the academic year, students take an English language proficiency exam. Those who pass the proficiency exam can start their degrees. Those who cannot pass the proficiency exam take a placement exam, and they are placed into the levels of D, C, B or A according to Global Scale of English (GSE) based on their scores from the exam. These levels in GSE refer to A1(Beginner), A2 (Elementary), B1 (Pre-intermediate), and B1+(Intermediate) respectively according to the Common European Framework of Reference for Languages (CEFR). The students have 22-26 hours of English classes a week. Students must attend to the classes regularly.

In this institution, there are different institutional units including Testing Unit, Proficiency Exam Unit, Curriculum Development Unit, Professional Development Unit, Material Development Unit, Technology Unit. An integrated skills-based syllabus where communicative approach is adopted is written and shared by Curriculum Development Unit. A market textbook as well as house materials such as grammar or vocabulary exercises on Kahoot or Quizlet, Grammar Bite videos with grammar explanations, extra reading and listening exercises prepared and compiled by the Material Development Unit are included in the syllabus. The syllabus strictly shows the allocated class hours for each part in the coursebook, extra materials, quizzes and tasks. As for the assessment, students take one midterm and one final test prepared by the Testing Unit throughout one term. In addition, throughout the term, students take 8 quizzes and complete 8 speaking and writing tasks, which compose, together with performance grades given by the class teachers, their second midterm exam. Quizzes are prepared by the Testing Unit and the tasks are prepared by Curriculum Development unit. This strict syllabus in its current form does not give class teachers any room for flexibility on assessment. Proficiency exams that are taken at the beginning and the end of the term are prepared by Proficiency Exam Unit.

However, Covid-19 pandemic necessitated certain changes in the system explained above. In fall and spring terms of 2020-2021 academic year, the classes were conducted online. Attendance for students was not obligatory. Instructors had 8 hours of online teaching a week and instructors who worked for a unit or who has administrative duties at school besides teaching had 4 hours of online teaching.

Participants

In 2021-2022 academic year fall semester, 141 EFL instructors, 87 of which participated in this study, were teaching at the institution. They are of various ages and have different amount of teaching experience. The instructors at the school of foreign languages teach between 14-18 hours a week on average. Each class has two or three instructors. Besides the teaching hours, some instructors do extra work at different institutional units such as the professional development unit, the material development unit, or the technology unit.

The participants had their majors in different departments such as English Language Teaching, English Language and Literature, American Culture and Literature, English Linguistics, and Translation and Interpreting. Some of the instructors hold MA and PhD degrees, and some have CELTA (Certificate in English Language Teaching to Adults) and/or Delta (Diploma in Teaching English to Speakers of Other Languages) certificates. There were also some instructors who attended and presented papers at national and international conferences, and some of them publish articles on a regular basis.

Given the heterogeneity of the instructors at the institution in terms of teaching experience, graduations, educational backgrounds and teaching qualifications, the overall population of EFL instructors is well represented in the sample. Therefore, it provides a perfectly suitable context for the purposes of this study.

The detailed demographic information about the participants in the current study is presented in Table 1.

Table 1

Information about the Participants of the Quantitative Part of the Study

Variable	Category	*n*
Gender	Female	61
	Male	26
Department of graduation	ELT (English language teaching)	64
	American/English language and literature	13
	Linguistics	5
	Translation	5
Highest degree earned	B.A	44
	M.A.	34
	Ph.D	9
Qualifications hold	None	38
	CELTA/Delta/TESOL/others	49
Years of experience	Less than 16	53
	16 and more	34
Teaching hours in a week	Less than 16	46
	16 and more	41

The questionnaire was sent to all teachers at school. However, 87 out of 141 instructors responded following the e-mails sent by the researcher to remind them about the survey. Interviews were conducted with 13 volunteering teachers.

Instrumentation

The quantitative data was collected through a questionnaire (Appendix A) which was adapted from an original questionnaire developed by Tomlinson and Santangelo to be used in their study Teacher Educators' Perceptions and Use of Differentiated Instruction Practices: An Exploratory Investigation (2012). It reflects Tomlinson's (2005) differentiation model which is the conceptual framework that this current study is based on and, the purpose of the original study is in line with the purposes of this research study. The questionnaire consists of three parts. Followed by an Informed Consent Form, the main parts in the survey includes *Demographic Information*, Perceptions of DI with the subsections of *Readiness*, *Interest*, *Learning*

Profile and Practices of DI with the subsections of *Learning Environment*, *Content, Process/Product* and *Assessment.* The questionnaire was originally conducted with teacher educators while this study focuses on EFL instructors at tertiary education level. Therefore, several modifications to the questions were made in order to make the questionnaire more conducive to a study aiming at EFL teachers at a preparation school context. However, the questionnaire received merely the necessary modifications so that it could stay as close as possible to the original version. These modifications are explained more in detail below.

The first part of the questionnaire aims to collect demographic data about the participants. In part one of the original questionnaire, some of the demographic information required were adapted so that this part could become more suitable for the context and the purposes of this research. The categories *race*, *departmental affiliation*, *professional rank* and *graduate/undergraduate course load distribution* were removed from part one since these categories are irrelevant or not applicable in the context of school of foreign languages. Instead, the following were added to the first part of the questionnaire;

- Department you graduated from
- Teaching qualifications hold
- Before Covid-19, number of hours usually taught a week
- Levels usually preferred to teach
- Levels usually taught

The second part of the questionnaire seeks to investigate the instructors' perceptions of DI based on the elements of readiness, interest and learning profile. This part included 21 items on a 5-point Likert scale ranging from *Strongly Disagree* (1) to *Strongly Agree* (5). Minor adaptations were applied to the second part based on

the context in which the current study was carried out. The word (teacher) *candidate(s)* was changed into *student(s)* as in the context of this research EFL instructors rather than teacher educators were the participants. This adaptation of a word is the only change in part two.

The third part of the survey focused on instructors' practices of DI in the content, process/product and assessment stages of their teaching practice. There were 39 items on a 6-point scale including *Never- No intention to do so in the future* (1), *Never- may be willing to do so in the future* (2), *Occasionally* (3), *Frequently* (4), *Always* (5) and *I do as part of the curriculum requirement* (6). There is also an open-ended question as the 40th item at the end of this section. As for the modifications in the third part, the word *yourself* has been modified into *myself* besides the same adaptation with the word *teacher candidate* as in Part II. Moreover, a few explanation words were removed from this part as they are not applicable to the context of the research. *Narrative & graphic* and *theory to example & example to theory* in item C5, *chapter outlines* in item C11 and *lecture outlines* in item C12 were removed. Instead, *summaries/checklists* and *visuals such as tables and diagrams* were added to item C11 and C12 respectively to make these explanatory examples applicable to the context of the research study. Lastly, the words *teacher set homework* and *observe* were added to the items PP 10 and PP13 respectively.

After the adaptation of the questionnaire, all the items were reviewed by a professor in the field to check content and face validity. The questionnaire was revised based on the feedback

In order to collect qualitative data, semi-structured interview questions (Appendix B) were used as this type of questions allow the researcher to respond to emerging perspectives of the participants and new ideas on the topic (Merriam &

Tisdell, 2016). Interview questions were written by the researcher with the purpose of seeking elaboration on the answers received from the participants to clarify certain points based on questionnaire results and explore the research questions more in depth.

During the preparation of the questions, experience and behavior questions were preferred to explore participants' practices, and leading questions that can imply bias or an assumption were avoided (Merriam & Tisdell, 2016). Seven main questions addressing seven main themes in the scope of the conceptual frame were written by the researcher and the supervisor. 10 follow-up questions referring to the main constructs of the framework were also added to the main interview questions to learn about participants' experiences in further detail and to clarify their responses (Merriam & Tisdell, 2016). The main questions focus on the seven main aspects of differentiation which are affect, content, process, product, readiness, interest and learning profile. As differentiated instruction puts forward that each learner has a different readiness level, interest and learning profile and it should be taken into consideration while presenting the content of the class and providing practice and production activities. Therefore, instructors were asked what they take into consideration while they plan their classes. While assessment is also included in the questionnaire as another aspect of differentiation, the researcher did not explicitly include it in the interview questions as the summative and formative assessments are standardized by the institution. However, the questions refer to various kinds of assessments carried out to find out about the students. The last main question refers to the online classes since at the time of the current study, the classes were held online.

Pilot Study

The original questionnaire developed by Tomlinson and Santangelo (2012) is valid and reliable (Cronbach's alpha, $\alpha = .91$); however, a pilot study was still conducted as it could provide the researcher with more feedback for any possible problems (Fraenkel & Wallen, 2009). The questionnaire was sent to 7 EFL instructors from the sample institution who had been informed about the pilot study beforehand. All of them responded the questionnaire and provided feedback regarding face validity and wording. Following the pilot study, necessary adaptations were made regarding face validity, wording and clarity based on the feedback of the participants. The adaptations made on the questionnaire were as follows:

In Part II, relevant language was added to the background in the first three questions for clarity purposes.

In Part III, a sixth point *I do as part of curriculum requirement* was added to the 5-point scale and the instruction for this part was adapted as

"In normal circumstances before Covid-19;

How often do you do the following?

If within your discretion, choose a number between 1-5.

If NOT within your discretion, choose number 6."

This adaptation was necessary as feedback from the teachers who participated in the pilot study revealed that the current context due to Covid 19 restrictions at the institution might affect the answers.

As Merriam & Tisdell (2016) points out, piloting interview questions is essential to detect the questions that need revising as they may be confusing or unnecessary. Therefore, the researcher also conducted pilot interviews with two instructors. Consequently, the expression "before Covid-19" was added to the

beginning of each question to prevent any kind of confusion. Also, a new question "How has your teaching regarding all the questions discussed above changed during Covid-19?" was added.

Ethical Considerations

The consent was sought from Bilkent Ethics Committee after the adaptation of the questionnaire and the development of the interview questions to be used in the research study. Consent from the participants were obtained through consent forms at the beginning of both the questionnaire and the interview questions.

Data Collection & Data Analysis

Following the final modifications to the questionnaire, the items were transformed into an online survey. An e-mail was sent to 141 teachers by the researcher after the official permission was received from the school administration. The e-mail included a link to the survey which consisted of a brief explanation of the purpose of the study, a statement reassuring the information is collected for the study purposes only and would be kept strictly confidential and question items. The quantitative data from the survey were collected throughout two weeks during which a reminder e-mail was sent. 87 EFL instructors replied the questionnaire.

Collected through an online questionnaire, the quantitative data were analyzed through descriptive and inferential statistics using the Statistical Package for the Social Sciences (SPSS) program v.25. Frequencies were calculated for all items on the questionnaire. Means and standard deviations were calculated for each item in Parts II and III in the questionnaire. Although the original questionnaire used by Tomlinson and Santangelo (2012) yielded high Cronbach Alpha levels for readiness ($\alpha = .75$), interest ($\alpha = .71$), learning profile ($\alpha = .74$), content ($\alpha = .87$), process/product ($\alpha = .81$), environment ($\alpha = .86$), and assessment ($\alpha = .81$), a new

calculation was made to find out the reliability of the current questionnaire as some adaptations were applied to the original questionnaire.

Table 2 shows the Cronbach' alpha levels for the parts of the questionnaire in its current study. The Cronbach Alpha levels for the second and third part of the questionnaire was found as .88 and .92, respectively. For each sub-part in the questionnaire, the Cronbach Alpha levels were calculated as .81 (Readiness), .72 (Interest), .79 (Learning Profile), .65 (Learning Environment), .85 (Content), .85 (Practice/Production) and .77 (Assessment).

Table 2

Cronbach Alpha Levels for the Questionnaire

Questionnaire parts	Cronbach alpha
Part II - Perceptions	.88
Readiness	.81
Interest	.72
Learning profile	.79
Part III - Practices	.92
Learning environment	.65
Content	.85
Practice/Production	.85
Assessment	.77

A questionnaire is mostly considered reliable when the Cronbach's alpha is minimum .70 (Muijs, 2004). As can be seen in Table 2, all the items except for learning environment have a Cronbach alpha level that is over .70. Moreover, the Cronbach alpha level of the learning environment, which is .65, is also considered to be in the acceptable range (Taber, 2017).

Subsequently, normality assumption was checked prior to any parametric tests on the quantitative data set. Skewness and kurtosis values were calculated, and z-scores were checked. Z-scores between 1.96 and -1.96 indicates a normal distribution (Cramer, 1998; Gravetter & Wallnau, 2013). Normality tests applied to the quantitative data revealed that the Z-scores were within the boundaries, and the quantitative data was normally distributed. As these calculations allowed the researcher to run parametric tests on the quantitative data, inferential statistics were performed to make comparisons between the mean scores of the participant groups based on four demographic categories (highest degree, teaching certificate/diploma, years of teaching experience and weekly teaching hours). Four different independent samples T-tests were conducted to compare the means of two groups in each of these four demographic categories for each item related to the two aspects: perceptions and practices. A post-hoc test was not conducted since the group sizes were close. The other demographic variables in the first part of the questionnaire could not be included in the independent T tests as two groups with close sizes did not emerge within those demographic categories.

As for the qualitative data, all the interviews were conducted on Zoom due to the concerns raised by the Covid-19 pandemic and sessions were video recorded with participant consent. 13 EFL instructors volunteered to take part in the interviews. The interviews lasted 30 minutes on average. Table 3 shows the length of each interview conducted.

Table 3

Duration of the Interviews with the Participants

Participant	Duration (min.)
1	36:11
2	38:19

Table 3 (cont'd)

Duration of the Interviews with the Participants

Participant	Duration (min.)
3	34:10
4	29:09
5	25:14
6	21:31
7	36:49
8	39:19
9	23:17
10	28:58
11	18:36
12	24:33
13	36:07
Total	390:13

All the interviews were conducted in English. The qualitative data from the interviews were transcribed by the researcher manually to ensure an accurate process and to familiarize more with the data (Seidman, 2006; Merriam & Tisdell, 2016). The data were analyzed through content analysis. Prior to the analysis of the qualitative data, a preliminary list of codes was prepared based on Tomlinson's (2001) differentiation framework and it was used for the initial analysis of the data. The themes in the list were extracted from the framework and related literature. The interview questions aimed to explore if any part of the teaching process is differentiated and if differentiation is practiced based on readiness, interest and learner profile. The data was also expected to reveal if differentiation is practiced on class level or individual level. Therefore, the preliminary list included seven main aspects of differentiated instruction; affect, content, practice, product, readiness,

interest and learner profile as well as class and individual level. Table 4 displays the preliminary list of categories and themes.

Table 4

Preliminary List of Categories and Themes

Parent category	Sub-parent category 1	Sub-parent category 2	Sub-parent category 3
Perceptions	Readiness Interest Learner profile	Class level Individual level	
Practice	Learner environment Content Practice Product	Readiness Interest Learner profile	Class level Individual level

Parent categories are in line with the research questions that seek to explore EFL instructors' perceptions on and practices of DI. Sub-parent category 1 for the first category, *Perceptions* contains instructors' thoughts, beliefs and opinions on the learner needs including readiness level, interest and learner profile, and sub-parent category 2 refers to whether these needs were considered at individual level or at class level. As for the second parent category, *Practice*, what part of the instruction is differentiated constitute sub-parent category 1. Sub-parent category 2 refers to what learner needs differentiation is based on and sub-parent category 3 includes whether differentiation based on needs is implemented at individual level or class level.

After preparing the preliminary list, the transcripts of the interviews were manually coded and analyzed based on the list by the researcher.

For the organization of the data, Microsoft Excel was used. The columns were created for the participants, themes and relevant quotations on the Excel sheet.

Throughout the analysis, rounds and rounds of coding were applied to the data analysis by the researcher and checked by the supervisor, and the sheet was updated multiple times with additions of new columns for new layers. Most of the data from the interviews included how teachers practice differentiation. Therefore, a new layer code (layer 1 how) was added to the Excel sheet regarding how teachers practice differentiation. Based on the framework of differentiation defined by Tomlinson and some related literature (Imbeau & Tomlinson, 2010; Sausa & Tomlinson, 2010; Tomlinson, 1999, 2001), 9 themes were extracted from the data; *active learning, student engagement, positive atmosphere, student support, flexibility, ongoing assessment, varied avenues, pro-active planning and homework.* New rounds of analysis of the data revealed more codes at other layers. Various ways in which the themes at Layer 1 are practiced were coded as layer 2 (how layer 2). Likewise, a third layer (how layer 3) as more details for how differentiation is implemented emerged when the researcher analyzed the data further. All the themes at these layers were based on the framework of differentiation defined by Tomlinson (2001) and related literature.

Table 5 shows the themes unfolded in layer 1 and 2.

Table 5

Themes at Layer 1 and 2

Layer 1 (how differentiation is implemented)	Layer 2 (how details)
Active learning	
	Interaction
	Participation
	Little TTT
	Sharing teaching
Student engagement	
	Engaging activities
	Meaningful activities
	Authentic materials
	Challenging activities
	Creative activities
	Enjoy learning

Table 5 (cont'd)

Themes at Layer 1 and 2

Layer 1 (how differentiation is implemented)	Layer 2 (how details)
Positive atmosphere	Personalization Creating interest Creating motivation
Student support	Appraisal Safety Belonging Comfort Taking a personal interest Equality Good rapport Support Collaboration
Flexibility	Scaffolding
Ongoing assessment	Giving options Flexible grouping Adaptation
Varied materials/activities	Observation Noting the mistakes Reflection
Proactive planning	Different materials Different tasks Different tools Different activities Different methods Modification
Homework	

Themes *active learning* and *student support* produced the third layer during the coding of the qualitative data. Table 6 presents how these two themes unfolded in a second and third layers.

Table 6

Themes at Layer 1, Layer 2 and Layer 3

Layer 1 (How DI is implemented)	Layer 2 (How details)	Layer 3 (How details)
Active learning		
	Sharing teaching	Peer feedback
		Metacognition
		Peer teaching
		Autonomy
		Feedback from students
Student support		
	Scaffolding	Pre-teaching
		Building up
		Elicitation
		Using L1
		Modelling
		Grading activities
		Grading language
		Mini lessons
		Personal feedback
		Delayed feedback
		Class feedback
		Supplemental exercises
		Own examples

In addition to the new layers, some themes emerged in the preliminary list. In the sub-parent category 2 which is related to what differentiation is based on, new themes including *content itself*, *time*, *exercises*, *number of students*, *teacher preference* and *feedback by colleagues* emerged. Moreover, instructors' comments on why differentiation is difficult for them lead to another category in the data and it is named as challenges. After the final coding of the data, a different code was assigned to each theme and the data was coded accordingly. In Figure 1, a sample coding of the interview data analysis can be seen.

Figure 1

Sample Coding of the Interview Analysis

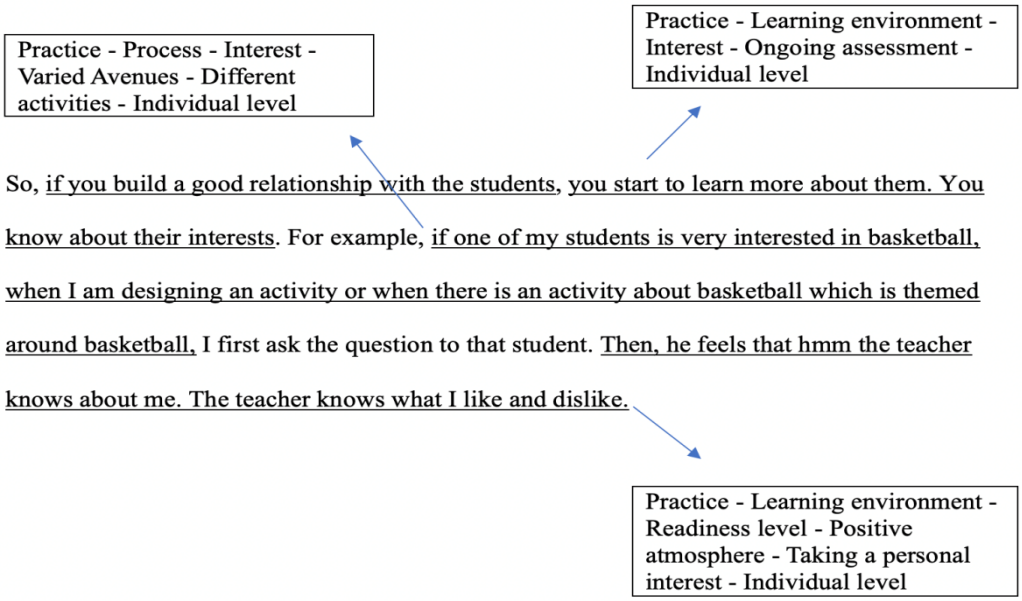


Figure 2 displays a sample excel sheet where coding was organized.

Figure 2

A Sample Excel Sheet Coding Organization

Part. code	Parent category	Sub-parent category	Emerged category	Based on what	Layer 1 How	Layer 2 How	Layer 3 How	Level individual /class	Challenges	Code	Quotation
3	PRA	PRA-AFF		Readiness	Positive atmosphere	Good rapport				PRA-AFF-R-PA-GR	That's very important for me so I try to create a friendly atmosphere in my classrooms
3	PRA	PRA-AFF		Readiness	Ongoing assessment	Reflection				PRA-AFF-R-OA-REF	Especially the students in the second term sometimes tell me about the behaviors that their ex-teachers did not show. So, I try not to do the same things
4	PERC			Interest	Correlation between interest and course performance					PERC-I-CRLTN	I always think that when students deal with the topics that they are interested in, they get more motivated while doing these exercises
6	PRA	PRA-PRAC	PRA-PRAC-CHA						Strict syllabus	PRA-PRAC-CHA-SS	Because of the syllabus we have, we have to follow a course book, Speak out. So, I mainly follow that one

CHAPTER 4: RESULTS

Introduction

This study aims to investigate Turkish EFL instructors' practices and perceptions of differentiated instruction at tertiary level. For this purpose, the study sought to answer the following questions:

1. What are Turkish EFL instructors' perceptions on differentiated instruction at tertiary level?

   1a. Do their perceptions differ based on:

      i. highest degree of graduation?

      ii. teaching certifications hold?

      iii. years of teaching experience?

      iv. number of teaching hours?

2. What are Turkish EFL instructors' practices of differentiated instruction at tertiary level?

   2a. Do their practices differ based on:

      i. highest degree of graduation?

      ii. teaching certifications hold?

      iii. years of teaching experience?

      iv. number of teaching hours?

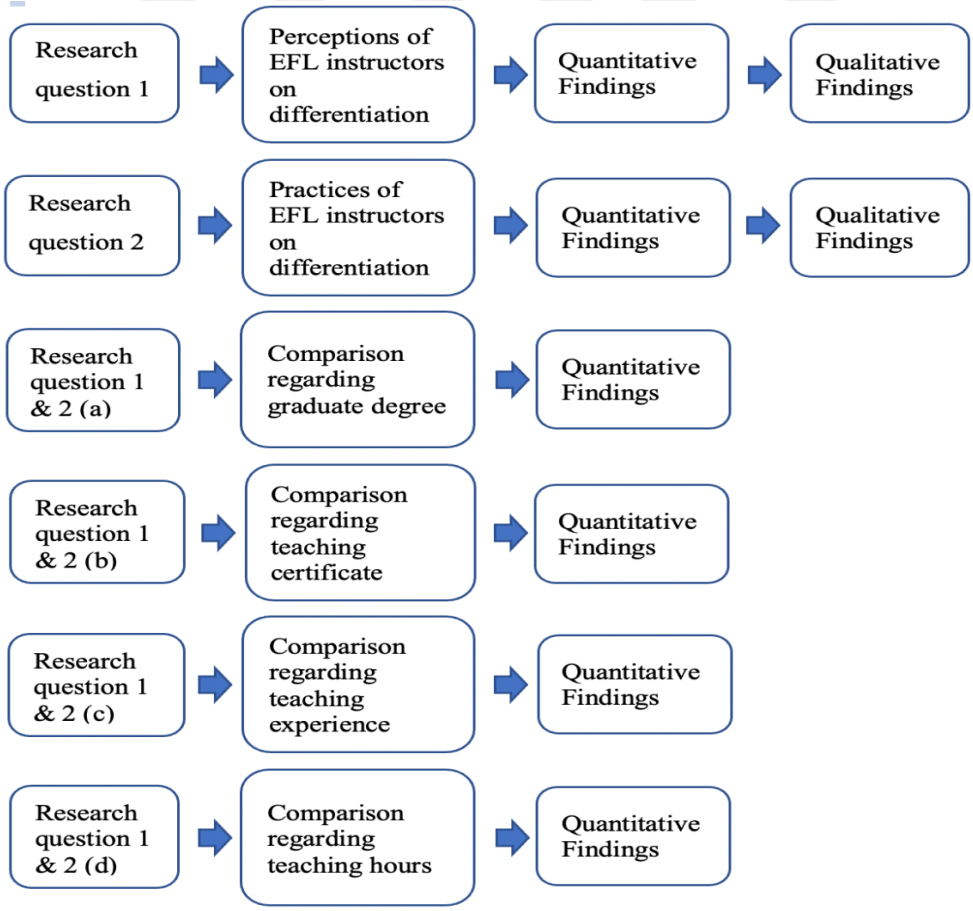
In this study, Turkish EFL instructors' perceptions and practices of differentiated instruction were investigated based on the research questions presented above. The present study employed a mixed-method research study design. The data were collected through interviews and an online survey adapted from the questionnaire developed by Tomlinson and Santangelo (2012). The questionnaire

and the interview focused on 8 main aspects of differentiation: affect, content, process, product, assessment, readiness, interest and learning profile. Both the qualitative and the quantitative data sought answers to both research questions, the survey mainly focused on instructors' perceptions of DI and the interview mainly focusing on instructors' practices of DI. The interview questions elaborated the answers to the questionnaire to get a more detailed picture of the perceptions and practices.

The purpose of this chapter is to present the findings of the current research study. Figure 3 displays the outline of how the results are organized and presented in this chapter.

Figure 3

Outline of the Presentation of the Findings



The results obtained at the end of the analyses of quantitative and qualitative data are presented under two sections as Turkish EFL Instructors' Perceptions and Turkish EFL Instructors' Practices of DI. The results of the descriptive statistical data will be presented for the quantitative phase under each research question. Likewise, the findings of the qualitative part were grouped according to the research questions. The results from the qualitative data revealed themes under each research question. Each theme and subtheme that appeared in the qualitative data are also presented in this chapter. Subsequently, the chapter displays the independent sample t-test results comparing perceptions and practices of EFL instructors regarding four demographic categories (highest degree, teaching certificate/diploma, years of teaching experience and weekly teaching hours).

Results of the Study

Turkish EFL Instructors' Perceptions of Differentiated Instruction

Quantitative Results

The results obtained from the questionnaire regarding Turkish EFL instructors' perceptions of differentiated instruction based on readiness level, interest and learning profile are presented below.

Readiness Level

The first twelve items in the second part of the questionnaire examine instructors' perceptions regarding DI, specifically differentiating instruction according to the readiness level of their learners. Table 7 presents the mean scores and standard deviations of these items as responded by the instructors.

Table 7

Means and Standard Deviations in EFL Instructors' Perceptions of DI Based on Readiness Level

Readiness level related items	Instructors (N= 87)	
	M	*SD*
1.Students…differ….in background knowledge.	3.48	1.05
2….correlation …background knowledge and course performance.	4.24	0.56
3. ..variance in …background knowledge impacts my instruction.	3.82	0.65
4. Students…differ….in basic academic skills.	3.67	0.92
5. ….correlation between..academic skills and course performance.	4.06	0.75
6…variance in …academic skills impacts my instruction.	3.78	0.70
7. Students…differ….in study skills.	3.93	0.83
8. ….correlation between..study skills and course performance.	4.14	0.65
9…variance in …study skills impacts my instruction.	3.62	0.83
10. Students…differ….in motivation/attitude.	4.09	0.81
11….correlation …motivation/attitude and course performance	4.47	0.56
12…variance in …motivation/attitude impacts my instruction.	4.00	0.71

As Table 7 shows, the means of the readiness related items ranged from 3.48 (SD= 1.05) to 4.47 (SD= 0.56), which may suggest that teachers are mostly aware that students differ in their readiness levels which include their background knowledge, academic and study skills, motivation or attitude towards the class

Moreover, the mean scores may indicate that teachers reflect a general understanding for an existing correlation between learners' readiness level and their performance in the course, as well as how this correlation should affect their lessons. For each readiness related item, almost half of the instructors reported they agreed with the statements. Item 1 received the lowest mean score in this section which may suggest that some participants are not fully aware that students vary in their background knowledge. Still, the participants have a moderate level of understanding of the significant variance in their students' relevant language background knowledge. The strongest agreement was expressed for item 11 with a mean score of 4.47. Almost all participants think that a strong correlation exists between students' attitude/motivation and their course performance.

Interest

Items 13-16 in the second part of the questionnaire investigate instructors' perceptions on differentiation with a focus on learners' interests. Table 8 displays the mean scores and standard deviations of these items as replied by the instructors.

Table 8

Means and Standard Deviations in EFL Instructors' Perceptions of DI Based on Interest

Interest related items	Instructors (N= 87)	
	M	*SD*
13. Students…differ….in their interests in the course content.	3.80	0.84
14….correlation …interest and course performance.	4.00	0.73
15. …variance in …interest impacts my instruction.	3.86	0.76

As Table 8 displays, the mean scores ranged from 3.80 (SD= 0.84) to 4.00 (SD= 0.73) for interest related items, which may show that participants have a

general awareness of diverse learner interests and the relationship between interests and course performance. In each interest related item, participants mostly reported that they agreed with all three items. The item 14 has the highest mean score of 4.00, and it may suggest that most participants are aware of the existence of the strong correlation between students' interests and their course performance. Item 15 received a mean score of 3.86, which may indicate that instructors generally think that variance in student interest has an impact on their instruction. The lowest mean score of this part, 3.80, belongs to item 13. Disagreement slightly increased in this item compared to the other two items. Although most participants think that students in their courses differ significantly in their interests with regard to course content, some participants do not agree with this item.

Learner Profile

The remaining 6 items in the second part of the questionnaire examine instructors' perceptions of differentiated instruction, specifically differentiation based on learner profile. The mean scores and standard deviations of these items based on instructor responses are displayed on Table 9.

Table 9

Means and Standard Deviations in EFL Instructors' Perceptions of DI based on Learner Profile

Learner profile related items	Instructors (N= 87)	
	M	*SD*
16.Students…differ….in their preferred learning modalities.	3.85	0.69
17….correlation … preferred learning modalities and course performance.	3.65	0.71
18. ..variance in … preferred learning modalities impacts my instruction.	3.68	0.73
19. Students…differ….in grouping orientations.	3.72	0.77

Table 9 (cont'd)

Means and Standard Deviations in EFL Instructors' Perceptions of DI based on Learner Profile

Learner profile related items	Instructors (N= 87)	
	M	*SD*
20. ….correlation between.. grouping orientations and course performance.	3.48	0.80
21…variance in … grouping orientations impacts my instruction.	3.72	0.78

The results for the items regarding differentiation based on learning profile are similar to the results for the readiness level and interest related items. As the Table 8 shows, the mean scores of items ranged from 3.48(SD= 0.80 to 3.85(SD= 0.69) for the learner profile related items suggesting that instructors have a moderate level of understanding of variance in learner profiles and the correlation between learner profiles and course performance. It may also reveal that they have an average awareness of how this might affect their instruction.

The lowest mean score belonged to item 20, with a score of 3.48 (SD= 0.80). Yet participants are generally aware that there is a strong correlation between students' grouping orientation and their course performance. Item 16 yielded the highest mean score, which is 3.85 (SD= 0.69). It implies that participants generally agree that students in their courses differ significantly in their preferred learning modalities.

Qualitative Results

In the qualitative phase of the research, via interviews participants were asked questions that require them to elaborate on their beliefs of differentiated instruction and how they practiced differentiation in their instruction. The qualitative data

revealed instructors' perceptions on differentiation based on readiness level which contains learners' background knowledge, academic and study skills, motivation and attitude towards the course. It also revealed instructors' perceptions on differentiation based on learner interest and learner profile which contains preferred learning modalities, grouping orientations, gender and culture (Tomlinson, 2010; Tomlinson et al., 2003).

The qualitative data for the perceptions of DI were accordingly divided into three main categories as readiness level, interest and learner profile, following the same format of the questionnaire. In some of the comments regarding perceptions of DI based on student needs, instructors clearly refer to students as a group or individuals. In these cases, the themes derived under each category were assessed at individual level and class level depending on whether participants refer to students as individuals or as a group when commenting on their needs. The findings indicate that the qualitative data are mostly consistent with the quantitative data regarding the perceptions of Turkish EFL instructors on differentiated instruction except for some divergences. Table 10 displays the number of comments each category received regarding perceptions of DI in the interview.

Table 10

EFL Instructors' Perception of DI Based on Readiness Level, Interest and Learner Profile (n=13)

Sub-parent categories	Number of comments
Readiness level	81
Learner profile	33
Interest	21
Total	135

Readiness level was the most repeated theme in the interview data in terms of perceptions on differentiated instruction. The number of comments including the themes *interest* and *learner profile* decreased significantly. This may suggest that participants may attach more importance to the readiness level of the students that their interests and learner profile.

Readiness Level

Table 11 shows the themes derived from the qualitative data regarding perceptions of DI, specifically readiness level and number of comments by the participants.

Table 11

Perceptions on Differentiated Instruction in Terms of Readiness Level (n=13)

Theme	Level	Number of comments
Variance in background knowledge and academic skills		21
	Individual level	9
	Class level	8
	Not specified	4
Lack of variance in background knowledge and academic skills		2
	Individual level	1
	Class level	1
The correlation between background knowledge/ academic skills and the course performance		4
	Individual level	1
	Class level	3
Lack of correlation between background knowledge/academic skills and course performance		1
	Individual level	0
	Class level	0
	Not specified	1
Impact of variance in background knowledge and academic skills on lesson planning		1
	Individual level	0
	Class level	0
	Not specified	1

Table 11 (cont'd)

Perceptions on Differentiated Instruction in Terms of Readiness Level (n=13)

Theme	Level	Number of comments
Individual readiness level in terms of background knowledge and academic skills having no impact on lesson planning		2
	Individual level	0
	Class level	0
	Not specified	2
Variance in motivation/attitude		15
	Individual level	7
	Class level	8
The correlation between motivation / attitude and the course performance		29
	Individual level	4
	Class level	14
	Not specified	11
Irrelevance of motivation/attitude		6
	Individual level	0
	Class level	0
	Not specified	6
Total		81

Overall, Table 11 reveals that some participants seem to consider learners' *readiness level* as a class level rather than at the individual level. Participants usually refer to students as a group with same needs rather than different individuals with varying needs. This may suggest that some participants do not take into consideration their students' individual differences in terms of their readiness level.

One theme that appeared in the data related to instructors' perceptions of DI in terms of readiness level is *variance in students' background knowledge and academic skills*. In parallel with the findings of the quantitative data, most participants seem to believe that students vary in their background knowledge and academic skills although they are placed in the same level. Instructor 4 highlighted

this belief when he said, “[a]ll student profile is very different because they take education under different circumstances.” Instructor 6 said, “They take a proficiency exam. And we suppose that they are at similar levels but sometimes we can have very weak or very strong students.” Instructor 2 stated regarding the variance in academic skills:

> No, they are never the same or they will always be out of training students. Always 3 or 4 students are not hardworking but they have fluent English or there are always students with bad speaking skills. They are not good at speaking but when you ask them a question they are like glossary. They know a lot of vocabulary. They are really different.

However, a few comments revealed that a minority of the participants seem to think that learners *do not vary in terms of their background knowledge and academic skills*. Instructor 5 stated, “They are already grouped into levels A or B so their level is not up to me.” Instructor 1 said that he assumed students are at the same level.

There were a few comments on the *relationship between background knowledge/academic skills and course performance* while in the quantitative data the items with the same theme received high mean scores. Some participants believed that students’ background knowledge affect their learning process. Parallel to the quantitative results, very few participants disagree that there is a direct relationship between students’ background knowledge and their course performance. Only instructor 3 said, “But I don’t think me and my students face a problem about readiness level. I don’t think I ever had a student who wasn’t successful because he or she was not ready about learning a certain structure.”

Unlike the findings of the quantitative data, the interviews revealed little data showing that teachers perceive this individual difference as an important factor for any part of their instruction and that they are aware of the fact that they should make necessary adaptations for individual students with different readiness levels. Unlike the findings of the quantitative data, some instructors may think that individual readiness level should not impact their classes. Instructor 4 said, "So if I start to take them (individual readiness levels) into consideration, then at some point my teaching will be interrupted." Only instructor 5 mentioned that the variance in individual students' background knowledge impacts how she/he teaches. She stated, "What I have to do is maybe use a variety of materials considering their needs and their interests."

Variance in motivation and attitudes towards language learning or school is another theme that was derived from the qualitative data regarding perception of DI in terms of readiness level. Most instructors seem to believe that learners vary in their motivation and attitude towards the lesson. Instructor 7 said, "Some students have a very positive attitude towards the lesson but some may have very negative attitudes."

The relationship between motivation / attitude and course performance was the most repeated theme in the qualitative data regarding instructors' perceptions of DI in terms of readiness level. In sync with the related results in the quantitative data, most of the participants seem to think that motivation and attitude of the learners is crucial in the learning process and the course performance of the students. Instructor 1 said, "So it is again the same thing. If the student is motivated to learn, he does learn." Instructor 13 stated, "Most of them are not prepared for a year full of language learning. For that reason, they mostly come to our classes confused. Not

ready to learn the language and not motivated". Instructor 9 added, "If they are not motivated in my classroom, whatever you do in the classroom, you cannot reach them."

However, some teachers seem to consider motivation or attitude as independent from the learning process. Some participants stated that understanding of variance in individual students' attitude and motivation do not impact on what and how they teach. Instructor 4 said:

> They are young people. They have a lot of things, you know. Their minds are all over the place. They always have problems; they always have sharp emotions. They have anger, other things. but in our classes, there is only one thing we do which is learning English. I always, you know, leave my problems outside the door so please you do that too.

Learner Profile

The findings from the quantitative data and qualitative data in relation to the instructors' perceptions of DI based on learner profile showed a similar pattern. Participants seem to have a moderate level of understanding of variance in the learner profiles and its impact on the course performance and on their instruction. Table 12 shows the themes and sub-themes derived from the qualitative data and the number of comments made regarding perceptions of DI in terms of learner profile.

Table 12

Perceptions of Differentiated Instruction in Terms of Learner Profile (n=13)

Theme	Level	Number of comments
Variance in learner profile		14
	Individual level	6
	Class level	8
Lack of variance in learner profile		2

Table 12 (cont'd)

Perceptions of Differentiated Instruction in Terms of Learner Profile (n=13)

Theme	Level	Number of comments
	Individual level	0
	Class level	2
Correlation between learner profile and motivation		2
	Individual level	1
	Class level	1
Impact of learner profile on the lesson		8
	Individual level	0
	Class level	7
	Not specified	1
Variance in grouping formats		5
	Individual level	5
	Class level	0
Lack of variance in grouping formats		2
	Individual level	1
	Class level	0
	Not specified	1
Total		33

As Table 12 displays, instructors generally believe that students have *different learning profiles*, which is in line with the findings of the quantitative data. Some instructors address to learner profile at individual level and some address to it at class level. Instructor 7 highlighted his perception of variance in learner profile at individual level by saying, "I know every student is different. Students have different abilities, different capacities, different interest, different learning strategies, learning styles, etc." Yet instructor 9 stated, "I did it (an activity) with one of my classes and they loved it. They didn't even want to go out for a break but the other class did not like the activity." A few instructors mentioned cultural differences of students, which

hints that they have some understanding of culture as part of learner profile and its impact on their instruction. Instructor 5 said, “Well you know .. we know that there are a variety of students from almost all cultures.” Instructor 12 said, “You know cultural background, regions, economical background…all of them are important. Because for example they are talking about holidays and some students go surfing in Alaçatı and others haven’t done.”

One theme that appeared related to instructors’ perceptions of DI in terms of learner profile was *lack of variance in learner profile.* A few instructors do not seem to consider different learner profiles in their classes. Instructor 11 stated, “There are lots of things important of course. Having a quiet environment where everyone pays attention or try to make everyone pay attention.” However, it depends on the learner profile in the class. Some students prefer interaction, group activities and a lively, noisy classroom while others benefit a silent classroom. This theme may suggest that some teachers may have a limited understanding of variances in individual learner profiles.

Another theme that appeared in the qualitative data regarding instructors’ perceptions of DI in terms of learner profile was *correlation between learner profile and motivation*. A few instructors believe that students get motivated when they bring in different kinds of activities. Instructor 9 stated that the reason for students’ demotivation in the class might be lack of variety in the way they do activities. She said:

> They have to sit all day if I don’t bring different activities to the class on that day. It could be really demotivating for them because they have to sit and listen to me, talk to each other. The same thing again and again. So, I think bringing some different materials could stop this demotivation.

Impact of learner profile on lesson planning was another theme that was derived from the qualitative data. Some instructors think that adapting the classes according to students' learner profile would be beneficial for students to become more active in the learning process. Instructor 5 said, "What I have to do is maybe use a variety of materials considering their needs and their interests…" Instructor 6 stated, "I want to improve myself because I think I am sometimes very dependent on the course book and I want to change it so I try to make the activities more communicative."

Variance in grouping formats was derived as a theme from the qualitative data. Instructors generally believe that students benefit variety in the grouping formats. Instructor 3 said, "pairing the same students all the time or grouping the same students in the same groups with the same members all the time ends up with some problems." Another participant (Instructor 5) stated, "If there are four weak students in a group, you know there is no conversation." Instructor 13 said, "it depends on their group dynamics again. If they are willing to, you can make lots of different organizations."

Lack of variance in the grouping formats also appeared as a theme in the interview data, which might suggest that some instructors may not be fully aware of different grouping orientations of students and its relation with course performance. Instructor 8 thinks that it is a waste of time to match different learners in pair or group works. He said, "when you group them, it takes a lot of time for rearranging and in the end what you get is not much different from what you might get if you keep them in the same order." Instructor 2 stated he did not know what criteria to depend on while creating flexible groups. He said, "I don't want to decide because

how should I decide? For example, should I match a hardworking student with a less hardworking student? Or a girl with a boy? What criteria do I have?"

Interest

The qualitative data revealed instructors' thoughts and beliefs on differentiation based on interest. Table 13 shows the number of comments revealing perceptions on differentiating instruction based on learners' interests.

Table 13

Perceptions on Differentiated Instruction in Terms of Interest (n=13)

Theme	Level	Number of comments
Variance in interest		9
	Individual level	3
	Class level	5
	Not specified	1
Correlation between interest and course performance		5
	Individual level	1
	Class level	2
	Not specified	2
Impact of interest on the lesson		7
	Individual level	2
	Class level	3
	Not specified	2
Total		21

As the Table 13 presents, the data from the interviews indicate that most participants think that students have *varied interests*, which is in line with the quantitative findings. However, these differences are generally perceived at class level rather than individual level. It might suggest that in general most participants may consider students in a classroom as a single unit with same interest rather than

individuals with different interest. For example, Instructor 3 stated that, "[a]nd you know our students, Z generation, they are very interested in technology."

Similar to the findings of the quantitative data, some participants seem to believe that there is a *strong correlation between students' interests and their course performance*. Instructor 2 said, "Boredom is important for me because whatever you do, however you are, if they are bored, they can't get what they should get in a class." Instructor 3 stated, "You know, homework is something very boring and if we keep homework in a boring way, possibly students will not do it."

Unlike the findings of the quantitative data, only few participants commented on how the *variance in student interest impact their instruction*. Instructor 2 said:

> They [books] are really outdated. The people who prepared them are old maybe or just …for example we read about a woman, an actress staring in a film with the role of Queen Elizabeth II. For our students… they are not interested in the Queen, they do not know anything about the actor or actresses so why should I use it?

Instructor 13 stated, "What I can do is to get their attention to something that they are interested in, not that they should be interested in."

Turkish EFL Instructors' Practices of Differentiated Instruction

The results obtained from the quantitative data regarding Turkish EFL instructors' practices of differentiating learning environment, content, practice/product and assessment are presented in this section.

Quantitative Results

The results obtained from the questionnaire regarding Turkish EFL instructors' differentiation practices of learning environment, content, process, product and assessment are presented below

Learning Environment

Items 22 to 27 in the third part of the questionnaire investigate instructors' differentiation practices, specifically differentiation of the learning environment. Table 14 shows the mean scores and standard deviations of these questionnaire items as responded by the instructors.

Table 14

Means and Standard Deviations in Turkish EFL Instructors' Differentiation Practices of Learning Environment

Learning environment related items	Instructors (N=87)	
	M	*SD*
22. Create activities/assignments to develop a sense of community.	3.90	1.04
23…. efforts to ensure each student feels known, welcome, and respected.	4.45	0.72
24. ….efforts to make myself approachable/available to students.	4.60	0.59
25. ….efforts to ensure students participate consistently and equitably during class.	4.51	0.60
26… efforts to enhance students' attitude/motivation towards course content.	4.34	0.72
27. Follow up privately on behaviors or circumstances of concern.	3.78	0.84

As Table 14 demonstrates, the range of the mean scores are between 3.78 (SD= 0.84) and 4.60.(SD= 0.59) for the items focusing on differentiation of learning environment, which may suggest that participants generally differentiate the learning environment. Most frequent practice was reported in item 24 with the highest mean score of 4.60 (SD= 0.54). Almost all participants reported that they take deliberate efforts to become approachable / available to the students. Similarly, in their

response to item 25, participants mostly stated that they take try to ensure students participate consistently and equitably during the class.

The lowest mean score was noted for the item 27 which is about the practice of following up privately on behaviors or circumstances of concern. Still, the mean score signifies that participants on average follow up privately on behaviors or circumstances of concern.

Content

The items 28 to 42 examine instructors' differentiation practices, specifically about the differentiation of content. The mean scores and standard deviations of the questionnaire items as responded by the instructors are displayed in Table 15.

Table 15

Means and Standard Deviations in EFL Instructors' Differentiation Practices of Content

Content related items	Instructors (N=87)	
	M	*SD*
28. Use text materials that represent a variety of formats	4.28	1.33
29.Use text materials ….. at varying levels of complexity.	4.16	1.42
30. Allow students to select from multiple text options	3.37	1.48
31. Use materials that represent a variety of formats	4.29	1.19
32. Use ..materials besides course textbooks ..in a variety of ways.	3.77	1.07
33. Use text and/or…materials … students' interests or experiences.	3.67	1.13
34. …supplemental materials/resources to support… who have difficulty understanding course content.	3.91	1.04
35. …supplemental materials / resources to ….students who master course content with minimal effort.	3.39	1.03
36…. content using visual displays or demonstrations.	4.00	0.96
37….content…examples….students' interests and experiences.	4.04	0.87

Table 15 (cont'd)

Means and Standard Deviations in EFL Instructors' Differentiation Practices of Content

Content related items	Instructors (N=87)	
	M	*SD*
38. strategies to support comprehension and retention of content…	4.13	1.12
39….strategies …comprehension and retention of content …	3.75	1.14
40. supplemental support .. difficulty understanding course content	3.98	1.13
41… advanced opportunities …master..content with minimal effort.	3.26	1.00
42.Solicit student feedback ..select/adjust the content presented …	3.93	1.31

The table shows that the mean scores range from 3.26 (SD= 1) to 4.29. (SD=1.19) for these items that focus on differentiation of content. It indicates that instructors moderately differentiate the content in their instruction. The highest mean score was noted for item 31, which implies that most participants seem to use materials that represent a variety of formats (e.g., text, video, audio, web-based). The lowest mean score was noted for item 41 which is about creating more advanced opportunities for students who master course content with minimal effort. It suggests that instructors may not usually provide students who master the content easily with more advanced opportunities. Similarly, item 30 received a low mean score with a score of 3.37 (SD= 1.48). It implies that it is not a common practice for instructors to allow students to select from multiple text options (e.g., read one of the three).

Process / Product

In the third part of the questionnaire, items from 43 to 57, in total 15 items, in the third part of the questionnaire investigate instructors' differentiation practices

with a focus on differentiation of process and production. Table 16 displays the mean scores and standard deviations of the questionnaire items related to differentiation of process and production.

Table 16

Means and Standard Deviations in EFL Instructors' Differentiation Practices of Process/Product

Process/Product related items	Instructors (N= 87)	
	M	*SD*
43. Design activities/assignments …interacting with each other.	3.97	1.01
44. Use a variety of grouping formats during class.	4.51	0.80
45. Use a variety of grouping ..for assignments ..outside of class.	3.56	1.45
46. Allow each student to select his/her preferred grouping format.	3.39	1.15
47. Purposefully group students based on their levels of readiness.	3.28	1.09
48. Purposefully group students based on their interests.	2.98	1.06
49. Purposefully group students…. preferred learning modalities.	2.73	1.05
50. Create activities/assignments that offer format options.	4.40	1.52
51…activities/assignments …student to select ….personal interest.	3.81	1.37
52. Adjust assignment deadlines… individual students' needs…	3.56	1.78
53. supplemental support …who have difficulty completing…	3.70	1.03
54 enrichment opportunities …who complete …. minimal effort.	3.27	1.10
55. Observe / evaluate student ..improvement during the semester.	4.08	0.95
56.Use multiple forms of assessment to determine course grades.	5.26	1.16

Table 16 (cont'd)

Means and Standard Deviations in EFL Instructors' Differentiation Practices of Process/Product

Process/Product related items	Instructors (N= 87)	
	M	*SD*
57. Solicit student feedback to...create…activities/assignments…	4.02	1.36

As the Table 16 shows, the mean scores range from 2.73 (SD= 1.05) to 5.26 (SD=1.16) for the items that focus on differentiation of process/product. The lowest and highest mean scores were noted at these items in the entire questionnaire. The highest mean score was noted for the item 56 which is about using multiple forms of assessment to determine course grades. However, instructors may refer to the varied forms of assessment throughout the term set by the curriculum unit. Similarly, item 44 which is about using varied grouping formats received a high mean score which is 4.51 (SD= 0.80). It suggests that participants mostly use variety of grouping formats during class to differentiate process and production phase of their instruction. However, scores decreased in item 46 which is about allowing each student to select his/her preferred grouping format. It may imply that students are not generally given a choice on the grouping formats. Likewise, when it came to the item 49, which is about purposefully grouping students based on their preferred learning modalities, scores decreased significantly. In fact, item 49 received the lowest mean score. It may signify that preferred learner modalities are not generally a criterion for instructors regarding how to group or pair students.

Assessment

The last three items in the questionnaire focus on instructors' differentiation practices, specifically differentiation of assessment. The mean scores and standard

deviations of the questionnaire items related to differentiation practices of assessment can be seen in Table 17.

Table 17

Means and Standard Deviations in EFL Instructors' Differentiation Practices of Assessment

Assessment related items	Instructors (N= 87)	
	M	*SD*
58. Assess each student's level of readiness.	3.52	1.31
59. Assess each student's interests.	3.34	1.08
60. Assess each student's learning profile characteristics.	3.18	1.21

As Table 17 presents, the mean scores range from 3.18 (SD= 1.21) to 3.52 (SD=1.31) for the item related to the differentiation of assessment. The highest mean score belonged to item 58. It suggests a moderate level of practice when it comes to assessing each student's level of readiness. As for item 59 which is about assessing each student's interests, the mean score decreased to 3.34. The lowest mean score was noted for the item 60 which is about assessing each student's learning profile characteristics (e.g., preferred learning modality, grouping orientation). It may imply that teachers take learner profile into relatively less consideration compared to interest and readiness level in their differentiation practice of assessment.

Quantitative Findings

Tomlinson (2001) puts forward that content, process, production and environment should be differentiated based on learner needs. According to Tomlinson and Santangelo (2012), learning environment contains the overall rapport between the students and teachers along with the routines and procedures in the classroom. Content refers to essential knowledge, skills, understanding that is being taught and how students are provided with that information. Process is defined as

"*sense-making* activities that allow students to begin thinking about, working with, and personalizing the content—either in class or at home" (p.313). Product, on the other hand, is the phase where students do assignments that facilitate their ability to critically think about, apply, and demonstrate what they have learned" (p. 313).

During the interviews participants were asked what they took into consideration when planning the content, process and product phases of their lessons to find out if they differentiated these components to any extent. They were also asked about the kind of environment they usually created to see if learning environment was differentiated.

The qualitative data collected through these interviews were divided into four categories: learning environment, content, practice and production. Each of these four categories were analyzed at two steps; what the differentiation of these categories is based on as the sub-parent category and how the differentiation is implemented as Layer 1. Regarding how differentiation is implemented, the qualitative data produced themes such as creating a *positive atmosphere* and *active learning* environment, providing *student engagement*, *student support* and *various avenues*, ensuring *flexibility* and flexible groupings, *ongoing assessment*, *pro-active planning* and *homework* (Sausa & Tomlinson, 2010). These themes are mostly in parallel to the items in the third part of the questionnaire related to the practices of differentiation. Table 18 provides short explanations for these themes.

Table 18

Short Explanations for the Themes Regarding How Differentiation is Implemented

Themes	Explanations
Positive environment	A learning atmosphere where every student feels comfortable and safe, which will motivate them in the learning process

Table 18 (cont'd)

Short Explanations for the Themes Regarding How Differentiation is Implemented

Themes	Explanations
Active learning environment	A learning environment where there is a lot of interaction among the students and teacher and where students are active participants of the learning process
Student engagement	Keeping students motivated and interested in the learning process through activities, tasks, topics or materials that respond to their interests and learner profiles
Student support	Providing the necessary support, scaffold, guidance or enrichment in accordance with learner needs
Various avenues	Using different materials, activities, tasks besides the coursebook or adapting the course materials to differentiate instruction
Pro-active Planning	Planning instruction in advance according to individual learner needs in a group
Ongoing assessment	The process where instructors continuously assess students for their needs to learn more about them and plan their instruction accordingly
Flexibility	Being flexible in the learning process and adapt the instruction as necessary, giving students options based on their needs and creating flexible groupings which is to create pairs or groups where students work with different students each time in accordance with their needs
Physical circumstances	Physical conditions of the classroom such as light, heat, seating arrangements, classroom walls and so on.
Homework	Students' work

New themes besides *readiness level*, *interest* and *learner profile* emerged in the sub-category related to what differentiation is based on from the interview data. Moreover, when instructors express that they do not take readiness, interest or learner profile into consideration, these themes were marked with a minus (-) next to

them to show the lacking of them. Layer 1 produced two more layers that unfold details about how the differentiation is practiced as Layer 2 and Layer 3.

Moreover, the data for each category was assessed at individual level and class level as students were sometimes referred as individuals and sometimes as a group by the interviewees.

Table 19 displays the number of comments made on each category.

Table 19

The Number of Comments regarding Instructors' Practices of DI (n=13)

Categories	Level	Number of comments
Learning env.		266
	Class level	156
	Individual level	85
	Not specified	25
Content		150
	Class level	120
	Individual level	8
	Not specified	22
Process		278
	Class level	216
	Individual level	40
	Not specified	22
Production		129
	Class level	104
	Individual level	14
	Not specified	11
Total		823

As can be seen in Table 19, the greatest number of comments were made regarding differentiated instruction during learning environment and process and the least regarding production. This may indicate that differentiation of learning

environment and process is more commonly practiced by the instructors compared to production. It can also be seen that in their comments, instructors mostly refer to students and their needs at class level rather than individual levels. This may suggest that teachers may tend to see students as a single unit with same needs as a class rather than individuals with rather unique needs.

Learning Environment

Regarding the learning environment the instructors create in the classroom, the interview findings are parallel to the findings from the questionnaire.

Table 20 presents the themes derived from the interview data regarding the differentiation practices of learning environment.

Table 20

Themes Related to What Differentiation is Based on and Its Implementation from the Data Regarding Differentiation of Learning Environment (n=13)

What differentiation is based on	How is differentiation implemented	Number of comments
Readiness		101
	Positive atmosphere	72
	Active learning	8
	Flexibility	7
	Student engagement	5
	Varied avenues	5
	Ongoing assessment	3
	Lack of proactive planning	1
Learner profile		26
	Flexibility	17
	Varied avenues	8
	Student engagement	1
Interest		11
	Student engagement	4
	Positive atmosphere	2

Table 20 (cont'd)

Themes Related to What Differentiation is Based on and Its Implementation from the Data Regarding Differentiation of Learning Environment (n=13)

What differentiation is based on	How is differentiation implemented	Number of comments
	Varied avenues	2
	Ongoing assessment	1
	Flexibility	1
	Lack of student engagement	1
Content itself		3
	Active Learning	2
	Flexibility	1
Readiness (-)		12
	Lack of positive atmosphere	11
	Lack of pro-active planning	1
Learner Profile (-)		2
	Lack of flexible grouping	2
Interest (-)		1
	Lack of student engagement	1
Not specified		110
	Positive atmosphere	50
	Active learning	22
	Student engagement	14
	Flexibility	10
	Lack of positive atmosphere	4
	Physical circumstances	3
	Lack of pro-active planning	2
	Ongoing assessment	2
	Lack of active learning	2
	Non specified	1
Total		266

When instructors were asked about how they create a good learning environment, they made comments about what they base their differentiation of

learning environment on. As can be seen in Table 20, *readiness level* appeared as the most uttered theme which may suggest that participants take into consideration learners' readiness level the most when they differentiate learning environment. Instructors mostly try to create a *positive atmosphere* to keep students motivated and help them have a good attitude towards school. In fact, Table 20 suggests that creating positive environment is the most employed way of differentiating learning environment. Instructor 3 said, "In order to make students comfortable during the class hours …. I always try to create a close and sincere relationship with my students." Instructor 7 said, "So being positive in the classroom is the first rule for me."

Some participants reported that they tried to create an *active learning environment* where students actively participate in the class and peer teach to support weaker students. Instructor 7 said, "You know, it is a good idea to give the opportunity to the weak students of learning from the strong ones and strong ones can teach the weak ones, so I do that."

Flexibility is another theme derived from the data in relation to differentiation of learning environment according to readiness level. A few teachers practice differentiation of learning environment through flexible groupings of weak and strong students so that they can help each other learn. Instructor 7 said, "But depending on the subject and my purpose of making them work in a group, I sometimes match the weak ones with the strong ones."

Student engagement appeared as a theme in relation to how differentiation of learning environment is practiced based on readiness level. Some participants mentioned that they try to motivate students towards the lesson by helping them

enjoy the lesson and learning a language. Instructor 1 said, “I try to make my students like the lesson or like learning a new language.”

Varied avenues that include making adaptations to the course material or bringing different or extra materials, tasks or activities were also uttered in the interviews as a way of differentiating learning environment according to readiness level. A few participants reported that they make adaptations on activities to motivate certain students more into the class. Instructor 12 said, “On some issues they might feel shy to express themselves to their friends so writing might be a better idea. Or sometimes they may find it childish to talk about those topics.”

A few instructors seem to carry out *ongoing assessment* as a way of differentiating learning environment. Instructor 3 reported how he applied ongoing assessment as a way to differentiated learning environment according to learners’ readiness level. He mentioned that he got feedback from students about what teacher behaviors motivate them and tried to act accordingly. He said, “So some teachers they say never have a smiling face when they (students) go to the office hours. Especially the students in the second term sometimes tell me about the behaviors that their ex-teachers did not show. So, I try not to do the same things.”

Lack of proactive planning also appeared in the qualitative data regarding differentiation of learning environment based on readiness. Instructor 5 reported that he does not do any planning to differentiate the learning environment.

The interview data reveals that some teachers do not seem to take readiness level in terms of learners’ motivations, attitude and emotions into account in the differentiation of learning environment. They might think that learning process can be divorced from attitudes or motivation. Instructor 4 said, “To be honest it (student emotions) does not play a big role in my class because I am there for a specific

purpose. You know teaching English". The same instructor added that she does not consider students' feelings or attitudes while planning lessons.

As Table 20 displays, the number of comments decreases in the differentiation of learning environment based on *learner profile* compared to differentiation based on readiness level. This may suggest that fewer participants take learner profile into consideration while differentiating the learning environment.

Regarding the differentiation of learning environment based on learner profile, some participants seemed to create *flexibility* by implementing flexible groupings including pair works, group works and whole class activities and giving options to students as to decide groupings or how to do a certain activity. Instructor 7 said, "It can be a pair work, it can be a groupwork, I don't know, or it can be a whole class activity." Regarding giving options, Instructor 1 said, "[f]or example, if it was a speaking activity, I always asked them if they wanted to do it as a pair or group and if half of the class wanted to do it in pairs, I just divided the class and the others worked in groups or individually."

Some participants seem to bring in *varied activities* or make adaptations as varied avenues to address the learner profile in their class while differentiating the learning environment. Instructor 1 said, "I try to motivate my students to learn English through different activities, different type of interaction patterns."

Student engagement was another theme that was brought up by one participant. Instructor 4 stated that she tried to give activities a purpose to make them meaningful for students.

However, a few instructors do not seem to take *learner profile* into account in their differentiation practice of the learning environment. Instructor 7 said she always paired students with their desk mates.

Regarding differentiation of the learning environment, *interest* received the fewer number of comments compared to readiness level and learner profile. This finding might suggest that learner interest might be generally ignored in the differentiation of learning environment. Some participants seem to differentiate the learning environment based on interest through creating a *positive learning environment* and *student engagement.* Some instructors try to engage students in the learning process and help them enjoy the class through different ways such as personalizing the activities. Instructor 6 said, "Sometimes to make the activity more enjoyable, I change the names on it and I put students' names in the classroom. I don't know but they find it very funny also to see their names on the board."

Regarding creating a positive environment, Instructor 3 said, "[i]f I can present a topic or subject by using some interesting and funny, enjoyable videos, both I and they enjoy the lesson. Then, he feels that hmm the teacher knows about me. The teacher knows what I like and dislike. Or it may also be about dislikes." Some instructors apply to *varied avenues* to differentiate learning environment. Instructor 3 also reported that he brought in different activities based on students' interests. He said, "For example, if one of my students is very interested in basketball, when I am designing an activity or when there is an activity about basketball which is themed around basketball, I first ask the question to that student." The same instructor added that he does *ongoing assessment* to learn about his students' interests. He said, "So, if you build a good relationship with the students, you start to learn more about them. You know about their interests." Only one instructor indicated *flexibility* regarding how he differentiated learning environment based on interest. Instructor 1 said, "Well if my students don't like talking about their

weekends, I don't ask them that question because I know they won't be interested in that and they will get bored."

However, one instructor does not seem to take *interest* into consideration in the learning environment he tries to create. Instructor 1 reported that it was not important if students were interested in the subject because they would still learn something from it.

Content itself emerged as a theme regarding what the differentiation of learner environment is based on. Some participants stated that they differentiate learning environment depending on the subject they are to teach. For some participants, *active learning* where students actively participate in the class and *flexible grouping* changes according to what subject they are teaching. Instructor 7 said, "but of course it depends on the subject that I teach … If I am not teaching grammar, for example, I generally make my students do something in the classroom." This emerging theme may indicate that student needs are sometimes not taken into consideration while planning lessons.

Some instructors gave information about how they differentiate learning environment without specifying what they base the differentiation on. The most frequently repeated theme was *positive atmosphere.* Most instructors mentioned that they tried to create a positive environment where students feel safe, happy and comfortable. Besides positive atmosphere*, lack of positive atmosphere* also appeared as a theme in relation to differentiation of learning environment. While Instructor 4 implied that she does not have a good rapport with her students, Instructor 5 stated that he could tell from feedback he got from his students that they enjoy his classes. Some instructors seem to promote an *active learning* environment in their classrooms. Instructors generally try to make learners active recipients of knowledge

in their learning process. Instructor 1 said, “if they didn’t notice why we did that activity, I told them explicitly why we did it and how it helped them to practice”. Some instructors seem to attach importance to *student engagement* and they try to keep students engaged in their learning process. Instructor 7 said, “I sometimes try to make them (learners) have fun and enjoy the classes”. Some instructors seem to differentiate learning environment through flexible groupings or giving students options for how to an activity. A few instructors mentioned that they differentiate learning environment by differentiating the physical environment. Instructor 10 stated, “Most of the time I try to keep the classroom fresh, let’s say open the windows, open the doors, try to keep it lighted and all those physical things that make students comfortable.”

Lack of proactive planning was another theme as a few instructors stated that they do not plan learning environment in their instruction. Instructor 12 reported that he did not plan beforehand but he paid attention the learning environment during the lesson. *Ongoing assessment* appeared as another theme as Instructor 3 mentioned getting feedback from their students on how to differentiate the learning environment. He said, “… I mean when I think about students of the past, they had criticisms about teachers who did not have good relationships with them so I try not to do those things, do the things that students complain about”. A few instructors do not seem to promote an active learning environment. Instructor 4 said, “Normally I do not give a student the management of the class for anything. Not a single activity.” Instructor 10 stated that he never used peer feedback.

Instructors were also asked to elaborate their differentiation practice of learning environment. Table 21 unfolds more details as to how differentiation of learning environment is implemented.

Table 21

Themes Related to How Differentiation is Implemented from the Data Regarding Differentiation of Learning Environment (n=13)

How the differentiation is implemented	How (details)	How (details)	Number of comments
Positive atmosphere			124
	Safety		31
	Support		24
	Good rapport		16
	Taking a personal interest		16
	Comfortable		10
	Respect		10
	Equal opportunities		4
	Appraisal		3
	Not specified		10
Flexibility			36
	Flexible grouping		22
	Giving options		9
	Adaptation		3
	Not specified		2
Active learning			32
	Learner participation		15
	Sharing teaching		13
		Peer teaching	8
		Feedback from students	4
		Not specified	1
	Metacognition		2
	Little TTT (teacher talking time)		2
	Not specified		0

Table 21 (cont'd)

Themes Related to How Differentiation is Implemented from the Data Regarding Differentiation of Learning Environment (n=13)

How the differentiation is implemented	How (details)	How (details)	Number of comments
Student engagement			24
	Enjoy learning		10
	Personalization		3
	Meaningful activities		2
	Creating motivation		2
	Creating interest		1
	Challenging activities		1
	Engaging activities		1
	Interaction		1
	Not specified		3
Lack of positive atmosphere			15
	Lack of personal interest		3
	Lack of safety		3
	Lack of good rapport		2
	Lack of support		2
	Not specified		5
Varied materials/activities			14
	Different material / activities /methods /tasks		7
	Modification		6
	Not specified		1
Ongoing assessment			6
	Reflection		4
	Not specified		2
Lack of pro-active planning			4
Physical circumstances			3
	Classroom walls		1
	Comfortable		1

Table 21 (cont'd)

Themes Related to How Differentiation is Implemented from the Data Regarding Differentiation of Learning Environment (n=13)

How the differentiation is implemented	How (details)	How (details)	Number of comments
	Not specified		1
Lack of flexibility			2
Lack of student engagement			2
Lack of active learning			2
Not specified			2
Total			266

Similar to the quantitative results, Table 21 shows that instructors generally create a *positive atmosphere* where there is a good rapport between teacher and students and where students feel safe and supported. When asked how they create a positive learning environment, experiences such as establishing a good rapport, giving students support, providing appraisals on their work, making them feel comfortable and safe in the classroom, taking a personal interest in them and creating equal opportunities for students emerged in the qualitative data. Regarding the emphasis on positive learning environment, Instructor 2 stated, "[i]n order to make students comfortable during the class hours so I always try to create a close and sincere relationship with my students." Instructor 3 said:

> An atmosphere where students will be okay and where they are never afraid of me and where they have no doubts about the relationship between the teacher and the students. That's very important for me so I try to create a friendly atmosphere in my classrooms

Some instructors stated that they took a personal interest in students regarding what they like and dislike or their private problems. Nevertheless, there

were also comments indicating *lack of positive atmosphere* in the class. It implies that some participants may not put in efforts to create a positive atmosphere to motivate the students. Instructor 4 said, “If you ask my students, most probably they will say that... teacher is kind of …. She has a distance from us.” Instructor 4 also added, “And sometimes if I feel some kind of tension between two students, I generally make them work together. They cannot say that teacher I do not want to work with that student.”

Another theme that was highlighted in the qualitative data was *flexibility*. Participants seem to create a flexible learning environment mainly through flexible groupings. They emphasized the importance of working with different people. Instructor 7 said, “I always try to change the groups, I give them number, I tell them colors or I use sticks and then they go to their group. I use some variety of course.” Participants mentioned pairing students up based on their readiness level to help each other. However, there were not any mention of matching students based on their interests or learner profile. Giving options and adaptation were also uttered as other ways of ensuring flexible learning environment. A few participants mentioned letting student choose the format of the grouping, the partners to work with or how to do a certain activity. Instructor 2 said:

> Maybe this is not a good example but when I say, okay you need to be standing when you are talking so that’s my rule, always, but when I observe within the same class, some students are really uncomfortable standing. They are uncomfortable. I don’t know maybe because of their outfit or whatever. So, although my rule is that everybody stands up, I go to that student and say of course you can sit

However, as can be seen in Table 21, a few participants do not seem to implement flexible grouping and diversify the members of the groups and pairs. Instructor 7 said, “Instead of that [changing partners], I match the students sitting next to each other in pair work.” As for adaptation, Instructor 12 reported that he may change the plan of his lesson during class if he thinks it is not going to work.

Some instructors try to promote *active learning* in the learning environment they create. They share teaching through peer teaching and feedback from students on their teaching as part of an active learning environment. Instructor 1 said that he always got feedback from students on some activities they do in the class. Regarding peer teaching, Instructor 8 said “[s]he talks with stronger students to help their friends during some activities.” Similar to the quantitative findings, the qualitative data indicates that participants pay attention to student participation in the class and their interaction with each other. Some instructors seem to make learner participation an important element in their classes. However, no comments were made about how to ensure equal learner participation at individual level. To make learners more active in the learning process, a few instructors seem to create a kind of metacognition in students by trying to make them actively notice what they are learning and why they are learning it. Instructor 1 said, “if they didn’t notice why we did that activity, I told them explicitly why we did it and how it helped them to practice” A few instructors stated they work on decreasing their talking time to create a more active learning environment. Instructor 7 said, “I don’t want to talk too much, you know teaching talking time is important for me but I try to reduce my talk and I try to give opportunities to my students to do something in the classroom.” A few teachers do not seem to promote active learning in the classroom by giving responsibilities to students for their own learning.

In parallel to the findings of the survey, instructors generally try to increase *student engagement* in the learning process through engaging and meaningful activities, different activities, different groupings, personalizing the activities Regarding student engagement, Instructor 1 stated, “I try to motivate my students to learn English through different activities, different type of interaction patterns.” Instructor 6 said, “Sometimes to make the activity more enjoyable, I change the names on it and I put students’ names in the classroom. I don’t know but they find it very funny also to see their names on the board.” However, as it can be seen in Table 21, student engagement might be sometimes ignored. Instructor 1 said, “okay you know sometimes we need to read about something that students are not interested in but they will learn something from it.”

Varied materials, activities or modifications of activities based on readiness, interest and learner profile at class level were uttered in the qualitative data as ways of enhancing a motivating learning environment. Instructor 1 said, “I also try to motivate my students to learn English through different activities, different type of interaction patterns.” Instructor 12 said, “On some issues they might feel shy to express themselves to their friends so writing might be a better idea.”

As it can be seen on Table 21, *ongoing assessment* was a theme that appeared in the qualitative data in relation to differentiation of learning environment. Some instructors seem to implement ongoing assessment to differentiate learning environment by reflecting on their own attitudes and behaviors based on feedback from the students. Instructor 3 said, “… I mean when I think about students of the past, they had criticisms about teachers who did not have good relationships with them so I try not to do those things, do the things that students complain about.” There was also one comment about lack of ongoing assessment in the qualitative

data. Instructor 3 said, “But we don’t talk about their interests, their hobbies or whatever. So, I do not know much about them.”

As Table 21 shows, *lack of proactive planning* was appeared in the qualitative data regarding differentiation of learning environment. It may suggest that some participants do not include differentiation of learning environment in their instruction. Instructor 11 said, “Before class, if I prepare something, I don’t think thinking about their emotions is that important because it doesn’t affect what I prepare.”

Some instructors seemed to pay attention physical circumstances and differentiate learning environment by making physical arrangements in the classroom. Instructor 8 stated that he used the classroom walls as a tool.

Content

The qualitative data yielded similar results to the quantitative data regarding differentiation of content. Table 22 shows themes related to what the differentiation of content is based on and how it is implemented.

Table 22

Themes Related to What Differentiation is Based on and Its Implementation from the Data Regarding Differentiation of Content (n=13)

What differentiation is based on	How differentiation is implemented	Number of comments
Learner profile		34
	Varied avenues	30
	Ongoing assessment	1
	Not specified	3
Readiness		26
	Varied avenues	10
	Student support	9
	Student engagement	2

Table 22 (cont'd)

Themes Related to What Differentiation is Based on and Its Implementation from the Data Regarding Differentiation of Content (n=13)

What differentiation is based on	How differentiation is implemented	Number of comments
	Ongoing assessment	1
	Flexibility	1
	Not specified	3
Interest		24
	Varied avenues	22
	Student engagement	1
	Ongoing assessment	1
Content itself		17
	Varied avenues	12
	Not specified	5
Readiness (-)		4
	Lack of pro-active planning	2
	Lack of varied avenues	1
	Not specified	1
Interest (-)		1
	Lack of varied avenues	1
Not specified		44
	Varied avenues	26
	Lack of varied avenues	13
	Student engagement	5
Total		150

As can be in Table 22, the differentiation of content is mostly based on learner profile. However, differentiation that is based on readiness and interest is close to differentiation that is based on learner profile in terms of the number of comments made. Thus, it may be suggested that readiness level, interest and learner profile are almost equally considered in the differentiation of content.

Instructors seemed to differentiate content based on *learner profile* mostly through *varied materials and activities* besides the coursebook or modifications of the coursebook material or activities. Instructor 3 said, “whenever I present a new content, I try to trigger students’ motivation and interest in the subject by using some visuals” Only Instructor 3 seemed to carry out *ongoing assessment* as a way to differentiate content. He said, “I had some studies trying to find out their approaches, their feelings about visuals and audiovisual materials.”

A few instructors reported that they differentiate the content based on their student profile; however, they did not specify how they practice the differentiation of content.

As for differentiation of content based on *readiness level*, instructors mostly benefit from *varied materials and activities or modifications* to suit their level better. Instructor 10 said:

> Sometimes if I think that my students already know some things, sometimes I skip some parts and I put more emphasis on the other parts like if I think they know the topic, then I don’t- I mean from my point of view- waste time in the process and I focus on the product

Instructor 9 said, “If I believe that the level is appropriate for it and the students are familiar with the procedure, I try to you know maybe it could be an activity for a guided discovery for a grammar point.”

Instructors also differentiate content based on *readiness* through *student support.* They generally provide guidance or scaffolding to help students understand the content better. Instructor 4 said, “Generally, instead of talking to the classroom and explaining to the classroom, I generally ask questions to exploit the background knowledge of the students and then I give the new topic to them”. However,

instructors only referred to situations where students needed help understanding the subject. Similar to the findings of the quantitative data, there was no mention of presenting the content at varying level of complexity or offering more advanced opportunities to students who already master the content. Most instructors reported that they think the language level of the students as a class are important and they choose how they present the content accordingly.

Instructor 10 seems to enhance *student engagement* by personalizing the content if he thinks students have problem understanding the topic. He said, "and if they don't seem to understand or if they cannot produce any examples, I try to personalize as much as possible." The same participant also benefits *ongoing assessment* to choose the materials and activities that better suit them. He said, "But sometimes, as I learn about my classrooms, I can say that this topic is really difficult for my students and the explanation in the book is not enough." Only instructor 10 seemed to promote *flexibility* to differentiate content. He said, "I try to make group work, try to combine students who understood and who didn't understand so they can explain to each other." On the other hand, a few instructors do not seem to address their students' readiness level while presenting the content.

As can be seen in Table 22, instructors mostly practice differentiation of content based on *interest* through *varied activities and materials* that they thought would be interesting for their students. Similar to the quantitative data findings, majority of the participants mentioned that they tried to present the content in an interesting way for the students though activities or topics that would attract their attention. However, they did not mention that they chose these materials of activities based on an assessment of individual student interests in the class. The instructors reported choosing topic or materials that they assumed would interest their students.

Regarding differentiation of content based on interest, one participant said, “[i]f I can present a topic or subject by using some interesting and funny, enjoyable videos, both I and they enjoy the lesson. Instructor 10 explained how he differentiated the content based on learner profile as follows:

> Basically, we can say that I present the content in the book. While presentation, though, it changes based on the students. Sometimes some classes prefer to work on things on their own, like I give them sentences and I want them to analyze what they see new, what is different and then we go from there to explanations. Sometimes they are not like that, I need to explain things right away so I just present it, I just explain it on the board.

Only Instructor 3 mentioned differentiating content based on interest by providing *student engagement*. He said, “if I can catch them in the first one or two hours to the theme, they show their attention throughout the theme, throughout the unit”. Only Instructor 12 seemed to benefit *ongoing assessment* to differentiate content. She said, “For example, I look at the class, if there are sportive people, I try to prepare activities according to them or if there are rockers or girls who like pop etc.”

There were also a few instructors who reported that they did not consider learner interest when they presented the content. Instructor 3 said that he could not make a content to fit his students’ interest as he needed to follow the book.

C*ontent itself* emerged in the qualitative data as a new theme regarding what the differentiation of content is based on. Instructors seem to generally choose *various materials* they bring to the class according to the subject they are about to teach. Instructor 5 said, “I just think how I will present the language and I just … if for example the ... well it depends on the type of language item, I can say.” Similarly,

Instructor 2 reported that he decided if he would make use of authentic materials depending on what he needed to teach. He said:

> The material really changes according to the content. If it is reading or vocabulary, I generally try to make use of the content on the software. What I mean the content creators like the Guardian or whatever and the things that they share on social media are really update. you can just check National Geographics' posts and really on the captions you can see a lot of related grammar points or vocabulary

A few instructors reported that they took content itself into consideration when they differentiate the content. Yet, they did not specify how they implement the differentiation. This emerging theme may suggest that students' needs may not be the main the criterion in the differentiation of the content, as a result of which students' needs may not be responded.

Some comments in the qualitative data revealed that some instructors may not take readiness level or interests into consideration while presenting the content. This finding may suggest that students' readiness level or interests are not addressed when presenting content, which may lead to an inefficient learning process. Regarding readiness, Instructor 12 said, "[if] I need to present that topic that day, I do not consider the readiness level of the students…. It will be time wasting to make them ready so I just present in a standard way." Regarding interest, instructor 3 said, "[b]ut individually updating a content or trying to make a content to meet…I think I have never done it. So, I cannot make a content fit to their interest."

Differentiation of content seemed to be sometimes carried out without addressing to any needs. Some instructors seem to practice differentiation of content through *different materials and exercises* besides the ones in the coursebook or

modification of the materials in the coursebook. Some seem to differentiate content by providing *student engagement*; however, they did not specify what they base the differentiation of content on. Instructor 3 said, "I always, especially when I present a new content, I usually try to use materials that students usually do not have an access to". Instructor 4 said, "Sometimes based on the topic or the skill, I use brochures or I don't know, menus, sometimes I don't know role plays." Regarding student engagement, Instructor 13 said, "[w]hile using the reading parts or grammar teaching parts, I tried to make them as much meaningful as I can."

Some instructors do not seem to differentiate content by bringing in different materials or activities besides the coursebook. Instructor 13 said coursebook was the main material for him in the class. Instructor 2 stated that he could not prepare different exercises for different students on the same content.

Instructors gave details about how they implement the differentiation of content which unfolded new levels of themes in the analysis of the qualitative data. Table 23 presents the themes derived from the qualitative data regarding how the differentiation of content is implemented.

Table 23

Themes Related to How Differentiation is Implemented from the Data Regarding Differentiation of Content (n=13)

How DI is implemented	How (details)	How (details)	Number of comments
Varied materials/activities			100
	Different activities /materials/tasks/methods/tools		84
	Modifications		16
Lack of varied materials/activities			15
Student support			9

Table 23 (cont'd)

Themes Related to How Differentiation is Implemented from the Data Regarding Differentiation of Content (n=13)

How DI is implemented	How (details)	How (details)	Number of comments
	Scaffolding		8
		Grading the content	3
		Building up	3
		Not specified	2
	Not specified		1
Student engagement			8
	Meaningful activities		3
	Authentic activities		2
	Enjoy learning		1
	Personalization		1
	Not specified		1
Lack of pro-active planning			2
Ongoing assessment			3
Flexibility	Flexible grouping		1
Not specified			12
Total			150

As Table 23 displays, *varied materials/activities* are the most repeated theme regarding how differentiation of content is implemented, which is in parallel to the quantitative findings on differentiation of content. The majority of the instructors reported that they tried to differentiate the content through varied avenues including using different websites, different materials such as videos and visuals, different activities and different methods. Some instructors also reported modification of

course materials to suit learner needs as a varied avenue to differentiate content. Some instructors, on the other hand, reported that they never employed varied materials or activities in their classes apart from the coursebook.

Some instructors seem to support their students as a way of differentiating the content. When asked how they provided *student support* in the implementation of content differentiation, some participants mentioned that they scaffolded their students through grading the content in terms of going from less complex to more complex, building up on the existing knowledge and doing mini lessons as tutorials when students do not understand the topic. However, instructors did not mention whether they differentiated the content to enrich students who can easily master the content. Instructor 4 said, "Generally, instead of talking to the classroom and explaining to the classroom, I generally ask questions to exploit the background knowledge of the students and then I give the new topic to them." Regarding doing mini lessons, Instructor 10 said, "[if] they asked me to do, if I think they studied it and they didn't understand some points, I presented the content again, the parts that they didn't understand."

Student engagement appeared as a theme regarding how instructors implement differentiation of content. Some participants mentioned that they tried to enhance student engagement through meaningful activities, authentic materials and personalization activities that will motivate students at the content phase of the lesson. Instructor 13 said, "[so] while using the reading parts or grammar teaching parts, I tried to make them as much meaningful as I can."

As Table 23 demonstrates, there were two comments revealing lack of *proactive planning* as a theme in relation to the differentiation of content. Some instructors do not seem to plan their lessons beforehand to differentiate content.

There was also one comment that unfolds *ongoing assessment* regarding content differentiation based on readiness level. Instructor 10 said, "[s]ometimes, as I learn about my classrooms, I can say that this topic is really difficult for my students and the explanation in the book is not enough." One instructor seemed to promote *flexibility* through flexible groupings to differentiate content.

Some instructors seem to differentiate content; however, they did not specify the ways in which they practice differentiation. They mostly stated that how they presented the content depended on the content itself. A few instructors said it depended on the student profile.

Process

The qualitative data bears a lot of similarities with the quantitative data regarding the differentiation of the learning process. Table 24 shows the themes from the interview data related to what the differentiation of process is based on.

Table 24

Themes Related to What Differentiation is Based on and Its Implementation from the Data Regarding Differentiation of Process (n=13)

What the differentiation is based on	How the differentiation is implemented	Number of comments
Readiness		80
	Student support	24
	Varied avenues	18
	Flexibility	12
	Ongoing assessment	5
	Active learning	4
	Student engagement	2
	Not specified	15
Learner profile		56
	Flexibility	33
	Varied avenues	19
	Student engagement	1
	Not specified	3

Table 24 (cont'd)

Themes Related to What Differentiation is Based on and Its Implementation from the Data Regarding Differentiation of Process (n=13)

What the differentiation is based on	How the differentiation is implemented	Number of comments
	Flexibility	1
	Not specified	3
Content itself		15
	Varied avenues	8
	Flexibility	3
	Not specified	4
Interest		8
	Varied avenues	5
	Student engagement	2
	Flexibility	1
Exercises		5
	Varied avenues	2
	Flexibility	1
	Not specified	2
Readiness (-)		4
	Lack of varied avenues	3
	Lack of student support	1
Number of Students		4
Interest (-)		3
	Student engagement-	1
	Varied avenues-	1
	Not specified	1
Time	Varied avenues	1
Feedback by colleagues	Varied avenues	1
Not specified		101
	Varied avenues	40
	Student engagement	20
	Flexibility	18
	Lack of varied avenues	10
	Active Learning	9
	Student support	1
	Ongoing assessment	1
	Not specified	2
Total		278

As can be seen in Table 24, instructors seem to take *learners' readiness level* into most consideration when they differentiate process part of their instruction. Learner profile is also generally taken into account in the differentiation of process. However, interest does not seem to be considered as much as readiness level or learner profile during the differentiation of process. This finding might suggest that there is an imbalance in what the differentiation of process is based on.

In the differentiation of process based on readiness level, instructors sometimes scaffold their students and provide *support* if they feel that students cannot do well in the exercises. Moreover, instructors generally benefit *various materials and tasks* to differentiate the process part of the instruction based on readiness level. However, the qualitative data reveals that when instructors differentiate process based on learners' readiness level, they seem to mostly consider weak students or the level of a student group as a class. There was no mention of differentiating process based on the readiness level of the learners who already masters one kind of exercise or activity. It might indicate that high achievers do not receive the enrichment they need. Instructor 6 said, "When I feel that students need extra support, extra exercises, then I get new materials." Instructor 3 said, "Sometimes I discover that some students haven't understood some certain points. And I ask them not to leave the session when the lesson is over and I try to explain some certain things." Instructor 6 noted,

> I pay attention to their errors. The errors they make during the speaking or writing tasks. I take notes of them and I realize that these students are having problem, let's say with perfect tense and they are not capable of doing the right forms about that topic. So, I find some extra materials on the internet or different reference books.

Flexibility was another theme that appeared in the interview data regarding differentiation of process based on readiness. Instructors generally reported to put weak students and strong students together in pairs or groups to practice the content. Some instructors mentioned that they carried out *ongoing assessment* to find out their learners' development and shape the process accordingly. Moreover, a few instructors seem to create *an active learning environment* where students can actively work on the areas they need practice. Instructors also try to motivate student through activities that aim to create *student engagement.*

Some instructors reported that they differentiated process based on their learners' readiness level but they did not specify the ways they implement it. Moreover, Table 24 shows that a few instructors do not seem to take learners' readiness level into consideration in the differentiation of process.

Instructors often differentiate process based on *learner profile* although the number of comments significantly decreased compared to those on differentiation of process based on readiness level. As Table 24 displays, instructors mostly create a *flexible learning environment* in the differentiation of process based on learner profile. They reported that students worked in *different grouping formats* in their classes. Instructor 3 said, "[if] the book is telling me to make a pair work in order to practice a certain skill, but if I think that they are some dynamic groups in my class, if I think it will be more effective to transform it into a group work." However, instructors do not seem to purposefully pair or groups students on their learner profile, which is parallel to the findings of the quantitative data.

The qualitative data also shows that instructors generally make use of *different activities or materials* and *modification of activities* for whole class or individual students as ways of differentiating process according to learner profile.

Student engagement also appeared as a theme in relation to how instructors differentiated process based on learner profile. Instructor 7 stated that she brought in card games or board games so that students could practice in a fun way. Instructor 4 stated that he used translation method most in his classes because both students and he liked it.

A few instructors reported that they differentiate process based on the learner profile of their students but they did not specify the ways they implement it.

Content itself was derived from the qualitative data as an emerging theme regarding what the instructors base the differentiation of process on. Some instructors choose *varied materials or activities* to practice content according to the content they wanted to practice. Likewise, they seem to decide if students should work in *flexible groups* according to the content they practice. To illustrate, Instructor 9 said, "[so] in the practice part, if we have especially a grammar point, I try to do controlled practice like gap fills or close tests." It might suggest that learner needs might be sometimes ignored in the practice phase of instruction.

Some instructors take learners' *interest* into consideration when they differentiate process phase of their instruction. Some instructors reported to choose *various materials* or topics that they think would interest their students. For example, Instructor 1 said, "I try to change the exercise or activity and as I knew my students' interests, I try to find another topic that will attract their interest and attention more." Instructor 12 reported that he tried to create *student engagement* by personalizing topics on students' interests. However, instructors did not mention any systematic assessments of their individual learners' needs to differentiate process. Likewise, instructors never mentioned purposefully grouping learners based on their needs. Only Instructor 2 seems to provide *flexibility* by presenting students with alternative

exercises based on their interest. As can be seen in Table 24, interest as to what differentiation of process is based on received less comments than readiness level and learner profile. It may imply that learner interest might be taken into less consideration in the differentiation of process. When they stated that they consider learner interest in the differentiation of process, all instructors referred to learners as a single unit rather than individuals. Moreover, as can be seen in Table 24, a few instructors do not seem to respond to their learners' interest in the process part of their lessons.

As Table 24 displays, new themes emerged in relation to what differentiation of process is based on besides content itself. *Exercises* is one of the emerging themes in the qualitative data. Some instructors reported that they sometimes chose exercises according to types of exercises, their manageability and complexity when they differentiated the process. Instructor 9 thinks that an exercise should not be too complex with many layers, and it should be easy to manage in the class with a group of students so that she could use it in the class. Another new theme that appeared was the *number of students*. A few instructors mentioned that the number of students in their group helps them decide what activity or exercise they choose to practice the content. Instructor 4 mentioned *time* as a new theme regarding what is being taken into consideration while differentiating the process. She said how to practice content depends on how much time is allocated on the practice of a certain content. Lastly, *feedback from colleagues* appeared as another new theme. Instructor 6 mentioned that sometimes she chose to do an activity in the class if she got positive feedback about the activity from a colleague.

These emerging themes regarding what is taken into consideration in the differentiation of process might indicate that occasionally other factors such as *time*,

exercises, *content* and *feedback from colleagues* rather than learner needs might be taken into account when differentiating the process.

Many instructors reported to differentiate process through bringing in *varied materials and exercises*, creating *an active learning environment* and *student engagement*, providing *student support* and *flexibility*. Yet, what the differentiation of process was based on was not specified. Regarding bringing in varied materials or modification of the course materials, Instructor 1 said:

> I just go to the coursebook we are using and see if I will use all the activities given in the syllabus. Again, sometimes I skipped some of them and try to find another material which would be more effective in teaching that language item

To illustrate how he tried to create student engagement, Instructor 8 stated that he tried to make practice part fun, meaningful and challenging through activities that require thinking and reflection on students' lives. Instructor 11 reported that she supported her students through regular revisions. She said, "Every three or five units I make a revision of units in form of questions so we review them in a fun way I believe".

The ways in which instructors implement the differentiation of process is presented in Table 25.

Table 25

Themes Related to How Differentiation is Implemented from the Data Regarding Differentiation of the Process (n=13)

How the differentiation is implemented	How (details)	How (details)	Number of comments
Varied materials/activities			94
	Different materials / tasks / activities / materials		67

Table 25 (cont'd)

Themes Related to How Differentiation is Implemented from the Data Regarding Differentiation of the Process (n=13)

How the differentiation is implemented	How (details)	How (details)	Number of comments
	Extra materials		10
	Modification		13
	Not specified		4
Flexibility			69
	Flexible grouping		56
	Giving options		6
	Adaptation		5
	Not specified		2
Student Engagement			26
	Meaningful activities		6
	Personalization		6
	Enjoy learning		4
	Challenging activities		4
	Engaging activities		2
	Authentic materials		2
	Creative activities		1
	Not specified		1
Student Support			25
	Scaffolding		25
		Mini lessons	6
		Grading the activities	4
		Building on	4
		Personal feedback	2
		Delayed feedback	2
		Immediate Feedback	2
		Revision	2
		Modelling	1
		Brainstorming	1
		Prompts	1
Lack of varied avenues			14
Active Learning			13
	Share teaching		4
		Peer feedback	3
		Peer teaching	1
	Metacognition		1

Table 25 (cont'd)

Themes Related to How Differentiation is Implemented from the Data Regarding Differentiation of the Process (n=13)

How the differentiation is implemented	How (details)	How (details)	Number of comments
	Interaction		3
	Learner participation		1
	Not specified		4
Ongoing assessment			5
	Taking notes for the errors		4
	Formative assessment		1
Lack of student support			1
Not specified			31
Total			278

As Table 25 presents, instructors mostly make use of *varied materials* and *activitie*s besides coursebook as a way of differentiating process, which is in parallel to the quantitative data findings. Participants reported that they generally differentiate process through use of different materials, activities, methods and technology. The interview data indicates that all these varied materials and activities are chosen at class level without purposefully targeting individual needs of the students. On the other hand, the qualitative data also revealed *lack of varied materials and activities* as a theme regarding differentiation of practice. As Table 25 displays, some instructors, on the other hand, do not make use of any varied materials or activities apart from the coursebook in their instructional practice. A few participants reported that they mostly used the exercises in the student book without any variation.

Table 25 shows that *flexibility* is the second most repeated theme regarding differentiation of practice. Instructors mostly use flexible groupings and create different groups or pairs with different students to differentiate process in their

instruction. Instructor 1 said, "[s]ometimes I can pair two strong students up and well it might work but I try to have a variety in that. So sometimes I pair a stronger one with a weaker one." Giving options is also reported as a way of enhancing flexibility in the differentiation of process. Instructors sometimes give options to students over how to do some activities. Instructor 2 said, "[w]ithin the same exercise, I can promote them to do it differently. For example, if I want them to list something, I never expect all of them to do it so when I walk around, when I notice someone, instead of writing words, there are students who tend to write sentences, so I can encourage them to do it their ways." Adaptation was also mentioned as another way of providing flexibility in the differentiation of practice. Instructors sometimes skip some activities in the book or change the process of an activity to adapt the book more in response to their learners' needs.

Some instructors reported that *student engagement* is important for them during practicing the content and they enhance student engagement through personalizing the activities, exercises or examples, meaningful and creative activities and authentic activities. As an example for meaningful activities, he brought to the classroom, Instructor 8 reported:

> I make them use the forms they have just learned in meaningful sentences… The topic was conditionals and the activity I chose for my first practice was I gave them the beginning and they would make meaningful sentences from their own experiences.

Student support was another theme that appeared in the interview data regarding the differentiation of practice. Participants generally scaffold students through different ways such as mini lessons, grading activities from easy mechanical ones to more complex ones, providing feedback and revisions of the lessons.

Qualitative data indicates that mini lessons and feedback are practiced at individual level while other scaffolding activities are practiced at class level. Regarding mini lessons, Instructor 3 said, “I discover that some students haven’t understood some certain points. And I ask them not to leave the session when the lesson is over and I try to explain some certain things.” Only Instructor 13 implied *lack of support* when he said, “These are the works that students are supposed to do. I never score those because then I tell them that these are things they have to do”

As it can be seen on Table 25, *active learning* is a theme that appeared in the qualitative data in relation to how differentiation of process is implemented. Some instructors mentioned learner participation and sharing teaching through peer feedback as ways to ensure active learning in their teaching practice. Instructor 10 said, “And they share their writings with their friends and they give each other feedback and then correct them and they give feedback to each other.” Only Instructor 7 seemed to attach importance to metacognition to create an active learning environment in the differentiation of process. He said, “[f]irst of all, I always want my students – of course depending on the level but- to believe that mechanical activities are also very important at the beginning of this language learning process.”

Some instructors seem to benefit *ongoing assessment* as a way of differentiating process as a way of differentiating the process. Instructor 6 said that he took notes of students’ most common mistakes and plan a class focusing on those mistakes.

Although some instructors reported differentiate how students make practice based on students’ readiness level, their interests and learner profiles, content itself, exercises or number of students, they did not specify how they implemented it.

Product

The qualitative data regarding the differentiation of production yielded findings that are parallel to quantitative data findings. Table 26 shows the themes appeared in the qualitative data in relation to the differentiation of production.

Table 26

Themes Related to What Differentiation is Based on and Its Implementation from the Data Regarding Differentiation of the Product (n=13)

What the differentiation is based on	How the differentiation is implemented	Number of comments
Learner Profile		36
	Varied avenues	17
	Flexibility	14
	Lack of varied avenues	2
	Student engagement	1
	Not specified	2
Readiness		25
	Student support	13
	Varied avenues	3
	Homework	3
	Flexibility	2
	Active learning	1
	Not specified	3
Interest		6
	Varied avenues	3
	Flexibility	2
	Not specified	1
Time		3
	Flexibility	2
	Not specified	1

Table 26 (cont'd)

Themes Related to What Differentiation is Based on and Its Implementation from the Data Regarding Differentiation of the Product (n=13)

What the differentiation is based on	How the differentiation is implemented	Number of comments
Content itself		3
	Varied avenues	2
	Active learning	1
Learner Profile (-)		2
	Lack of varied avenues	2
Interest (-)		1
	Lack of varied avenues	1
Exercises		1
	Not specified	1
Not specified		52
	Varied avenues	24
	Flexibility	13
	Homework	6
	Lack of varied avenues	3
	Active learning	2
	Lack of homework	1
	Lack of flexibility	1
	Ongoing assessment	1
	Student engagement	1
Total		129

As can be seen on Table 26, instructors seem to differentiate production mostly based on *learner profile*. Instructors usually enhance *flexibility* through different pairs/ groups with different students, and they generally use *varied materials* as a way of differentiating the production. Instructor 6 said, "I try to have a variety in my lessons, in my tasks. Like one day I have a visual material, other day I

use a song." However, a few instructors stated that they do not make use of different kinds of tasks or activities for production part of the class.

The number of comments decreases at the theme of *readiness level* in relation to what the differentiation of production is based on. Yet, instructors seem to generally take their learners' readiness level into account when they differentiate production phase of their instruction. They mostly differentiate production based on readiness by providing *support* for their students and scaffolding them in various ways. Instructor 7 said, "[i]f I prepare activities myself, I generally try to start with the easy ones, and then go on with the more challenging ones." Instructor 4 reported, "I generally start with controlled exercises like gap filling or rewriting. But then I like getting students free practices too like writing short texts or preparing a very short speech for the class." Some instructors benefit *varied tasks and materials* and *homework* to differentiate production based on readiness level. Regarding giving homework, Instructor 9 said:

> in the book sometimes we have some parts that we do not need to cover in the classroom. If I think that my students need it, they are really weak in that skill. speaking or writing because they don't like these parts. I assign them these parts as optional homework

A few instructors enhance *flexibility* in their classes through flexible groupings while differentiating product based on readiness. Instructor 4 said, "I want stronger students to work with weaker students because I really believe that they learn from each other." The same instructor also tries to create an *active learning* environment through peer feedback to differentiate product based on readiness.

In the differentiation of product, learner *interest* seems to be taken into less consideration compared to readiness level and learner profile. A few instructors seem

to assign various production activities or tasks based on their learners' interests. Moreover, Instructor 4 and Instructor 8 seem to promote *flexibility* in their classes by occasionally giving students options over the topic of a production assignment.

Time emerged as a theme in relation to what the instructors take into account in the differentiation of product. Some instructors decide whether they do a production activity or not according to how much time they have left. Instructor 4 said, "I have a class or two class hours then I give them individual activities."

Content itself appeared as another factor that a few instructors take into consideration while differentiating product. Instructor 10 said, "[i]f I want them to learn a grammar point, I usually create a project that they can use that grammar part and that they can produce something like a poster."

A few instructors do not seem to differentiate production activities based on their students' learner profile. Instructor 2 reported that he likes his students to do speaking activities so he mostly focused on speaking instead of writing. Likewise, students' interests may sometimes be ignored in the production activities. Instructor 11 said, "[t]he book's units are really well prepared. Every unit has very good and easy to speak topics like work, family or future, so I don't create new topics."

Only Instructor 9 mentioned that she decided on what production activity to bring in the class according to the manageability of the *exercises*.

Many instructors reported that they differentiated the production part of their instruction through *homework* assignments, *varied materials and exercises*, *ongoing assessment* and, providing *flexibility* and *student engagement*. Yet, they did not explicitly explain what they took into consideration when they differentiate the production.

The ways in which instructors implement the differentiation of practice is presented in Table 27.

Table 27

Themes Related to How Differentiation is Implemented from the Data Regarding Differentiation of the Product (n=13)

How the differentiation is implemented	How (details)	How (details)	Number of comments
Varied materials/activities			49
	Different materials / tasks / activities / materials		19
	Extra materials		9
	Modification		19
	Not specified		2
Flexibility			33
	Flexible groupings		23
	Giving options		10
Student support			13
	Scaffolding		12
		Personal feedback	4
		Grading activities	2
		Brainstorming	1
		Mini classes	1
		Using L1	1
		Not specified	3
	Not specified		1
Homework			9
Lack of varied materials / activities			8
Active learning			4
	Interaction		2
	Sharing teaching		1
		Peer feedback	1
	Participation		1

Table 27 (cont'd)

Themes Related to How Differentiation is Implemented from the Data Regarding Differentiation of the Product (n=13)

How the differentiation is implemented	How (details)	How (details)	Number of comments
Homework			9
Lack of varied materials / activities			8
Active learning			4
	Interaction		2
	Sharing teaching		1
		Peer feedback	1
	Participation		1
Student engagement			2
	Personalization		1
	Engaging activities		1
Ongoing assessment			1
	Formative assessment		1
Lack of flexibility			1
	Not specified		1
Lack of homework			1
	Not specified		1
Not specified			8
Total			129

As Table 27 shows, instructors mostly differentiate product through *varied materials/activities*. Instructors reported that they try to use different kinds of production activities in their instruction. However, some instructors reported that they either do not use any varied production activities or they mostly focus on one skill.

Flexibility is another theme that appeared often in the interviews data regarding the differentiation of production. Instructors provides flexibility in their differentiation of production mostly through flexible groupings. Qualitative data shows that instructors used a variety of grouping formats during production phase of their instruction. Instructor 4 said, "I want stronger students to work with weaker students because I really believe that they learn from each other." Only Instructor 8 stated that his students always watch with the same people.

Some instructors provide support to their students to differentiate production in their classes. They scaffold their learners in the production phase of the class in diverse ways such as feedback for their work, grading the activities from easy to more complex ones, teaching mini classes and brainstorming activities. Instruction 3 said, "I usually ask them to visit me if they have problems producing the language, especially writing so I ask them to visit me in my office"

Another theme that was uttered by some participants in the interviews was *homework*. Some instructors mention that they give homework to students as a way of working on production. However, they did not mention that they purposefully design homework based on learners' interests or learning profiles. Instructor 13 stated, "[f]or written production, I give homework and that is the written work."

As can be seen in Table 27, a few instructors try to promote an environment where students are actively participating in the class, interacting with each other and teaching each other. Instructor 4 highlighted how she created an *active learning* environment during the production part of her instruction. She said her students give each other feedback on the works they produce.

The number of comments decreased at the themes of *student engagement* and *ongoing assessment* regarding the differentiation of production A few instructors

reported that they try to differentiate production activities by enhancing *student engagement* through engaging activities and personalization. Instructor 8 reported, "[l]ike I give them a context like you have a party and you need to find someone. So, because they work as whole group, they will move around, they will interview people." Instructors also reported that they provide student support through scaffolding as personal feedback and grading activities from easy ones to more complex ones. Instructor 9 said, "I give my students speaking questions but sometimes it could be more structured ones." As for ongoing assessment one instructor mentioned that he followed his students process in the production activities and give them feedback accordingly. Instructor 3 said, "[b]ut I know some of their weaknesses. You know we read tasks and give feedback."

A few instructors reported that they take students' readiness level, time limitations and manageability of the exercises into account when they prepare production activities. However, they did not explicitly explain how the implement the production based on these factors.

Overall, the findings from the qualitative data are in line with the findings of the quantitative data. However, there are some discrepancies regarding the differentiation practices.

Challenges in the Differentiation Practice

Almost all participants addressed to some problems or challenges they face during their differentiation practices. Likewise, they gave reasons for why differentiation is challenging. Therefore, *challenges* emerged as another level in the qualitative data regarding differentiation of learning content, process, product and differentiation practice in general. In Table 28, challenges mentioned regarding the content differentiation and their frequency in the data can be seen.

Table 28

Challenges Regarding Differentiation of Content

Challenges	Number of comments
Strict syllabus	12
Insufficient resources	5
Exams	2
Extra work	1
Teaching with a partner	1
Total	21

As Table 28 shows, the most repeated theme regarding the challenges faced was *strict syllabus*. Participants indicated *strict syllabus* and related time restrictions as one of the reasons to explain why differentiation of content is difficult or impossible. Some instructors stated that they were bound to the coursebook as their primary source. Instructor 12 said, "Because I need to catch up with the syllabus and as a teacher in addition to preparing for my lessons, this is an extra time for me. I may not have enough time every day. It will be time wasting to make them ready so I just present in a standard way."

Insufficient resources are another theme that emerged regarding the challenges of content differentiation. Participants stated that the course book did not suffice and diverse resources were not available in their context. Instructor 3 stated, "You know Speakout series is not very good at presenting grammar and it may sometimes be very superficial, especially if I am teaching higher levels like B or A levels."

Exams were also mentioned as a challenge as the instructors reported that the students would be responsible for every vocabulary from the coursebook in the exam so they cannot bring in different materials or activities. Instructor 10 said:

> At least the levels I have been teaching, the syllabus is so heavy so if I try to get anything extra then I feel the stress, I am gonna fall behind the syllabus because we have this quiz, if I fall behind the syllabus the quiz will come and the students will say we haven't learnt this part

Instructor 2 stated that differentiation of content would be an *extra work* for him. He said that it would require a lot of extra work to find diverse content activities.

As for the challenges regarding the process differentiation, similar challenges were uttered. Table 29 displays the challenges mentioned related to the differentiation of process.

Table 29

Challenges regarding Differentiation of Process

Challenges	Number of comments
Strict syllabus	9
Insufficient resources	4
Time consuming	2
Getting to know students	1
Crowded classes	1
Total	17

Similar to the challenges regarding content differentiation, *strict syllabus* emerges as the most common challenge in the differentiation of process. Instructor 8 said, "I take my own material but you know there is this thing. When are you supposed to go beyond the curriculum?"

Insufficient resources were another challenge uttered by participants. They addressed the problem of insufficient course book and lack of diverse resources available. Instructor 8 said, "I find the book quite restrictive in that sense because

most of the exercises in the book we are using right now doesn't really give them a focus on the form. Because it is generally to choose between the two options and one of the options is generally irrelevant, not even grammatically correct."

Two participants stated that differentiation of process was *time-consuming*. Instructor 3 reported, "It (flexible grouping) takes some time. It has some disadvantages. You have to transfer students from one seat to another so it may take some time."

One comment was made on the difficulty of *getting to know students*. It was emphasized that it was difficult to find out the needs of the students. Instructor 1 reported that it was very difficult to get to know the students at the beginning."

Crowded classes were also uttered as another challenge. Instructor 3 said differentiation was difficult due to the big number of students they have in the classroom.

The themes that emerged in the data related to the challenges in differentiation of production is presented in Table 30.

Table 30

Challenges regarding Differentiation of Production

Challenges	Number of comments
Strict syllabus	3
Exams	2
Insufficient resources	1
Total	6

The challenges addressed regarding differentiation of product resemble to the ones related to the differentiation of process. As can be seen in Table 30, *strict syllabus* appeared most in the data related to the challenges at product differentiation. Similar to differentiation of content, *exams* were also mentioned as a challenge

regarding product differentiation. Instructor 7 said, “But I try to finish everything, not everything, most of the things in the book because we all know that students have quizzes, they have midterms and this is their responsibility and this is my responsibility to teach them as well”. Instructor 6 mentioned *insufficient resources* to explain why differentiation of product is difficult. He said he did not think their book was sufficient for the production activities.

The qualitative data also yielded comments on the challenges of differentiation practices in general. The themes that emerged in the related data bears a lot of similarities to the challenges regarding differentiation of each aspect separately. Table 31 displays the themes that emerged in the data related to the differentiation practices in general.

Table 31

Challenges Regarding Differentiation in General

Challenges	Instructor (N=13)
Strict syllabus	15
Exams	3
Crowded classes	1
Teaching with a partner	1
Extra work	1
Difficult	1
Non-specified	9
Total	31

Similar to the findings regarding challenges at the differentiation of each aspect, *strict syllabus* appeared as the most addressed challenge in the data regarding differentiation practice in general. The *strict syllabus* and related *time restrictions* were pointed out as a reason why differentiation practice is difficult. Instructor 3 said, “You know we have a syllabus so we have to follow a certain flow. So, because

I am not actively involved in planning the flow of the lesson, the subjects that follow each other, I can't take into consideration the readiness level."

In parallel with the findings regarding differentiation of content, process and product, *exams* and *insufficient resources* were uttered as challenges faced in differentiation in general. Unlike the other findings, *extra work* and *teaching with a partner* appeared as two themes regarding differentiation in general. Instructor 2 said it would be extra work for him to practice differentiation. Regarding teaching with a partner, Instructor 10 said, "so I cannot mix and match them (order of the activities in the course book) but if I was teaching alone or if I think that my partner wouldn't make a big deal of that, I'd like to."

How did the Differentiation Practices Change in Online Teaching?

Most participants expressed dissatisfaction regarding online teaching in the Covid-19 period both in the survey and the interviews, and they refer to the challenges that made their differentiation practice even more difficult. Instructors mostly addressed to drawbacks such as not being able to create a positive and active learning environment besides technical problems and lack of training on how to teach online effectively. Instructors mostly addressed to drawbacks such as not being able to create a positive and active learning environment besides technical problems and lack of training on how to teach online effectively. Table 32 displays the themes that emerged in the qualitative data related to the online teaching.

Table 32

Themes regarding Online Teaching Practices

Themes	Number of comments
Artificial learning environment	22
Not knowing students	21
Too few students	20
Lack of motivation	18

Table 32 (cont'd)

Themes regarding Online Teaching Practices

Themes	Number of comments
Lack of participation	13
Lack of differentiation	12
Differentiation	10
Lack of training on online teaching	5
Technical problems	3
Varied avenues	3
Lack of varied avenues	3
Time limitation	3
More participation	2
More autonomous teachers	2
More autonomous students	1
Total	138

As Table 32 shows, most comments were made about online teaching as an *artificial learning environment* where students acted as they were watching TV rather than being in a classroom. Instructors said they turned their cameras and microphones off. Some participants also reported that students did not participate in the class. One instructor stated:

> You just try to express yourself on a screen as much as you can. It is not always the same that you speak with your students in the live classroom because your physical appearance, your physical closeness, they are you know listening to and watching real human. In some days you know you are bored. When they are in the real classroom, it is much more effective. On screen sometimes it is just like watching TV or a YouTube channel. Not very close. And this is one part of the weaknesses of the Covid teaching.

Second most repeated theme regarding how online teaching affected differentiation practices was *not knowing students*. Most participants mentioned that

for them it was very difficult to get to know their students personally during online education. They said that they did not have ideas about their interest, hobbies, learning styles or backgrounds, which prevented them shaping their classes accordingly.

Participants also reported that there were *too few students* in the Zoom classes. Instructors mentioned that too few students participated in the classes as attendance was not obligatory in the online classes. It was a problem for them because it affected everyone's motivation negatively. Also, there were usually too few students to have flexible groupings. They also reported that when students went to the breakout rooms, they spoke in Turkish or there was not any interaction between them.

Unmotivated students were one of the themes that appeared repeatedly in the qualitative data regarding how differentiation practice changed during online teaching. Instructors mostly reported that students are not motivated to learn during online education, and that they do not seem to be happy about being in front of a screen rather than in a classroom. Instructor 5 said, "but in the pandemic, just a few students joined the class and they were not so enthusiastic."

Lack of student participation was another theme that was frequently repeated in the data regarding online teaching. Teachers reported that student participation considerably decreased in the online teaching compared to face-to-face classes. Instructor 3 said, "students were silent in the classroom. They never speak. During face-to-face education, no student could find a way to keep silent. In a way I asked them a question and forced them to speak. In online education it is like broadcasting a radio program in monologue."

Another theme that appeared in the qualitative data regarding how differentiation practice changed during online teaching was *differentiation*. Some instructors mentioned that they can differentiate their instruction according to their students' weaknesses and strengths. They also reported that they did mini classes on presentation of a certain content if the students did not understand the content in the content videos that they are supposed to watch before the online class. However, slightly more number of comments addressed to *lack of differentiation* in the qualitative data in relation to online teaching. Some teachers mentioned that they did not know the interests of the students and they could not differentiate the exercises or activities based on their interests.

Lack of training on online teaching was also mentioned by the instructors. They reported that they did not receive a training on how to teach online or what tools they can make effectively use of during online education. Instructor 13 said:

> Another part is that we are all prepared to teach normal (face to face) classes. None of us are prepared for online classrooms. I feel that it is another profession. Preparing materials, preparing your teaching, involving activities or materials that students would participate. They all need a lot of preparation and system and ability. In time we learn but it doesn't mean that we can teach as effectively as we used to

As Table 32 displays, *varied avenues* including different tools, activities and exercises were mentioned by several participants. Instructor 2 reported that she used the tools offered by the Zoom application. She said:

> If I am presenting content, I can use the white board on Zoom to draw my timelines or clines. Or for interactions, I can send them to breakout rooms to get them to work either in groups or pairs so I can do the same thing. I try to

> use some other techniques as I tell my students not to tell me the answers but that I will tell them the exercise number and they will write the answers in the chat box. Or sometimes if they are not happy with something, they just send me a direct message and nobody knows about it

Lack of varied avenues was also mentioned by a few participants in relation to teaching online. Instructors said they could not do the activities they usually did in face-to-face classes. Instructor 7 said, "for example I prepared a lot of activities, a lot of games, a lot of activities that we can do in the classroom. But in online education it is not possible."

A few participants found the *time allocated for classes insufficient*. They complained that they could not do a lot of activities they wanted to do because of the limited time.

As it can be seen in Table 32, *more participation* emerged as a theme in the qualitative data regarding online teaching. Instructor 8 mentioned that students in his grouped participated more than the students in his face-to-face classes in the previous years.

Some participants addressed to the *technical problems* they faced in the online teaching period and how it affected their class. Instructor 4 said:

> we have other problems than teaching and learning like Internet connection or technological problems so they always interrupt our classes. In this term actually I have never done any pair work or group works…..because of the internet connection, it was always interrupted so at some point we said OK let's do it in the standard way

Instructor 8 stated that he felt more *autonomous* in the online classes and differentiated his instruction more on his learners' needs. He also added:

> Because I knew the content was there available in the videos and I could lead them to the videos and tell them what they should get from the videos. I felt freer to do what I think was more useful for them….about differentiated instruction, I think I used it more during Covid but only because of the freedom I got from the content on the videos. So, it wasn't because I changed my style but I felt autonomous because there was something to compensate for free my behavior

Finally, *autonomous students* also appeared as a theme in the qualitative data related to the online teaching. It was reported that students were now more autonomous as a result of the flipped learning. Instructor 7 said:

> Because it is really nice that the students have responsibility to do something. In old times, it was like spoon-feeding, you know? We always tried to do something for the students. I think that they may become more autonomous during this session. When they come to school, they know that they do not have to do many things

Comparisons of Different Groups of Instructors

Independent T-tests were conducted to compare four different groups of instructors to find out whether instructors' perceptions and practices of DI differ depending on holding a graduate degree, holding teaching certificates, the years of teaching experience and the number of hours taught.

Comparison among Instructor Groups: Graduate Degree

An independent – samples T-test was performed to compare the mean scores of the instructors with undergraduate degrees and instructors with graduate degrees regarding their perceptions of DI based on readiness, interests and learning profile

and their practices of DI based on learning environment, content, practice/production and assessment. Table 33 displays the related findings of the independent T-Test.

Table 33

Differences Based on Degree in terms of Perceptions and Practices of DI (N_U= 44, N_G=43)

Dimensions	Degree	*M*	*SD*	*t*	*p*
Perceptions	U	3.83	0.36	-0.836	.41
	G	3.90	0.47		
Readiness	U	3.89	0.40	-1.146	.26
	G	4.00	0.48		
Interest	U	3.84	0.64	-0.716	.48
	G	3.94	0.63		
Learning profile	U	3.69	0.46	0.029	.98
	G	3.69	0.60		
Practices	U	3.76	0.53	-1.542	.13
	G	3.95	0.63		
Learning environment	U	4.23	0.45	-0.862	.39
	G	4.31	0.48		
Content	U	3.74	0.66	-1.794	.08
	G	4.00	0.70		
Practice/Production	U	3.69	0.63	-1.064	.29
	G	3.85	0.76		
Assessment	U	3.23	0.94	-1.102	.28
	G	3.47	1.07		

Note. I strongly agree 4.50 to 5.00, I agree 3.50 to 4.49, Unsure 2.50 to 3.49, I disagree 1.50 to 2.49, I strongly disagree 1.00 to 1.49

*U: Undergraduate degree, G: Graduate degree

The test did not produce a statistically significant difference between the two groups regarding perceptions of DI (t (85) =-.836, p=.41). Teachers with undergraduate degrees had a lower mean (M=3.83, SD=0.36) than the teachers with graduate degrees. (M=3.90, SD=0.47). In parallel with this result, T-tests applied separately to the readiness level, interest and learner profile sections did not produce a statistically significant difference between the DI perceptions of instructors with undergraduate degrees and the ones with graduate degrees.

Likewise, the two groups did not differ from each other in a statistically significant manner in terms of the practices of DI based on the degree (t (85) =-1.542), p=.13). Teachers with BA had a lower mean (M=3.76, SD=0.53) than the teachers with graduate degrees (M=3.95, SD=0.63). Separate analysis in terms of learning environment (t (85) =-862), p=.39), content (t (85) =-1.794), p=.08)., practice/production (t (85) =-1.064), p=.29). and assessment (t (85) =-1.102), p=.28) produced similar results, which is that there was no statistically significant difference between the two groups regarding differentiation of any one of these aspects.

Comparison among Instructor Groups: Teaching Certificates

Independent T tests were also performed to find out if there are statistically significant differences between instructors who hold teaching certificates such as CELTA, Delta, ICELT and instructors with no teaching certificates in terms of their perceptions and practices of DI. Table 34 shows the findings of the related comparison.

Table 34

Differences Based on Teaching Certificate in terms of Perceptions and Practices of DI (N_N= 38, N_G=49)

Dimensions	Teaching certificate	*M*	*SD*	*t*	*p*
Perceptions	N	3.87	0.42	0.184	.85
	C	3.85	0.42		
Readiness	N	3.97	0.46	0.560	.58
	C	3.92	0.41		
Interest	N	3.84	0.70	0.2219	.03
	C	3.94	0.54		
Learner Profile	N	3.67	0.49	0.004	1.0
	C	3.69	0.58		
Practices	N	3.93	0.59	.1.273	.21
	C	3.78	0.57		
Learning environment	N	4.30	0.48	0.674	.50
	C	4.23	0.46		
Content	N	3.91	0.67	0.710	.48
	C	3.81	0.68		
Practice/Production	N	3.87	0.69	.1.481	.14
	C	3.65	0.70		
Assessment	N	3.50	0.99	1.453	.15
	C	3.18	1.0		

Note. I strongly agree 4.50 to 5.00, I agree 3.50 to 4.49, Unsure 2.50 to 3.49, I disagree 1.50 to 2.49, I strongly disagree 1.00 to 1.49

*C: Certificate holders, N: Non-certificate holders

As Table 34 presents, there was no statistical difference between the two groups in terms of perceptions in general (*t* (85) =.184), *p*=.85). The mean score of teachers with teaching certificate(s) (M=3.87, SD= 0.42) was slightly higher than the teachers with none (M=3.85, SD= 0.42). Separate independent T-tests were applied to readiness, interest and learning profile, which yielded similar results with no statistically significant differences.

Regarding practices of DI, a statistically significant difference was not recorded based on possession of teaching certificate(s) (t (85) =1.273), p=.21). The teaching certificate holders has a higher mean score (M=3.93, SD= 0.59) than instructors that do not hold any teaching certificates (M=3.78, SD= 0.57). Likewise, separate independent T-tests of learning environment, content, practice /production and assessment did not produce statistically significant differences in the practices of DI of these two groups of instructors.

Comparison among Instructor Groups: Teaching Experience

Independent T tests were conducted to find out if the amount of experience has any significant effect on the instructors' perceptions of DI in terms of readiness, interest, learning profile and their practices of DI in terms of learning environment, content, practice/production and assessment. The researcher formed two groups as teachers who had more than sixteen years of experience and those with fewer years of experience. Table 35 presents the findings of the related Independent T tests comparing the perceptions and practices of these two groups of teachers.

Table 35

Differences Based on Teaching Experience in terms of Perceptions and Practices of DI (N_{-16}= 53, N_{+16}=34)

Dimensions	Teaching experience	*M*	*SD*	*t*	*p*
Perceptions	-16	3.76	0.44	-0.1937	.06
	+16	3.93	0.39		
Readiness	-16	3.86	0.52	-1.454	.15
	+16	4.00	0.38		
Interest	-16	3.71	0.66	0.2219	.03
	+16	4.00	0.59		

Table 35 (cont'd)

Differences Based on Teaching Experience in terms of Perceptions and Practices of DI (N_{-16}= 53, N_{+16}=34)

Dimensions	Teaching experience	*M*	*SD*	*t*	*p*
Learning profile	-16	3.58	0.48	-1.552	.12
	+16	3.76	0.55		
Practices	-16	3.68	0.41	-2.489	.02
	+16	3.96	0.65		
Learning environment	-16	4.17	0.42	-1.586	.12
	+16	4.33	0.49		
Content	-16	3.66	0.53	-2.368	.02
	+16	4.00	0.72		
Practice/Production	-16	3.63	0.54	-1.590	.12
	+16	3.87	0.77		
Assessment	-16	3.09	0.69	-2.124	.04
	+16	3.52	1.14		

Note. I strongly agree 4.50 to 5.00, I agree 3.50 to 4.49, Unsure 2.50 to 3.49, I disagree 1.50 to 2.49, I strongly disagree 1.00 to 1.49

*+16: 16 years and more, -16: less than 16 years

As can be seen in table 35, independent T-tests applied to find out whether the amount of teaching experience affect the instructors' perceptions and practices of DI produced statistically significant differences as well as statistically insignificant differences. Regarding perceptions, there was not a statistically significant difference between teachers with more than 16 years of teaching experience and teachers with less years of experience (t (85) =-1.937), p=.06). However, teachers with more experience had a higher score (M=3.93, SD= 0.39) than teachers with less teaching

experience (M=3.76, SD= 0.44). Separate analysis of the results for perceptions in terms of readiness and learning profile yielded similar results with no statistically significant difference in the perceptions of these two groups.

On the other hand, a statistically significant difference was recorded between the two groups in terms of interest (t (85) =-2.219), p=.03). Teachers with more experience (M=4.00, SD= 0.59) had a higher score than teachers with less teaching experience (M=3.71, SD= 0.66).

As for the practices of DI based on the teaching experience, the two groups differed from each other in a statistically significant manner. (t (85) =-2.489), p=.02). Teachers with less than 16 years of teaching experience had a lower mean (M=3.68, SD=0.41) than the teachers with more teaching experience (M=3.96, SD=0.65).

Separate analysis in terms of learning environment and practice/production did not yield to statistically significant difference between the two groups regarding differentiation practice.

However, a statistically significant difference was revealed in terms of content between the two groups (t (85) =-2.368), p=.02). Instructors with less teaching experience had a lower mean (M=3.66, SD=0.53) than the instructors with post-graduate degrees. (M=4.00, SD=0.72).

Likewise, there was a statistically significant difference between the two groups in terms of assessment (t (85) =-2.124), p=.04). The mean score of teachers with less teaching experiences (M=3.09, SD=0.69) was lower than the mean score of the teachers with more teaching experiences (M=3.52, SD=1.14).

Comparison among Instructor Groups: Teaching Hours

Independent T tests were conducted to find out if there were statistically significant differences between instructors who taught more than 16 hours and those

who had fewer than 16 hours in terms of their perceptions and practices of DI. Table 36 displays the findings of the independent T tests for the related quantitative data.

Table 36

Differences Based on Teaching Hours in terms of Perceptions and Practices of DI (N_{-16}= 46, N_{+16}=41)

Dimensions	Teaching hours	*M*	*SD*	*t*	*p*
Perceptions	-16	3.87	0.38	0.163	.87
	+16	3.86	0.46		
Readiness	-16	3.92	0.39	-0.480	.63
	+16	3.97	0.49		
Interest	-16	3.92	0.62	0.490	.63
	+16	3.85	0.65		
Learning profile	-16	3.74	0.50	0.956	.34
	+16	3.63	0.56		
Practices	-16	3.82	0.63	-0.496	.62
	+16	3.87	0.53		
Learning environment	-16	4.22	0.49	-0.882	.38
	+16	4.32	0.45		
Content	-16	3.88	0.73	0.116	.91
	+16	3.86	0.62		
Practice/Production	-16	3.72	0.73	-0.696	.49
	+16	3.83	0.66		
Assessment	-16	3.26	1.02	-0.897	.37
	+16	3.46	0.99		

Note. I strongly agree 4.50 to 5.00, I agree 3.50 to 4.49, Unsure 2.50 to 3.49, I disagree 1.50 to 2.49, I strongly disagree 1.00 to 1.49

*+16: 16 hours and more, -16: less than 16 hours

As Table 36 shows, there was no statistical difference between the two groups in terms of perceptions in general (t (85) =.163), p=.87). The mean score of teachers who teach more hours (M=3.86, SD= 0.46) was slightly lower than the teachers who teach less hours (M=3.87, SD= 0.38). Likewise, the two groups did not differ from each other in a statistically significant fashion regarding the practices of DI based on the degree (t (85) =-496), p=.62). Teachers who teach less than 16 hours a week had a lower mean (M=3.82, SD=0.63) than the teachers who teach more hours a week (M=3.87, SD=0.53). Separate analysis produced similar results for perceptions in terms of readiness level, interest, learning environment and differentiation practice in terms of learning environment, content, practice/production and assessment.

CHAPTER 5: DISCUSSION

Introduction

This chapter presents an overview of the current study. Following the overview, the chapter provides the discussion of major findings about EFL instructors' perceptions and practices of differentiated instruction. Next, implications for practice, limitations of the study and implications for further research are discussed.

Overview of the Study

This study investigated Turkish EFL teachers' practices and perceptions of differentiated instruction at tertiary levels. To this end, the study sought answers to the following research questions:

1. What are Turkish EFL instructors' perceptions on differentiated instruction at tertiary level?

   1a. Do their perceptions differ based on:

   i. highest degree of graduation?

   ii. teaching certifications hold?

   iii. years of teaching experience?

   iv. number of teaching hours?

2. What are Turkish EFL instructors' practices of differentiated instruction at tertiary level?

   2a. Do their practices differ based on:

   i. highest degree of graduation?

   ii. teaching certifications hold?

   iii. years of teaching experience?

   iv. number of teaching hours?

The study employed a mixed-method research design and it has quantitative and qualitative phases. Data were collected via two different instruments; questionnaire and semi-structured interviews. The questionnaire was conducted to collect demographic information about the participants, data about their perceptions of differentiation based on readiness level, interest and learner profile and data about their differentiation practices of content, process, product and assessment. Semi-structured interviews were administered to attain a deeper understanding of the participants' perceptions and practices of differentiation. The quantitative data collected from the questionnaire were analyzed through descriptive statistics on SPSS. The qualitative data from interview transcriptions were analyzed according to differentiation framework of Tomlinson. The researcher examined the transcriptions and defined codes and coded the themes that emerged.

Findings and Discussions

The results from the analyses of qualitative and quantitative data allows for some interpretations and assumptions regarding Turkish EFL instructors' perceptions and practices. The major findings related to each research question will be discussed under two sections and the results will be analyzed and interpreted with reference to previous research.

EFL Instructors' Perceptions of Differentiated Instruction

In general terms, instructors have high perceptions on differentiated instruction, and instructors' beliefs about learner needs seem mostly in line with Tomlinson's model. Teachers seem to believe that students have diverse readiness level, interests and learning profiles, and these have an impact on how they learn and their course performance. This is parallel to the results of some related previous research conducted by Chien (2015), Melesse (2019), Özkanoğlu (2015), Sharabi

(2011), Shareefa et al. (2019), Sibanda (2021), Tomlinson and Santangelo (2012), and Tzanni (2018).

However, they do not seem to place the same importance equally on these three aspects of differentiated instruction. Readiness level seems to receive the most attention; however, instructors seem to take student motivation and attitudes more into consideration rather than their varied background knowledge and academic skills in their teaching practice. Moreover, instructors differentiate instruction mostly based on readiness level of low achievers. The results suggest that instructors provide a lot of support for low achievers while there is not any kind of differentiation practice for high achievers. It indicates that high achievers may not benefit differentiated instruction based on their needs to the same extent as the low achievers. This result bears similarities to the results of the study by Milinga et al. (2022) that focused on teachers' perceptions of differentiated instruction for academically high achieving secondary school students in Tanzania. This result is also in line with the findings of the review study by Ziernwald et al. (2022) that focused systematically on related studies between 2000 and 2019 with a focus on differentiated instructions for high-achieving students. The results also indicate that while motivation and attitude of students are mostly considered as essential, some instructors seem to believe that it can be divorced from the learning process.

The results indicate that although instructors seem to be aware of the student differences, they think about these differences at class level rather than individual level. They generally think groups of students have different needs, and most students in one group have similar background knowledge or academic skills as they are in the same class or all students in one group have similar interests or learner profiles. It aligns with the findings of the study conducted by Paone (2017) on

middle school teachers' perceptions of differentiation instruction. In fact, when it comes to differentiate their instruction, instructors may perceive students not as individuals but as a unity that a single size can fit, which is in parallel to the findings of a relevant study conducted by Melesse (2015).

Another result that can be drawn from the study is that instructors' perceptions of differentiated instruction do not seem to be determined by variables such as degree of graduation, teaching certificates, experience and how many hours instructors teach a week. This result is in line with the findings of the study conducted by Richards-Usher (2013) that investigated whether there is a statistically significant difference in the DI perceptions of novice teachers and experienced teachers. The findings also align with the findings of the study conducted by Shareefa et al. (2019) in that experience and qualifications do not lead to any statistically significant difference in DI perceptions.

EFL Instructors' Practices of Differentiated Instruction

Overall, the results indicate that instructors' perceptions and practices of differentiated instruction are parallel to each other. However, instructors practice differentiated instruction to a limited extend although their awareness of individual differences is high. Differentiation practice does not seem to be comprehensive and it is not implemented proactively by assessing learner needs and differentiating accordingly. This finding aligns with the results of some previous research studies in terms of perceptions and practices of differentiated instruction (Bajrami, 2015; Brandy, 2020; Ismajli, 2018; Jamaloddinova & Kuchkarova, 2022; Melesse, 2019; Prince, 2011; Tzanni, 2018; Whipple, 2012; Zoraoğlu, 2016). The results are also parallel to the findings of the study by Santangelo and Tomlinson (2012) who reported that there is an agreement between teacher educators' beliefs and practices

and Tomlinson's modal, however there is little indication that teacher educators engage in a comprehensive differentiation practice. The reason that explains this result might be that teachers need training on how to put their beliefs into practice and how to implement differentiation in their classes.

The results show that instructors differentiate the four aspects of differentiated instruction which are learning environment, content, process and product disproportionately. The results reveal that most differentiation is practiced in learning environment, mostly based on readiness level. Similar with the results of the study carried out by Tomlinson and Santangelo (2012), instructors mostly attach a great importance to create a positive atmosphere by establishing a good, supportive learning environment and becoming approachable to students. This finding is also in line with the recorded high perceptions on the relationship between student motivation and attitude towards learning and their course performance, and its impact on instructor's lessons. The results also indicate that content and production parts of the instruction are not differentiated as often as learning environment and process. This finding is in line with one result of the study by Whipple (2012) that suggests product is the least differentiated part of the instruction while some results from both studies contradict as the same study suggests that content is the most differentiated part of the instruction. The findings of the present study also bear similarities with the findings of the research conducted by Zoraoğlu (2016) which suggested that differentiation of production is ignored and there is inconsistency with the differentiation of product, content and process. However, in his study, Ismajli (2018) suggest that teachers pay more attention to product and less to content and practice parts in their differentiation practice.

The current study also puts forward that differentiation is implemented in the process part to some extent through a variety of activities and grouping formats, which is parallel to the results of Tomlinson and Santangelo's study in 2012. However, the differentiation of process is not practiced proactively based on assessed student needs. Although instructors seem to benefit from a variety of materials with different formats, they do not purposefully select them considering individual student needs.

It can also be deduced from the results that differentiation is not equally practiced based on readiness level, interest and learner profile, which aligns with some previous studies (Tomlinson & Santangelo, 2012; Zoraoğlu, 2016). The variables that differentiation is based on, which are readiness level, interest and learner profile, are equally important in the learning process, and they require a balanced attention in teaching practice (Sausa & Tomlinson, 2010). Readiness level is taken into account most in the practice of differentiation, which is a finding also revealed in the studies of Şaban (2020) and Zolyomi (2022). Nevertheless, the present study suggests that high readiness level is not taken into account as much as low readiness level in the differentiation practice in general, which aligns with the findings of two previous studies (Jamoliddinova & Kuchkarova, 2022 ; Zoraoğlu, 2016). Instructor generally provide supplemental exercises or scaffolding in many forms such as feedback, mini lessons or tutorials for students who need help understanding or practicing the content. However, students who master the content easily do not seem to be provided with advanced opportunities. This may show that learner needs do not draw equal attention from the instructors. This finding might indicate that teachers might have the misperception that only weak students need support.

Although the findings from the survey suggest that differentiation of content is practiced based almost equally on readiness level, interest and learner profile, overall, interest receives the least consideration in the implementation of differentiation. This finding is in line with the results of the study conducted by Tomlinson and Santangelo (2012). Although instructors benefit grouping formats in their instruction, they are not usually organized based on student needs or their preferences, which is another similar finding to the results of the same study by Tomlinson and Santangelo (2012).

The results reveal that instructors consider other parameters besides readiness level, interest and learner profile in their differentiation practices. Content itself, time, exercises, the number of students are some aspects on which instructors base their differentiation practice. Some instructors seem to choose the materials or activities to do in the class according the content to be taught or practiced, how much time they have, how many students are there or whether the exercises are manageable or not. It may show that some instructors take into consideration some practical parameters that do not respond to learners' need in differentiation of their instruction.

Ongoing assessment is essential for a successful and efficient differentiation practice since it provides the teacher with the information on the variables that the differentiation practice should be based on so that they can make right decisions in their teaching practice (Chapman & King, 2015; Tomlinson & Moon, 2013; Watts-Taffe et al., 2012). The results indicate that it is not common for instructors to benefit ongoing assessment in order to get to know their students' needs so that they can differentiate their classes effectively. This may show that instructors do not customize their instruction based on learner learners' needs but rather they practice a

standard instruction for all their students. This result is parallel to the results from the previous research (Grafi-Sharabi, 2011; Tomlinson & Santangelo, 2012).

The results of the study also show that DI implementation do not depend on the variables such as degree of graduation, teaching certificates and how many hours instructors teach a week. However, the results suggest that experience seems to play a role in the DI practice. One explanation for this finding might be that teachers get to know their students better through experience and that experienced teachers develop ways to know better what will actually work with a particular group of students. This result is parallel to the results of relevant previous research (Melesse, 2015; Shaboul et al., 2020) in terms of the impact of trainings and qualifications hold on DI implementation. However, two different studies by Shaboul et al. (2020) and Suprayogi et al. (2017) suggest that experience does not lead to any significant change in differentiation practice, which is in contradiction with the results of the current study.

The findings also indicate certain challenges instructors face in the implementation of differentiation. Instructors pointed at strict syllabus, exams, insufficient resources, number of students and work load for why differentiation is difficult. One explanation for this result might be that teachers have certain misperceptions about the implementation of differentiated instruction. As Tomlinson repeatedly highlighted in many of her works (1999, 2001, 2008), teachers may perceive differentiation as something extra in the curriculum although it is rather “the core of effective planning”. Teachers may also have the misperception that differentiation is a separate way of teaching for each student in the class. Therefore, this result may be an indication for a lack of know-how about practical implementation of differentiation. This finding is in line with previous research

(Christopher, 2017; Demirkaya, 2018; Gaitas & Martins, 2017; Melesse, 2015; Morrison-Thomas, 2016; Özkanoğlu, 2015; Palmer, 2014; Shaboul et al., 2020; Sharabi, 2011; Wai-Wan, 2015).

Implications for Practice

The findings of the study carry valuable implications for practice. As the study revealed some misconceptions and misunderstandings about differentiated instruction, it may help teacher educators inform themselves about the instructors' perceptions and practices of differentiated instruction. Accordingly, workshops or seminars could be organized for instructors to discuss what differentiation is not as well as what it is (Tomlinson, 2001; Tomlinson et al.; 2008), why it is important and how to integrate it in their context can be considered.

Given that the results of the study indicated lower level of differentiation practice when compared to perceptions, the findings may inform the administrators of language schools at tertiary level about the professional development needs of the instructors, and administrators may organize in-service professional development activities to work on differentiation. Training sessions could be organized to focus on specifically how to put differentiation into practice in teaching practice. A step-by-step approach can be taken in the training sessions and training on implementation of differentiation can be divided as differentiation of learning environment, differentiation of content, differentiation of process, differentiation of product. Likewise, separate workshops can be organized on how to implement differentiation based on readiness, interest and learner profile in practice. Furthermore, webinars and workshops may be organized to introduce tools such as ChatGBT that can in many ways assist teachers to easily differentiate their class materials based on their students' needs. Some previous research shows that in-service trainings or

professional development programs focusing on differentiated instruction may be beneficial (Burkett, 2013; Christopher, 2017; Dixon et al., 2014; Fields-Homes, 2008; Karakaş, 2019; Özkanoğlu, 2015; Richards-Usher, 2013; Wai-Wan, 2016; Wright, 2018).

Some challenges were put forward regarding differentiation practice. Instructors mentioned strict curriculum, exams, lack of sources and number of students as hindrances to efficient differentiation practice. These findings may lead administrators consider how to ease these problems for instructors. A pool of diverse materials may be prepared so that instructors have an access to various materials to use in their class. The curriculum may be revised for an effective implementation of differentiation.

Implications for Further Research

The findings of the present study may offer several suggestions for further research**.** First of all, the current study was carried out at an English Language Preparatory Program at a state university in Eskişehir. Replications of the same study can be conducted in at preparatory programs of state and foundation universities in other cities in Türkiye to compare the results. Likewise, future research can make use of a larger sample size in an extended period of time for data collection, which would make the study more generalizable. Also, more studies conducted at other preparatory programs could show what is the impact of the context on the results.

The participants in the current study were EFL instructors. Perceptions of students could be explored in a further study to make comparisons between instructors and students. Also, a future study could investigate the perceptions of administrators to obtain a broader picture. In addition, the scope of the research can

be broadened and conducted in ELT faculties to investigate the perceptions and practices of preservice ELT teachers.

The present study employed a mixed method research model to seek an answer to its research questions. Other research methods could be benefited to make more explorations on the topic of focus. An experimental study could be conducted in the same context to compare student achievement or motivation before and after being exposed to differentiation. Furthermore, the perceptions of instructors about the differentiation experience could be explored in a further study.

Limitations

This research study revealed some important results related to EFL instructors' practices and perceptions of differentiated instruction at tertiary level, yet it has certain limitations. One limitation of this research study is the sampling method and the sample size. The samples of this research study were chosen through convenience sampling, which might make the results less generalizable to other contexts. Also, another study involving multiple preparatory programs of different universities would create possibilities to make more valid generalizations.

Another limitation of the current study may be the number of the participants. The time when this study was carried out coincided with the peak time of the Covid-19 pandemic, and it was not possible to contact the instructors in person due to the lockdowns and precautions. The invitation to participate in the survey was sent via e-mail. The number of the instructors that completed the survey was fewer than expected.

The researcher couldn't make comparisons between some demographic categories because the numbers of the participants under some categories were below

30. For instance, different genders or different majors could not be compared for this reason.

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Appendix A

Adapted Questionnaire

Dear Instructors,

This questionnaire (*adapted from Tomlinson & Santangelo, 2012) was prepared for a thesis within the scope of İhsan Doğramacı Bilkent University, Teaching English as a Foreign Language Master's Program. The purpose of this questionnaire is to investigate the Turkish English as a Foreign Language Instructors' practices and perceptions of differentiated instruction at tertiary level under the supervision of Asst. Prof. Dr. Tijen Akşit.

Your participation in this study is voluntary. You will be asked to complete an online survey, which should take no more than 15 minutes. All responses will be kept confidential and anonymous. The results of this study will be used for scholarly purposes only.

In terms of this questionnaire;

Your identification will never be disclosed.

Your data will be kept in a secure coded computer and will not be shared with third parties.

You can leave the questionnaire any time you want.

The results will be shared with you if you request them. In this case, you can reach me via the e-mail address stated below.

If you accept these terms, please choose Yes to begin the questionnaire. Thank you for your contribution.

Berrin Karasaç Horkel

MA. Bilkent University/ TEFL

Supervisor: Asst. Prof. Dr. Tijen Akşit

I agree with the terms explained above.

☐ Yes

☐ No

Part I

Questions in PART I focus on your specific situation and PART II & III explore your perceptions and practices of differentiated instruction.

Please choose the best option for you for the items below.

1. Gender:
   a. Female
   b. Male
   c. Prefer not to say
2. Department you graduated from:
   a. English Language Teaching
   b. American/ English Literature and Language
   c. Linguistics
   d. Translation and Interpretation
   e. Other…
3. Highest degree earned:
   a. BA
   b. MA
   c. PHD
4. Teaching qualifications hold:
   a. None
   b. CELTA/ICELT

c. Delta

d. Other…

5. Years of teaching in post-secondary context:

a. 1-3 years

b. 4-8 years

c. 9-15 years

d. 16+ years

6. Before Covid-19, number of hours usually taught a week:

a. 0-3 hours

b. 4-7 hours

c. 8-15 hours

d. 16+ hours

7. Levels usually preferred to teach (You can choose more than one option):

a. D-C levels

b. B level

c. A-A+ levels

8. Levels usually taught (You can choose more than one option):

a. D-C levels

b. B level

c. A-A+ level

Part II

For each statement below, rate how much you personally agree or disagree with these statements.

Please don't select more than 1 answer(s) per row.

1= strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

	1	2	3	4	5
1. Students in my courses differ significantly in relevant language background knowledge.					
2. There is a strong correlation between students' relevant language background knowledge and their course performance.					
3. My understanding of variance in individual students' relevant language background knowledge impacts what/how I teach.					
4. Students in my courses differ significantly in basic academic skills (e.g., reading comprehension, written expression, problem solving).					
5. There is a strong correlation between students' academic skills and their course performance.					
6. My understanding of variance in individual students' basic academic skills impacts what/how I teach.					
7. Students in my courses differ significantly in their study skills (e.g., note taking, exam preparation, time management).					
8. There is a strong correlation between individual students' study skills and their course performance.					
9. My understanding of variance in individual students' study skills impacts what/how I teach.					
10. Students in my courses differ significantly in their					

attitude/motivation towards course.					
11. There is a strong correlation between individual students' attitude/motivation and their course performance.					
12. My understanding of variance in individual students' attitude/motivation impacts what/how I teach.					
13. Students in my courses differ significantly in their interests with regard to course content.					
14. There is a strong correlation between individual students' interests and their course performance.					
15. My understanding of variance in individual students' interests impacts what/how I teach.					
16. Students in my courses differ significantly in their preferred learning modalities (e.g., visual, auditory, or kinesthetic; active or passive; intelligence preferences).					
17. There is a strong correlation between students' learning modalities and their course performance.					
18. My understanding of variance in individual students' learning modalities impacts what/how I teach.					
19. Students in my courses differ significantly in their preferred grouping orientations (e.g., whole class, small group, individual).					
20. There is a strong correlation between students' grouping orientations and their course performance.					
21. My understanding of variance in individual students'					

grouping orientations impacts what/how I teach.					

Part III

During face-to-face teaching before Covid-19;

How often did you do the following?

If the item asked is within your discretion, choose a number between 1-5.

If NOT within your discretion, choose number 6.

Please don't select more than 1 answer(s) per row.

1= never (no intention to do so in the future)

2= never (may be willing to do so in the future)

3= occasionally

4= frequently

5= always

6= I do as part of curriculum requirement

	1	**2**	**3**	**4**	**5**	**6**
22. Create activities/assignments to develop a sense of community among students.						
23. Take deliberate efforts to ensure each student feels known, welcome, and respected.						
24. Take deliberate efforts to make myself approachable /available to students.						
25. Take deliberate efforts to ensure students participate consistently and equitably during class.						

26. Take deliberate efforts to enhance students' motivation/attitude towards course content.						
27. Follow up privately on behaviour r circumstances of concern (e.g. absences, low grades, conflict between students).						
28. Use text materials that represent a variety of formats (e.g., textbooks, journal articles, literature).						
29. Use text materials that present content at varying levels of complexity.						
30. Allow students to select from multiple text options (e.g., read one of three).						
31. Use materials that represent a variety of formats (e.g., text, video, audio, web-based).						
32. Use other materials besides course textbooks to present content in a variety of ways.						
33. Use text and/or other materials that reflect students' interests or experiences.						
34. Provide supplemental materials/resources to support students who have difficulty understanding course content.						
35. Provide supplemental materials/resources to challenge students who master course						

content with minimal effort.						
36. Present course content using visual displays or demonstrations.						
37. Present course content using examples that reflect students' interests or experiences.						
38. Use strategies to support comprehension and retention of content presented in course materials (e.g., guided reading questions, summaries, checklists).						
39. Use strategies to support comprehension and retention of content presented in class (e.g., end of class summaries, visuals such as tables/diagrams).						
40. Provide supplemental support to student who have difficulty understanding course content (e.g., tutorials during office hours).						
41. Create more advanced opportunities for students who master course content with minimal effort.						
42. Solicit student feedback to help select/adjust the content presented within a given semester.						
43. Design activities/assignments that help students understand course content by interacting with each other.						

44. Use a variety of grouping formats during class (e.g., whole class, small group, individual).						
45. Use a variety of grouping formats for assignments completed outside of class (e.g., small group, partners, individual).						
46. Allow each student to select his/her preferred grouping format (e.g., work independently or with a partner).						
47. Purposefully group students based on their levels of readiness (e.g., relevant background knowledge, academic skills).						
48. Purposefully group students based on their interests.						
49. Purposely group students based on their preferred learning modalities (e.g. visual, auditory, kinaesthetic, tactile).						
50. Create activities/assignments that offer format options (e.g., write a paper, create a visual, design a web page, or give a presentation).						
51. Create activities/assignments that allow each student to select a topic of personal interest.						
52. Adjust assignment (teacher set						

homework) deadlines in response to individual students' needs and/or circumstances.						
53. Provide supplemental support to students who have difficulty completing activities / assignments.						
54. Create enrichment opportunities for students who complete activities / assignments with minimal effort.						
55. Observe and evaluate each student based on his/her improvement during the semester.						
56. Use three or more forms of assessment to determine course grades (e.g., a paper, presentation, participation, final exam).						
57. Solicit student feedback to help create / adjust activities/assignments used within a given semester.						
58. Assess each student's level of readiness (e.g., relevant background knowledge, academic skills, attitude).						
59. Assess each student's interests (e.g., future plans, areas of talent/passion).						
60. Assess each student's learning profile characteristics (e.g., preferred learning modality, grouping orientation).						

61. How has your teaching regarding the items above affected when you switched to online teaching due to Covid-19?	
If you would like to volunteer for a short interview to provide me with further information, please share your e-mail address and phone number below. _____	

Appendix B

Interview Questions

1. Please describe the classroom environment you create before Covid-19?
2. When you present a content, which materials do you make use of? And what do you take into consideration about the materials during the class or before the class while planning to present the content?
3. When you practice a content, which materials do you make use of? And what do you take into consideration about the materials during the class or before the class while planning to practice the content?
4. When you are at the production phase, which materials do you make use of? And what do you take into consideration about the materials during the class or before the class while planning to produce the content?
5. What do you think about the role of student emotions in your lesson preparation or in class teaching?
6. Do you think you differentiate the content, the practice and/or production at any point of your teaching based on student individual readiness level, learning profiles and interests?
7. How has your teaching regarding to the questions I've asked so far changed during Covid-19?