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COMPUTERIZED DYNAMIC ASSESSMENT: DIAGNOSING FIELD-KNOWLEDGE DEVELOPMENT OF ELT STUDENTS ACCORDING TO READER PROFILES

(YÜKSEK LİSANS TEZİ)

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Tezi Hazırlayan: Ulviye KETEN

Tezin Kabul Edildiği Enstitü Yönetim Kurulu Karar ve No: 23.06.2021/15

KOCAELİ 2021

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ÖZET

Bu tez, Alexander'ın (2005) geliştirdiği okuyucu profillerine göre ipuçlarının hazırlandığı dinamik değerlendirmeye dayalı bir alan bilgisi testinde, öğrencilerin nasıl bir gelişim göstereceğini kontrol ve okuyucu profilleri gözetmeksizin ipuçları verilen bir grupla karşılaştırmayı amaçlar. Bunun yanı sıra, testin alt kollarından elde edilen sonuçlar da gruplar arasında ve okuyucu profili belirlenmiş grup içerisinde karşılaştırılır. 81 İngilizce öğretmenliği bölümü öğrencisi bu çalışmaya gönüllü olarak katılmıştır. Öğrenciler 3 gruba dağıtıldı. 1. grup kontrol grubu, 2. grup okuyucu profilleri gözetilmeksizin ipuçları alan ve 3. grup okuyucu profillerine göre ipuçları alan grup olmuştur. Öğrencilerin okuyucu profillerinin belirlenmesinde, dil edinimi ve mühendislik konuları hakkında ilgi ve bilgilerini test eden iki test almışlardır. Sonrasında ise sesli düşünme yöntemi kullanılarak öğrencilerin kullandıkları stratejilerle ilgili detaylı bilgiler toplanmıştır. Bu ölçümleri kullanarak faktör analizi uygulanmıştır. 2. Deney grubunda toplamda 4 okuyucu grubu çıkmıştır: bilgilerine güvenen okuyucular, çaba sarf eden okuyucular, yetenekli okuyucular ve ilgiye bağlı okuyucular. Bu okuyucu profillerine göre ikinci deney grubu için ipuçları hazırlanmıştır. Kontrol grubuna adapte edilmiş sınav çevrim içi olarak direk uygulanmıştır. 1. Ve 2. deney grubu sınav esnasında müdahaleyle dolaylı yoldan en açık olacak şekilde gelene kadar toplamda 3 ipucu almıştır. Testler iSpring Suite Max programı kullanılarak çevrimiçi hazırlanmıştır. Çıkan sonuçlara göre öğrenciler alan bilgisi testinde ipuçları sayesinde ortalamalarını asıl puanlarına göre yükseltmişlerdir. Statik sınava tabi olan öğrenciler ile her iki deney grubu arasında önemli ortalama farkları görülmüştür. Fakat öğrencilerin alan bilgisi puanları iki deney grubu arasında farklılık görülmemiştir. Fakat okuyucu profillerinde alt alan bilgileri açısından farklılık gözlemlenmiştir.

Anahtar kelimeler: Dinamik değerlendirme, sesli düşünme metodu, okuyucu profilleri, alan bilgisi testi

ABSTRACT

This thesis aims to compare the mean scores of a group of students, who are provided with mediation according to their developing reader profiles, with a control group and another experimental group that is also assessed in the interventionist DA procedure for the field-knowledge. It also tries to track the development of learners during the test. In addition, results that were obtained for subcategories of the field-knowledge test are intended to be compared across and within the groups. 81 students who study at the English language teaching department joined this study voluntarily. There were three research groups. The first group was the control group. The second group included the students who took mediation without considering their reader profiles, and the last group was provided with mediation according to their reader profiles. To determine the reader profiles, students took prior interest and prior knowledge tests online. Then, by using think-aloud protocols with the last group, detailed information related to strategy processing was gathered. Hierarchical cluster analysis was conducted with the information related to the strategy processing, prior interest and prior knowledge. Four groups of readers emerged: knowledge-reliant readers, effortful processors, highly-competent readers and interest-reliant readers. According to these reader profiles, the mediation was designed for the second group. Experimental groups took three graduated prompts from most implicit to explicit. The tests were prepared by using the iSpring Suite Max program online. The control group took the test online in a non-dynamic way. As the results showed that the two groups increased their scores due to the mediation. There was a significant difference between the group members who took the static test compared to the other groups. The two experimental groups did not differ in terms of the mean score of the field-knowledge test but the significant mean differences can be observed within the reader profiles group.

Keywords: dynamic assessment, think-aloud method, reader profiles, field-knowledge test

LIST OF ABBREVIATONS

C-DA: Computerized Dynamic Assessment

DA: Dynamic Assessment

DVP: Dialogic Video Protocol

EFL: English as a Foreign Language

ELT: English Language Teaching

ESOL: English for Speakers of Others

GPA: Grand Point Average

LPS: Learning Potential Score

MDL: Model of Domain Learning

MLE: Mediated Learning Experience

NDA: Non-Dynamic Assessment

SCM: Structural Cognitive Modifiability

SCT: Socio-cultural Theory of Mind

ZPD: Zone of Proximal Development

ZPTD: Zone of Proximal Teacher Development

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INTRODUCTION

Dynamic Assessment (DA) has evolved from Vygotsky's Sociocultural Theory of Mind in the 1920s and earned its present situation by Feuerstein's theory of Mediated Learning Experience (MDL). Poehner (2008: p. 15) claims that cognitive development can only be achieved through various forms of support. This support or mediation helps people to develop their cognitive functions and internalize this process. When learners respond to the mediation, they present that they can develop themselves from the actual performance to their zone of proximal development (ZPD). So, DA takes into consideration of this potential development and tries to detect the immature functions to have them become matured enough to be used independently. When there is a dialogic mediation between the learner and the mediator, it is called the interactionist dynamic assessment whereas mediation that is predefined and administered in a strict order is called the interventionist DA.

DA has been mostly used in language assessment (Poehner & Lantolf, 2005: p. 233; Poehner, Zhang & Lu, 2015: p. 337), psychology (Deutsch & Reynolds, 2010: p. 311; Fabio, 2010: p. 41; Tzuriel & Kaufman, 1999: p. 359), and math (Wang, 2011: p. 1062) but there is a small body of studies that focus on teachers. There have been some studies that have focused on dialogical mediation in prospective teachers' teaching practices. However, there were no studies that assess the field knowledge of the teachers, or even English teachers through interventionist approaches in DA. Pre-service English teachers usually take statistic tests to be assessed to become teachers around the world. For instance, English language teachers take ESOL praxis test in the USA. Teacher candidates in the UK should obtain Qualified Teacher Status (QTS) certificate to work at state schools.

Prospective English teachers in Turkey take a field-knowledge test that is known as OABT to be appointed to state-run schools. As the digital statistic papers published by Student Selection and Placement Centre (hereafter, OSYM) in 2018, 2019, and 2020, prospective English teachers could obtain a mean score of 20.81 out

of 50 in 2018, 33.86 out of 75, and 35.61 in 2020 (OSYM, 2020). These results can be reached at www.osym.gov.tr. According to these results, pre-service teachers could only obtain scores lower than half of the total. There is an increasing tendency in the mean scores. So, educators and teachers need to consider what content areas are in the development process, what type of knowledge needs to be addressed by the educators so that they could educate teachers to become experts in content areas.

In the light of these needs, this thesis assessed 81 students with an internationally renowned test, the ESOL praxis test used in the United States, to test the field knowledge of novice English teachers. Mediation for one group was shaped according to the developing reader profiles of the students. So, three groups were formed: one of them was the control group, the second group was provided with meditation without looking at their reader profiles and the second group took the mediation during the test with a consideration participants' developing reader profiles decided on a hierarchical cluster analysis. Because of the current pandemic caused by COVID-19, all the tests were applied online by using the iSpring Suite Max program. The results indicated significant mean differences across and within groups due to the interventionist approach in computerized dynamic assessment (C-DA).

CHAPTER I

1. INTRODUCTION

1.1. BACKGROUND OF THE PRESENT RESEARCH

When teachers graduate from the university in Turkey, they may take exams to be appointed as qualified teachers in state-run schools. These tests are designed to show what teachers have acquired during their university education. In Turkey, to become a teacher, people study for four years in universities. If they want to work for the Ministry of National Education, they enter the exam named KPSS; namely Public Personnel Selection Examination. This examination aims to assess the teacher candidates' knowledge about general culture and ability and educational sciences besides the OABT (Teachers' Field Knowledge Test) to test the domain knowledge of teachers. Testing teachers' knowledge started to be applied in 2013. OABT always evolves and changes in time. However, it can be seen from the results and statistics taken from the OSYM in 2018 (M=20.81 out of 50), 2019 (M=33.86 out of 75), and 2020 (M=35.61) that students do not show high mean scores in the tests. Studies conducted with teachers (Atav & Sönmez, 2013: p. 12; Erdem & Soylu, 2013: p. 232; Gökçe, 2013: p. 186) showed that taking a field test would be one way of fair selection to become a teacher in the ministry. These teachers also reported that taking field tests could help develop themselves and more beneficial for students (Sert, 2015: p. 803). Sert's (2015) research with newly graduated teachers showed that teachers performed poorly in a practice test published by OSYM in 2013 (p. 803). Only 32% of the teachers displayed high scores above 30 out of 50. 35% of the teachers reported that they benefitted from the topics they were tested, especially approaches and methods for language teaching. 68% of the teachers believed in the necessity of a field knowledge test. It can be seen from the mean outcomes of OABT, students still have knowledge areas that they are lack of and they need to develop because most of the courses that are taken during teacher education focus more on

theory-based or knowledge-based rather than practice, (Higher Education Council , 2018).

Dynamic Assessment (hereafter, DA) has emerged from Vygotsky's Sociocultural Theory of Mind (SCT). The theory asserts that one can reach the highest cognitive functions through mediation with a peer or an examiner who is more competent than the individual. Through mediation, one can develop maturing functions. In time, this process becomes internalized. Zone of Proximal Development (ZPD) indicates the maturing functions. It leads examiners to evaluate one's potential of development rather than the actual score. When these aspects of SCT are included in the assessment process, it gives better insights into the developed skills and helps educators to assess the areas that need to be put more emphasis on to help learners to strive and succeed in reaching up to matured skills.

Alexander (2005: p. 16) framed 6 developing reader profiles in the Model of Domain learning, which asserts that individuals pass through states in reading different domains. These stages are acclimation, competence, and expertise. People show different types of knowledge through the trajectory from acclimation to expertise. Dependence on situational interest and text-specific knowledge decreases as one becomes more expert in reading domain-specific texts. Instead, they start to develop individual interest in the domains, and domain-specific knowledge. So, in accordance with this development, six types of readers have been theorized: highly-competent readers, seriously challenged readers, effortful processors, and knowledge-reliant, non-strategic and resistant readers.

DA has proved its success significantly in various studies such as language proficiency tests that were applied online (Lantolf & Poehner, 2013: p. 141). There were also a few studies (Golombek, 2011: p. 121; Kaivanpanah, 2017: p. 89) that integrated SCT into teacher education assessment of teaching practices by using interactionist approaches in DA. However, there have been no studies that focused on assessing the field- knowledge of teachers by using any approaches in DA.

Therefore, this thesis focuses on the possible effects of dynamic assessment on testing field-knowledge of prospective English language teachers while the mediations are provided according to the developing reader profiles.

1.2. STATEMENT OF THE PROBLEM

As it can be inferred from the past results published by OSYM (2018, 2019, and 2020), English teachers show low performance on the field-knowledge test although they take a number of courses related to learning and teaching English to students. Understanding what knowledge students show immaturity in field-knowledge can help educators to evolve teaching programs and the prospective teachers can notice what category of knowledge they need to develop. To that point, DA procedures can help to gain insights into this problem.

1.3. AIM OF THE RESEARCH

For years, DA has been applied in various language-related issues (Kozulin & Garb, 2002: p. 112; Darhower, 2014: p.221; Teo, 2012: p. 2; Lantolf & Poehner, 2013: p. 141). Besides, dialogic mediation and principles of SCT have been used in assessing teachers' practices (Johnson & Arshavskaya, 2011: p. 168; Verity, 2011: p. 153) but there have been no studies that focus on the field-knowledge of the teachers, though their courses mostly involve theoretical courses such as second language acquisition and linguistics. Moreover, field-test results that were obtained from OABT showed that novice teachers performed low below the mean of the total score. Therefore, the current study aims to find out what content areas in field knowledge need to be developed by the pre-service English teachers by applying a computerized field knowledge test and how DA procedures affect the results when the reader profiles are taken into consideration while designing meditation, too.

1.4. ORGANIZATION OF THE THESIS

This thesis includes six chapters. The first chapter gives brief information about the background of the study, statement of the problem, and aim of the research. The second chapter gives the related information and studies related to reader profiles and dynamic assessment. Chapter III presents the methodology of the research. Chapter IV deals with the results. Chapter V shows the discussion part and it gives a summary and importance of the findings, implications, suggestions for further research, and the limitations.

1.5. OPERATIONAL DEFINITIONS

Dynamic Assessment: It refers to a mode of assessment (Ellis, 2008: p. 960) that has 'the expressed goal of modifying learner performance during the assessment itself' (Poehner and Lantolf, 2005: p. 235) instead of an assessment that does not give any feedback or intervention, which is also called statistic way of assessment.

Mediation: This term refers to any kind of assistance by others in social interaction, mediation by self through private speech, and mediation by artefacts (e.g., tasks and technology, Lantolf, 2000; Ellis, 2008: p. 971).

Non-Dynamic Assessment: It means the assessment without any interference from outside (Sternberg & Grigorenko, 2002: p. 45).

Sociocultural Theory of Mind: This theory asserts that learning is the product of mediated activity (Ellis, 2008: p. 979). Learning evolves from object regulation to self-regulation, which means that it becomes internalized in time.

Zone of Proximal Development: This refers to "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through adult guidance or in collaboration with more capable peers" (Vygotsky, 1978: p. 86).

The Model of Domain Learning: MDL "describes the interacting and evolving roles of interest, knowledge and strategy use as learners progress from acclimation to competence and possibly to proficiency in an academic domain" (Fox & Alexander, 2004: p. 2). As they progress through the stages, they show sophisticated strategy use and they move from situational interest and knowledge to domain-specific interest and knowledge.

Think-aloud protocols: Think-Aloud Protocol Analysis refers to a specific procedure designed to assess reading comprehension by asking the subject to think out loud while reading a passage.

Reader Profiles: Developing reader profiles have been framed by Alexander (2005, p. 16) that have rooted back to the MDL; individuals move from acclimation to expertise and develop the number of strategies they used, quality of the strategies, knowledge, and interest from situational to domain-specific. There are six reader profiles: highly-competent readers, seriously challenged readers, non-strategic readers, resistant readers, effortful processors, and knowledge-reliant readers.

<div align="center">**CHAPTER II**</div>

2. LITERATURE REVIEW

This section of the thesis is divided into two main sections to give a theoretical and conceptual framework of the research. In the first part, a definition of developmental reader profiles and related studies are presented. The second part aims to demonstrate the general background information related to dynamic assessment and the constructs of it that were used for this research.

2.1. READER PROFILES

Reader profiles have rooted back to Alexander's (1997, p. 213) study on the Model of Domain Learning. According to this research, Alexander listed a number of features of lifespan reading development (See Figure 1). According to Alexander (2005, p. 3), "the ability to survive and to thrive in our world is strongly linked to achieving competence as a reader "(words in italic in the original paper). This competence does not only develop in the early years of education. It should be seen as a lifelong development process.

- Readers' knowledge of language and knowledge of content domains are critical forces in developing competence.
- Readers' personal interest in reading becomes a driving force in their development as competence is achieved.
- Lifespan development involves systematic changes in readers' strategic processing.
- Reading development is a lifelong journey that unfolds in multiple stages.
- Profiles of successful and struggling readers are reflective of developmental forces.
- Readers in acclimation are especially vulnerable and in need of appropriate scaffolding.

Figure 1 Features of Lifespan Reading Development (Alexander, 2005: p. 2)

As stated in RAND Reading Study Group (2002), when reading is seen as long-term development, then adults can read a vast variety of materials easily and read with comprehension irrespective of the difficulty of the texts, motivation, or interest in the texts (p. xiii). This process is said to be less focused in the literature although there are concerns and studies about emergent and following years of reading, there is a limited number of studies in adults' reading. Reading comprehension does not end to develop after one has learned to read or started to read complex texts. Rather, reading must be seen as a lifespan development (Alexander, 2005; p.4). One benefit of a lifespan developmental perspective on reading is that it can help to detect the reasons why students' performance on reading decreases while they progress through schools. Although students have the basic linguistic abilities during the early years of reading, they can face difficulties in the following years (Alvermann, 2001: p. 12). This situation can also be observed in the Turkish reading comprehension and linguistics section in Higher Education Examination (known as YKS). In 2020, high school students' mean score was 14.28 while it was 14.67 in 2019. So, Alexander suggests that if more is understood about adolescents' and adults' continued development, better and richer sources and practices can be provided in reading for them. Therefore, educators should understand and follow the progress of students' reading competence during lifespan development. If they can understand the characteristics of the development, problems that students can face during this process, educators can reorient their instruction

context and materials to lessen the effects or end the problems (Pressley, 2001: p. 33).

2.1.1. Model of Domain Learning

"The Model of Domain Learning or MDL is a theoretical framework for the study of academic development in domains, which are subject-matter areas or fields of study" (Kulikowich & Hepfer, 2017: p. 1). It mainly focuses on the academic domains and reading and learning in these domains by looking at the cognitive and motivational factors, and it looks through the changes in these variables in three main stages: (1) acclimation, (2) competence, and (3) expertise. Figure 2 presents these stages in detail. Many studies have been conducted by using text-based tasks in MDL, and several features of lifelong reading development were drawn out. Figure 1 shows them in general. According to inferences from the cognitive studies, knowledge is a key in developing competence in order to what one sees needs to know what it means because people mostly learn from what they read (Alexander & Murphy, 1998: p. 436). Although students know how to read basically, reading proficiently and learning from the texts, becoming proficient in what has been learned, require vast reading background and developed interest towards various domains, subject interest and a great deal of strategic processing. In MDL, Alexander et al. (1991: p. 332) define two types of subject-matter knowledge: domain and topic knowledge.
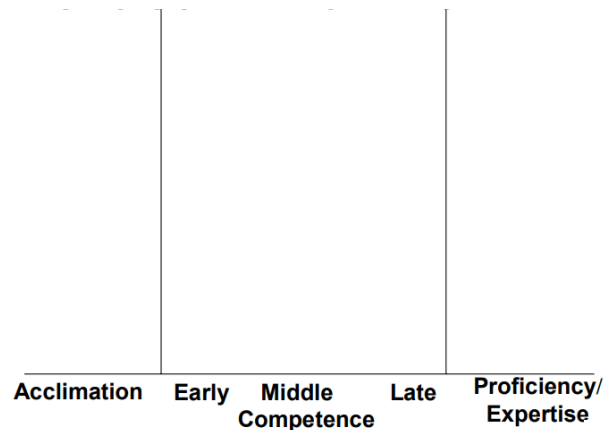
Figure 2 Stages of Reading Development (Alexander, 2005: p. 6)

Domain knowledge refers to one's knowledge about a subject in general while topic knowledge refers to the depth of students' knowledge on specific topics within the domain (Hattan & Dinsmore, 2019: p. 26). As students become more competent in reading, these two knowledge types increase and become more interconnected (Alexander, Jetton, & Kulikowich, 1995: p. 559). Besides, readers' strategic processing changes over time while they are progressing through expertise.

Strategies are also important aspects of developmental reading. Strategic processing or strategic knowledge refers to one's capability to monitor, control, or regulate learning and performance (Alexander, Graham & Harris, 1998: p. 130; Zimmerman, 1990: p. 8). There are two forms of strategies that affect reading development profoundly. These are surface-level and deep-processing strategies (Murphy & Alexander, 2002: p. 199; Alexander, 2005: p. 11). Figure 3 shows where the strategies can be observed more and their change during the process of development.
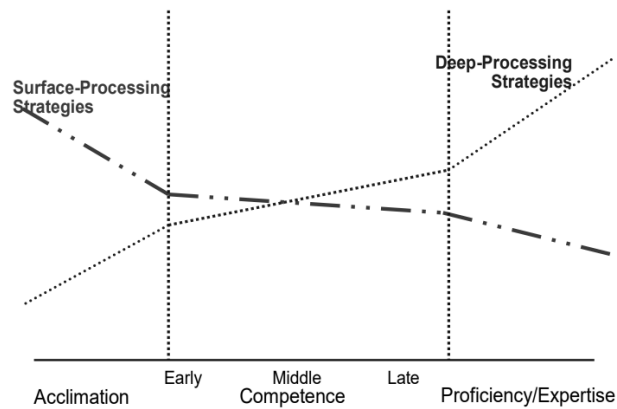
Figure 3 Changes in Strategy Processing (Alexander, 2005: p. 11)

Surface-level strategies refer to easily accessible strategies as adjusting reading speed and rereading. Deep-processing strategies indicate a personalisation or transformation of text by the reader through strategies such as arguing with the text, creating linkage with prior knowledge, and creating mental images (Cantrell & Carter, 2009: p. 199). In contrast to poor readers, good readers were shown to be engaged in strategic processing more (Alexander & Jetton, 2000: p. 292; Paris & Winograd, 1990: p. 15; Pressley, 2000: p. 545). Bråten and Anmarkrud (2013: p. 2) suggest that memorisation is a part of surface-level strategies whilst organisation, elaboration, and monitoring of reading are included in deep-level strategies (Entwistle & McCune, 2004: p. 331). Memorisation strategies are used to rehearse and repeat information to retain it, or sometimes highlighting words and sentences. Example organisation strategies can be summarising a sentence, a paragraph, or the whole text and outlining the important parts of the text to relate or group information given in the text.

According to Alexander (2005: p. 13), students in the acclimation stage usually use surface-level strategies and they transform their use of strategies into deep-processing in time. This is also because of the developing domain knowledge. That is to say, as students gain more domain knowledge, they become more competent in what they read. So, their dependence on prior knowledge is not only situation specific but relying on long-term domain-specific knowledge.

Anderson (1991: p. 460) also researched adult learners for what reading strategies they used during a standardized reading comprehension test and academic reading tasks and how students differed from each other when comprehending texts. He used a descriptive test of language skills-reading comprehension test and a textbook reading profile that included various reading texts from academic books at different lengths and difficulties. Students were grouped according to their level of proficiency and reading outcomes. Participants who reported using many unique strategies had also higher outcomes in reading comprehension but it was not statistically significant. Irrespective of reading outcomes, the research showed that students in low and high scoring groups were reported using similar kinds of strategies while reading and answering the comprehension questions (Anderson, 1991; p. 468). So, it was concluded in the text that knowing various strategies did not mean that they were used successfully. It may be said that being a good strategic user may require using the strategies appropriately and successfully, too.

Another variable that affects the development of reading is interest. Hidi and Renninger (2006: p. 112) defined the interest as a "psychological state of engaging or the predisposition to reengage with particular content". There are two main types of interest in the literature: situational interest and individual interest (Krapp, Hidi & Renninger, 1991: p. 5) Situational interest is defined as the emotional state that arises due to the specific text features whereas individual interest is the state of feeling toward a topic or activity that is more enduring and evolves in time (Schiefele, 1996: p.142; Krapp, 1999: p. 27). Topic interest derives from the individual interest in the text domain or subject-area (Ainley, Hidi & Berndoff, 1999, cited in List, Stephens & Alexander, 2019: p. 309), and text-based interest arises because of the text features (Schiefele, 1999: p. 263).

In early research, Alexander and Murphy (1998: p. 435) searched these three main variables, knowledge, interest and strategic processing, with the aim of profiling learners in learning. They also tried to see how profiles could change because of the course instruction. The participants were 329 undergraduate students

who were taking an introductory educational psychology course. They took a domain-knowledge test, an interest measure, and two strategy measures that included a strategy use inventory and a recall task. Hierarchical cluster analysis yielded three groups of learners before the course started. These were learning-oriented, strong knowledge and low-profile groups. The learning-oriented cluster reported having a moderate level of domain knowledge and the participants in this cluster had a high level of domain-specific interest. Strong-knowledge cluster participants started the course with more knowledge and these students were depending on their existing knowledge (Alexander & Murphy, 1998: p. 441). They showed the lowest interest in educational psychology. The last cluster was the low-profile cluster. This group reported moderate interest in the domain of educational psychology and this group's participants presented the lowest knowledge in the domain. After students took approximately 15 weeks of explicit instruction in the domain, in addition to the practice of various learning and studying strategies, all measures were put into hierarchical cluster analysis. In the post-test stage, four clusters emerged: (1) learning-oriented, (2) strong-knowledge, (3) effortful processors, and (4) non-strategic reader. Many students shifted into different groups in the post-test. This change suggested in the changes of interest throughout the course and knowledge they acquired. So, as an example, some students from low-profile cluster moved to the learning-oriented or effortful cluster. Strong knowledge cluster was stable in number and the participant names (Alexander & Murphy, 1998: p. 443)

2.1.2. Reader Profiles Framework

Alexander (2005: p. 16) framed six reader profiles with the light of previous studies (Alexander, 1997: p. 212; Alexander, Jetton, & Kulikowich, 1995: p. 559; Alexander & Murphy, 1998: p. 441). Highly competent readers have sufficient domain knowledge. Fox & Parkinson (2017: p. 92) and Goldman et al. (2016: p.9) state that when competent readers face complex or unfamiliar texts, they can use surface and deep-level strategies to comprehend the text. They can also regulate their reading and benefit from scaffolding if provided (Dinsmore, Hattan, & List, 2017: p. 40; Hacker, 1998: p. 165). They are interested in reading. Seriously Challenged

Readers have difficulty in reading due to several reasons ranging from language-processing difficulties to limited background knowledge to negative motivational conditions (Hattan & Dinsmore, 2019: p. 27). Effortful Processors use a lot of strategies to accomplish in reading. This strategy use helps them become successful readers thanks to their persistence with reading. Knowledge-reliant readers rely on their existing knowledge. Non-strategic processors, on the other hand, have a limited understanding of task demands and they usually use very few strategies to comprehend the texts. That's why they fail to comprehend and be successful at task demands. Examples can be seen in the following studies. Resistant readers lack the desire or will to attain their reading potential. A seventh profile was hypothesized by Fox, Dinsmore, Maggioni and Alexander (2009, cited in Dinsmore et al., 2019: p. 472). Interest-reliant readers' engagement with the text depends on the topic or situational interest.

Hattan and Alexander (2018: p. 8) investigated competent undergraduate readers whether they could benefit from scaffolding when they read complex and unfamiliar texts. The results showed that students' performance on unfamiliar texts was significantly affected by activating prior knowledge on higher-level questions related to texts such as inferring and evaluating questions. However, students did not benefit from scaffolding knowledge activation on multiple-choice questions.

Fox, Maggioni, and Riconscente (2005, cited in Fox and Parkinson: 2017: p. 94) studied with six participants; domain experts in reading and history, who were highly gifted young learners and undergraduate students. They read college-level texts in history and reading and thought aloud. Then, they were assessed on high and low-level reading outcomes. The results showed that students obtained higher scores in the texts they were experts. Fox, Dinsmore, Maggioni, and Alexander's (2008) study with undergraduate level students revealed that they could perform better when texts were familiar. Dinsmore, Fox, Parkinson, and Bilgili (2019: p. 470) studied with 3rd and 5th grade students to find out reader profiles using hierarchical cluster analysis and a reader profile rubric. The results showed that the number and variety

of strategies were low because students were on the trajectory of acclimation to competence. There were six clusters in which non-resistant readers were excluded for third grade and seven clusters for fifth-grade students. The reading outcomes were significantly related to the reader profiles for the students. Hattan and Dinsmore (2019: p. 36), using the same participants displayed that effortful processors had a higher mean score in reading outcome compared to interest-reliant readers.

In a similar vein, Rogiers, Merchie, and Van Keer (2019: p. 388) grouped learners by using a reading ability test, a prior knowledge test, a learning task, a task-specific self-report inventory, and a cued recall test. Clusters revealed integrated strategy users, information organizers, limited strategy users, and mental learners. These groups resemble Alexander's (2005: p. 16) readers' framework in terms of low-high levels of strategy processing in reading. Similarly, Alexander et al. (1994: p. 465), and passive and superficial groups in Renkl (1997: p. 26) and poor learners in Recker and Pirolli's (1995: p. 14) study could not succeed in comprehension tasks and they showed low-level of knowledge.

In conclusion, there have been no studies dealing with reader profiles in any second or foreign language learning or teaching setting. All studies have focused on the first language. Therefore, it's going to be the first in terms of reader profiles in the English as a Foreign Language (EFL) setting as well.

2.2. THINK-ALOUD PROTOCOLS

In most studies to determine the reader profiles of the learners, hierarchical cluster analysis was run (Dinsmore et al., 2019: p. 482; Hattan & Dinsmore, 2019: p. 33; Rogiers et al, 2019: p. 389). Variables that were put into this analysis generally obtained by think-aloud protocols, or sometimes it is called verbal reports.

Verbal reporting, which is also called the introspective method as an umbrella term, can be used to comprehend unobservable mental processes such as thoughts,

feelings and motives (Dörnyei, 2007: p. 147). This method has been used in various fields from psychology to maths. Think-aloud protocol is one of the methods of verbal reporting. The think-aloud is basically about thinking about thinking while engaged in an activity. As the participant is wanted to verbalise what he is thinking, a specific task is given to be carried, and the participant is expected to report what he is doing and thinking about the given specific problem at the concurrent moment (Gass,2013: p.532). It is not expected to explain or theorise but thoughts are the primary source of this technique. Mackey and Gass (2005: p. 77) also state that "the major advantage to the use of verbal reports is that one can often gain access to processes that are unavailable by other means. In addition, these reports can help the researcher understand the reasoning processes underlying higher-level cognitive abilities (Afflerbach & Johnston, 1984: p. 308). It also sheds light on the concerning factors of reading processes. However, some drawbacks are caused by the use of verbal reports, especially related to validity and reliability. Cohen (1998, cited in Mackey & Gass, 2005: p. 77) states that much of the concern about the introspective reports is that it does not reflect a true image of cognitive processing because certain conscious cognitive processes are too complex to be observed with verbal reports. On the other hand, Afflerbach and Johnston (1984: p. 308) claimed that unlike many other methods of examining cognitive processes, verbal reports depend on several sets of assumptions, which in the end may help a researcher gather converging data sources and there is a growing interest and studies that focus on the use of this approach (Pressley & Afflerbach, 1995), as in the studies that aim to profile the readers.

2.3. BASIS OF DYNAMIC ASSESSMENT

The basis of Dynamic Assessment (DA) originated from Vygotsky's Sociocultural Theory of Mind (SCT). It tackles with what one can achieve when the person cooperates with others who can support the potential of him instead of interacting with the tasks by themselves (Vygotsky, 1986: p. 85). This support is provided with the mediated interaction. As it was stated by Poehner (2008: p. 26), deriving from Vygotsky's theories that cognitive abilities do not come out alone but

the interaction in the world results in such abilities and these interactions are always mediated. Mediation can be mainly provided by physical tools for one's environment and with the help of social interactions and the use of cultural objects for cognition (Poehner, 2008: p. 26). Cognitive development takes several steps and evolves in time starting from object regulation (mediation with the help of outer variable) to self-regulation (mediating one's cognition by oneself) (Vygotsky, 1997: p. 350). It means that one needs to internalize this mediation process in time and as a result, mediation and the zone of proximal development (ZPD), which are the constituents of SCT, have an essential role in this course of development.

2.3.1. Zone of Proximal Development

The idea of the Zone of Proximal Development (ZPD) has emerged from the concerns about IQ and IQ testing. During Vygotsky's time, before the 1950s, scholars believed that effective teaching could be attained when students indicated a medium or a high score of IQ, which was observed by the performance of learners alone within a specific problem-solving task to assess their intelligence (Fani & Ghaemi, 2011: p. 1550). However, Vygotsky contradicted this belief and claimed with his research on IQ tests with children that two children could get similar or same results. Nevertheless, when one of the children is given assistance at a complex task, he may perform better compared to the other child who is also guided for the same task. This difference between the actual and potential IQ score led Vygotsky (1978: p. 86) to the notion of Zone of Proximal Development.

This concept is defined as 'the distance between the actual developmental level as determined by independent problem-solving and the level of potential development as determined through adult guidance or in collaboration with more capable peers' by Vygotsky in Mind and Society (1978: p. 86). It focuses on what a child can achieve alone and what a child can perform with guidance (Lantolf & Appel, 1994: p. 10).

In order to understand this notion, three levels of development should be considered. One of them is the 'actual developmental level', which is what has been developed already. The second one is the potential development level that refers to the capacity of one's to develop thanks to the assistance of an adult (an expert) or through collaboration with peers (novices) (Ellis, 2008: p. 532). The third level is where the presence of assistance does not guarantee the succeeding in a given task. ZPD takes place in the second level where the learner has the potential to develop. Vygotsky likens this development of one to 'bud' instead of a matured 'fruit' (Ellis, 2008: p. 532). The social interaction because of the assistance helps learners to become 'flowers' from 'buds'. So, they become autonomous in learning the targeted skills. He also defines the assistance referring to it as a mediation which is the only way of developing cognitive abilities. Wood, Bruner and Ross (1976: p. 90) also refer to assistance as scaffolding. In the end, this process of maturing creates a steady zone for learners to progress.

Vygotsky's notion of ZPD has influenced scholars in various research areas such as the learning disabilities of underprivileged learners. For instance, Luria (1961: p. 6) explained how three different children could obtain the same scores on an IQ test and how they differed or were the same on multiple tasks when given assistance. One of the children performed better with the assistance. When they were asked to perform the tasks again, they showed similar results just as before the assisted task performance. Therefore, one child in this research showed his potential for development. In the end, he concluded that students can display similar results in static ways of assessment, but they can differ in 'a dynamic approach' (Luria, 1961: p.7). Milton Budoff along with his colleagues (e.g., Budoff, 1968, cited in Poehner, 2008: p. 17; Budoff and Friedman, 1964: p. 434) studied with groups of children who were living in poor conditions. They tried to prepare learners for different types of tasks in standardized intelligence tests (Poehner, 2008: p. 38). These were the beginning of the Dynamic Assessment research. Kozulin (1998: p. 69), on the other hand, claimed that ZPD could be used as more of a qualitative perspective to understand and develop cognitive abilities. In conclusion, it can be said that the term

dynamic used by Luria has affected much of the following research in Dynamic Assessment.

2.3.2. Mediation

Kozulin (2003: p. 15) explains how mediation was theorized with a start from multiculturalism. Thanks to Vygotsky's environment in his lifetime, which was rich due to the social and ethnic groups in the educational context, he had a chance to look at the issues related to literacy in addition to ethnic and cultural diversity in a different way compared to his contemporaries in the Western culture. Vygotsky interpreted learning as a social instead of an individual phenomenon. The significant element in this notion was the psychological tools. Kozulin (2003: p. 15) defines it as "those symbolic artifacts-signs, symbols, texts, formulae, graphic organizers that when internalized help individuals master their own natural psychological functions of perception, memory, attention, and so on." So, alphabets, written texts, graphics, and any elements of literacy are the most significant psychological tools, which vary from culture to culture. And with the help of these various tools in the multicultural environment, comprehension of the texts can be achieved best, resulting in reaching beyond the meaning of the everyday word level. These are symbolic tools.

On the other hand, some psychological tools can be cognitive compared to symbolic tools stated above. These cognitive tools can be metacognitive strategies and skills to overcome difficulties in challenging situations such as comprehending and processing the knowledge in subject areas. So, "forms of mediation are intentionally introduced as individuals encounter difficulties completing tasks (Vygotsky, 1978, cited in Poehner et.al., 2015: p. 3).

All in all, all these tools are interpreted as the way of reaching the highest mental functions in one's cultural and social environment (Kozulin, 2003: p. 130). So, these tools are the means of mediation. In the beginning, children use the objects

and the language as the symbolic tools to be mediated. This step is called the "object regulation". In time, "object regulation" takes place in the mediation process, in which a person influences the mediation. The final stage where a person can mediate his or her cognition by themselves is called "self-regulation" (Vygotsky, 1997: p. 350). It is also named as the internalization of the mediation process.

2.3.3. Dynamic Assessment

Dynamic assessment (DA) is a well-known alternative to static ways of assessment. Luria (1961, cited in Poehner and Lantolf, 2005: p. 234) that static ways of assessment can mislead people to assume one's capacity just by considering the performance on a single test. On the other hand, it is said to be important to consider one's performance on different conditions especially when the person benefits from assistance and the transformation of this assistance to other tasks by dynamic ways of assessment. Feuerstein reasons how one can benefit from mediation during the interaction, which he calls the Mediated Learning Experience as a dynamic way of assessment and how it can be implemented into instruction as well. Lidz and Gindis (2003: p. 100) define DA as "an approach to understanding individual differences and their implications for instruction that embeds intervention within assessment procedure". Sternberg and Grigorenko (2002: p. 137) also explain it as an approach that has its root in Vygotsky's notion of ZPD that looks into developing potentials of individuals. All in all, DA aims to look for the developing abilities of individuals and how they can be developed with the mediation given during the assessment. When the problem arises, the mediator asks questions, gives hints and prompts as ways of mediation, and tries to find out how an individual can perform with the help of mediation. This process can help the mediator to detect the aspects of learners in need of improvement. This type of assessment differs from the static ways of assessment (Sternberg & Grigorenko, 2002: p. 8) in terms of scoring and scaffolding the learners during the assessment. The aim of providing mediation is to determine the needs and potential of the learners for their future learning. Poehner (2008: p. 42) highlights the distinctive features of DA as one's developed and developing skills can be observed through DA. However, non-dynamic assessment (NDA) only draws

attention to already developed skills. DA has been applied in many studies in such various domains as psychology, maths, and language and mediation is also used in various areas.

2.3.4. Types of Dynamic Assessment

There are mainly two types of dynamic assessment derived from Vygotsky's notion of ZPD; one of them is interventionist DA that uses previously designed prompts, and the other is interactionist DA that uses spontaneous prompts which are formed on the course of interaction with the mediator.

2.3.5. Interventionist Dynamic Assessment

Interventionist DA uses standardized administration procedures and forms of assistance in order to produce easily quantifiable results that can be used to make comparisons between and within groups and can be contrasted with other measures and used to make predictions about performance on future tests. (Poehner, 2008: p. 18)

In this approach, learners get standardized mediation. Mediation is not shaped according to the needs of the learners which arise during the assessment. It follows a predefined approach to mediation (Poehner, 2008: p. 44). That is to say, mediation as prompts, hints, and questions follow a way of implicit to explicit. By doing this, it is aimed to obtain valid and reliable results as in the non-dynamic assessment.

The first DA researcher in the Western culture was Milton Budoff due to his research with students living under poor conditions and their performance on traditional intelligence assessments. He and his colleagues stated that lack of inadequate education, preschool education (Hamers & Resing, 1993: p. 35) led

children perform poorly in the school, which later resulted in poor performance on the tests. So, these results were attributed to low intelligence and even mental retardation. However, Budoff and his associates suggested that this low performance could be the result of poor educational opportunities and socioeconomic backgrounds of the children instead of cognitive deficiencies (Poehner, 2008: p. 45). Thus, Budoff asserted that if the children were trained for the intelligence tests, they could increase their test results thanks to the training, concluding it as an implication of the children's learning potential. In line with this purpose, he used instruments such as Kohs Learning Potential Task and Raven Learning Potential Test. He followed a standardized process in order to train learners how to solve problems, namely problem-solving strategies. This process is similar to the treatment phase in experimental research. Then, students could be retested how they could perform after the treatment. This process was the establishment of the sandwich format of DA just as the research design in experimental psychology (Poehner, 2008: p. 45). Budoff, with this research, reasoned that cognitive abilities were open to change but cognitive development was not the purpose of his studies.

Another interventionist model of dynamic assessment is Lerntest or Leipzig Learning Test (LLT) that was developed by Guthke and his associates (Guthke, 1982). This approach derived from Budoff's model of DA, though it combined assessment with the instruction rather than seeing the assessment as one way. Instead of testing the intelligence, he tried to apply DA procedures to different subjects in language. If the learners answer questions wrong, they take standardized hints and prompts that start from the most general and finish with the most explicit. What is distinctive of this test is that it gives a report on how many prompts learners have needed during the test, the amount of time spent for questions, what type of errors are made, and the responsiveness of learners towards the assistance. He named the learners as high scorers, gainers, and nongainers according to the respond students give to mediation.

Carlson and Wiedl (1992: p. 153) came up with the Testing-the-Limits approach alternative to LLT. It was similar in using standardized hints but different in using verbalization of the reasons underlying the correct and incorrect answers. Guthke uses verbalization to prevent learners' guessing the correct answer; Carlson and Wiedl use it to understand learners fully in terms of the reasons behind the correct and incorrect answers. According to their views, it is better to know how they answer rather than knowing the number of correct answers. Besides, one reason why they provide hints is to mediate learners' planning process (Poehner, 2008: p. 49) because it has a profound effect on the performance of learners.

The last approach that is called as the Graduated Prompt was developed by Brown and her colleagues (Brown & Ferrera, 1985: p. 273). They have applied DA procedures on reading and maths on normal and special children. As in previous approaches, Brown's model of DA uses standardized means of mediation during the test in case of a problem or after each item. The distinctive feature of this approach is the transfer tasks. After students have mastered problem-solving skills in specific tasks, they take new problems called transfer tasks in which they can show their mastered skills. Campione and Brown (1984: p. 81) also state that the transfer is an aspect of learning potential and along with task-specific scaffolding, metacognitive hints need to be stressed. This transfer process helps examiners to predict the pace of the learners in learning new skills and they can find what learners need specifically (Lantolf & Poehner, 2007: p. 273).

2.3.6. Interactionist Dynamic Assessment

The interactionist approach to dynamic assessment focuses on assistance developed on the course of the assessment process by the interaction between the examiner and the learner. Mediation is not standardized as in the interventionist DA; rather it is shaped according to the emergent needs of the learners during the assessment. It develops with the negation with individuals, "which means that it is continually adjusted according to the learner's responsivity" (Lantolf, 2009: p. 360).

Elkonin (1998: p. 300) uses the train metaphor to explain it as the" new tracks leading toward a station that is potentially always relocating".

Structural Cognitive Modifiability (SCM) has been theorized by Feuerstein with his studies on children who were seen as less intelligent or labelled as mentally retarded. This theory has its roots in the belief that human cognitive abilities can be developed by interventions (Poehner, 2008: p. 53). People are not closed to the development of their cognitive abilities because of genetics but they are open to the improvement of their abilities with the help of appropriate forms of interaction and instruction (Feuerstein et al., 1985: p. 56). So, these abilities are flexible and modifiable. Feuerstein also sees the individuals as not retarded but he prefers using the term retarded performers (Feuerstein et al., 1985: p. 75). Therefore, the performance of individuals needs modification. Kozulin asserted that Vygotsky and Feuerstein understood mediation in a similar way. According to SCM theory, individuals interact with their environment by an adult or more competent peer, who "selects, changes, amplifies, and interprets objects and processes to the child" (Kozulin, 1998; p. 60). This interaction is called the Mediated Learning Experience (MLE).

Feuerstein et al. (2002: p. 75) indicate that in this mediated learning experience there is a "reciprocal, emotional, affective and motivational aspect of the interaction that melds the activity into a meaningful and structural whole, leading to self-awareness, structural change, and cognitive development". MLE has eleven components, and three of them are the keys in MLE: (1) intentionality of the assessor and reciprocity, referring to how learners respond to mediation, (2) transcendence, referring to how one can transfer new skills into novel tasks (Antón, 2012: p. 108), and (3) mediation of meaning, referring to one's making sense of the mediation provided by the mediator (Lidz, 1991: p. 77). Learners perform various tasks, which become more complex gradually. Mediator follows the development of the learners and performance in new tasks and the interaction happens between the learner and mediator during which the mediator decides what degree of assistance is needed

(Antón, 2012: p. 108). During this process, the mediator/assessor can guide learners in various ways such as planning, regulating and making connections. Another important thing is the contingent responsivity (Lidz, 1991: p. 85) of the learners. It means the ability of the mediator to react on time and give appropriate feedback to learners' behaviours (Antón, 2012: p. 108). That is why detailed feedback and verbalization are key elements in the mediated learning experience.

2.3.7. Computerized Dynamic Assessment (C-DA)

In recent years, there have been a number of studies that integrate principles of SCT into computerized dynamic assessment (Darhower, 2014; p. 221; Lee, 2008: p.53), especially in language studies (Zhang & Lu, 2019: p. 92; Poehner, Zhang & Lu, 2015: p. 337; Lantolf & Poehner, 2013: p. 141). Most of the studies reviewed here have used Aljaafreh and Lantolf's (1994: p. 471) regulatory scale that presented feedbacks on the basis of learners' ZPD. These feedbacks were from implicit to explicit in turn to detect learners' low and high zone of proximal development.

Lantolf and Poehner's study (2013: p. 147) results on the project focusing on a web-based computerized dynamic assessment of language proficiency for five languages showed that there was a significant difference between learners' actual scores (i.e., unmediated performance) and mediated scores (i.e., mediated performance with the help of hints and prompts). It indicated that when students were provided with mediation, their performance on language tests differed significantly. In this study, they also used transfer items that are "parallel to other test items in terms of response options, prompts, and focus on a particular construct relevant to comprehension. The sole difference between transfer and non-transfer items concerned their level of difficulty" (Poehner & Lantolf, 2013: p. 332). They also searched for evidence of learning through learners' LPS in addition to transfer scores.

Similarly, Poehner et al. (2015: p. 337) presented their C-DA study of Chinese listening and reading. Two phases of piloting, dynamic versus non-dynamic, resulted in a significant difference between the mean of mediated and actual scores. They also showed that learners who had similar actual, mediated and LPS scores could not be regarded as identical. So, it helped educators to assess what areas were needed to be developed for the students (Kamrood, Davoudi, Ghaniabadi, & Amirian, 2019: p. 21).

2.3.8. Score procedures and Categories of Learners

Budoff (1987: p. 173) developed the learning potential measure to categorize learners into three: high scorers, gainers, and non-gainers. In order to find these categories, he followed a three-step procedure in which the mediation phase was sandwiched between non-dynamic pre- and post-test administrations of standardized measures of cognitive abilities (Poehner et al., 2015: p. 337). According to Budoff, high-scorers are the ones who obtain high scores without mediation in the pre-test. Gainers are the ones whose scores increase after the instruction or mediation phase. Lastly, non-gainers are the ones who do not show any development although they are provided with hints and prompts.

The graduated prompt approach to DA (Brown & Ferrara, 1985: p. 273) did not regard the mediation separately. Instead, the mediation was integrated into the test and it was from implicit to explicit in its nature. So, this research also followed providing mediation during the test and while scoring the learners' development, learning potential score was used. Kozulin and Garb (2002: p. 118) proposed Learning Potential Score (LPS) to present the progress individual learners made under conditions of mediation. Interpretation of LPS is context-dependent. So, it should be considered between the groups in specific contexts. The formula is as follows:

$$LPS = (2* \text{Mediated Score} - \text{Actual Score}) / \text{Maximum Score}$$

2.3.9. Dynamic Assessment and Its Relationship with Training and Assessment of English Teachers

There have a number of studies that focus on using DA procedures in various aspects of language, and the teachers' views and appropriation of DA in the classroom. However, there can be found very few studies focusing especially on DA procedures in teacher education, assessing the pedagogical or content-related knowledge of English language teachers. That is why this study will be the first to assess language teachers' knowledge on teaching by using the dynamic assessment procedure following an interventionist approach in order not to reach an exact end but to gain insights about what subjects are needed to be developed in further and developed for the new teachers. Studies in this subject usually used dialogic mediation in one-to-one sessions to help student-teachers to develop their teaching procedure.

Golombek (2011: p. 121) researched on assessing maturing abilities of ESL student-teachers by using interactionist DA procedures in Dialogic Video Protocols (DVP). She stresses in her study that student teachers should go beyond "apprenticeship of observation" (Lortie, 1975, cited in Golombek: p. 121) on their ways of thinking. An expert teacher can handle problems by experiencing different teaching situations and reflecting on them in other teaching contexts. Tsui (2003) states that beginning teachers can utilize the concept of an expert teacher's "ways of thinking and ways of learning "(p. 281) and it can help new teachers to expertise in teaching. In order to achieve this expertise, student-teachers need to experiment with a real teaching environment where the teacher's class can be videotaped and analysed in order through a DA procedure to prevent teachers from falsified examination of themselves in practice alone. In her research, Golombek assigned her students to practice teaching one aspect of connected speech for listening purposes to their class friends as a course requirement. After they practised, they taught that lesson to international teaching assistants from China and Korea in ESL program in their department. Student-teachers in this course taught in pairs except for one

teacher, whom she named Abra. Abra's teaching was on linking in the speech where and how it happened. Golombek videotaped and recorded a dialogic video protocol for the DA procedures to evaluate the teaching process. They discussed together what problems they could observe. These problems were seen to create a ZPD for student-teachers. One of the problems that Abra faced was about directing students into participation. They analysed Abra's teaching session and the teacher-educator, here that was Golombek, proposed to categorize her mediation strategies. For instance, she used direct questioning to elicit an alternative *instructional response* (italics in original) for students to participate in the conversation. On another occasion, she used voicing an expert's response, referring to directing student-teacher to one problem area and gave her expert's reasoning behind this response (Golombek, 2011: p. 132).

In this study, Golombek used DA procedures in DVP and the results showed that this procedure helped a mediator to determine in what ways a teacher-learner was capable of and not developed in teaching during the DA procedure. Golombek gave her expert instructional responses and reasoned towards the problems the student-teacher faced and she had the chance to look at her teaching from a different angle, which also affected the teacher-learner's conceptual thinking. She also emphasized the importance of the DA procedure in the following way:

Through the teacher-learner and the mediator's stopping of the video when either felt an aspect of teaching to be problematic, the teacher-learner externalized her understanding of the teaching context, revealing invaluable information about her abilities to self-evaluate when isolated from the cognitive and affective demands of the actual teaching situation. The DA procedures used by the teacher educator in the DVP revealed a great deal more about the teacher-learner's abilities as a teacher than her performance alone in the classroom because the mediation focused not only on explanations of what was problematic but why, and what alternative instructional responses might be and the intentions behind them (Golombek, 2011: p. 133).

Another study conducted by Kaivanpanah et al. (2017: p. 89) focused on how strategic mediation can help novice EFL teachers' ZPTD and how they could

develop themselves in teaching grammar through a teacher-educator's support with strategic mediation. Zone of Proximal Teacher Development, (ZPTD) is a key term in this study that was coined by Warford (2011: p. 253), referring to " the distance between what teaching candidates can do on their own without assistance and a proximal level they might attain through strategically mediated support from more capable others". Intersubjectivity is significant in this notion, which means a shared understanding of the situation the learner faces (Wertsch, 1985: p.159). This study consisted of four female English teachers who had 1 to 2 years of teaching experience. The teacher educator videotaped the lessons of the teachers and he discussed the problems in novice teachers' practice and he observed the microgenetic development (Wertsch, 1985), referring to changes in a small period of time, due to strategic mediation throughout the feedback sessions. As in Golombek's study, these researchers followed the same way of mediation, from the most implicit way of mediation to the most explicit mediation whenever the educator observed that the teacher needed it while they were interacting. As the assistance at the beginning became fewer, novice teachers moved from the interpersonal to the intrapersonal in mediation (Vygotsky, 1978: p. 131) by discussing the reasons behind their actions instead of seeking justification for the reasons of their actions during teaching. The results showed that the inexperienced teachers were not sufficient in activating students' prior knowledge, raising awareness towards the functions of grammar rules, and in knowing the functions of grammar rules. However, the interaction between the educator and the novice teachers helped them to raise awareness towards their problems and assisted them to evaluate possible solutions and reflect on the reasons behind the problems. This small-scale study showed how teachers could develop and the studies related to these mediated sessions in the long term can be more beneficial for future teachers, too.

<center>**CHAPTER III**</center>

3. METHODOLOGY

3.1. RESEARCH QUESTIONS

The main goal of this research was to assess English language teachers' knowledge by following interventionist procedure in computerized dynamic assessment and diagnose prospective teachers' potential development zones for future teaching. Therefore, following questions were formed to guide the researcher during the study.

1. How do pre-service English language teachers perform at a field test when they are given mediations based on an interventionist Computerized Dynamic Assessment (C-DA) process?

2. Does academic success correlate significantly with the test scores for a field test for pre-service English language teachers?

3. How do pre-service English language teachers differ when they are given the mediations according to their reader profiles groups?

4. How do content-knowledge scores in the praxis test differ among research groups and within the reader profiles group, namely experimental group 2?

3.2. PARTICIPANTS

Convenience sampling was preferred for this study because the participants were easily available to the researcher in her studying university (Creswell & Creswell, 2018: p. 219). There were 81 pre-service English teachers in total who participated in this study voluntarily. Table 1 gives the descriptive statistics related to participants. They were grouped into one control group and two experimental groups. The control group included 23 students (M=4, F= 19) and they were senior students. The reason why they were chosen for the control group was that they would graduate at the end of the term. So, they already had a good deal of necessary knowledge to take the teacher field knowledge test (OABT) held in Turkey. Their mean score of GPA was 3.14. The main reason to have a control group was to observe and compare the group with others (Mackey & Gass, 2005: p. 148) on how mediation during the computerized assessment of the student-teachers' knowledge affected. The other two groups were third-grade students. In the second group, there were 28 students (M= 32%, F= 68%) while the last group consisted of 30 students, female participants dominating with 77 % percentage. Mean scores of GPA for these groups were 3.15 and 3.28 respectively. The last group's academic success was higher. All courses that are taken by the students can be seen in Appendix 1. It can be seen that the first year of education encompasses fundamentals of education and focuses on developing pre-service teachers' language skills. They begin to study on field-specific subjects in the second year. Thus, students' grades might be affected by the language skills courses greatly. All students' age ranged from 21 to 23. Participants were not informed of what groups they were in.

Table 1 Descriptive Statistics for Participants

Groups	N	Male	Female	Grade	Mean GPA (Grand point average)
Control	23	4	19	4	3.14
Experimental 1	28	9	19	3	3.15
Experimental 2	30	7	23	3	3.28

Participants to check the reliability and validity of the compiled test of praxis test consisted of 38 teachers, who had one to three years of teaching experience. Teachers with fewer years of teaching were chosen because they could still remember the subjects they learned in the university. Teachers with more years of teaching experience could have difficulty in answering the questions, thus affecting the results in an advert manner. These people were reached by the researcher's contacts and some of them were supervisor's M.A program students.

3.3. MATERIALS AND INSTRUMENTS

3.3.1. Reading Texts for Think-Aloud Sessions

Two sample reading texts were chosen for the verbal reporting part from International English Language Testing System (IELTS) (See Appendix 4). They were chosen from IELTS because participants were university-level students and they had reached up to a good level of English. One of the texts was about investigating a child's acquisition of the first language and the other was about a mechanical building that lifted up boats through two canals, its history and the working process. The first text was chosen as the participants were expected to be familiar with the topics. Thus, participants might show their prior knowledge from the university courses, and it was more observable how they might use their prior knowledge in tasks. The second text was decided by the researcher that almost none of the students might have prior knowledge or prior interest in the topic. Therefore, the readers were expected to use their reading strategies more carefully and obviously in the second text. These texts can be found in the appendices. Table 2 shows the characteristics of the two texts in terms of what grade they belonged to, the ease of reading the texts, simplicity and other important variables, too. These pieces of information were obtained through Coh-metrix (McNamara et al., 2014: p. 60) database. In the website, the aim of this database is explained as a system computing cohesion and coherence metrics for written and spoken texts http://cohmetrix.com/. It can be seen that these two reading passages were suitable

for students who were 10 grades and above, the first text was especially academic. They were both difficult to read.

Table 2 Length and Difficulty Data for Each Text

Title	Flesch-Kincaid Grade Level	Flesch Reading Ease Score	Narrativity (z score)	Syntactic Simplicity (z score)	Word Concreteness (z score)	Referential Cohesion (z score)	Deep Cohesion (z score)
Investigating Children's Language	13.6	45.9 (difficult to read)	-.86	.43	-.83	-1.76	.88
The Falkirk Wheel	9.84	58.15 (fairly difficult to read)	-1.09	.02	.84	-.89	.31

3.3.2. Coding Scheme for the Verbal Analysis

Think-aloud protocols were coded according to the level of strategies and evaluative strategies. Table 3 showed the descriptions of behaviours and examples from a reader.

Table 3 Coding Scheme for the Verbal Protocol Analysis (Dinsmore et al., 2019)

Code	Description of Behaviour	Example of Reader's Comments as Evidence of Strategy Use
Surface-Level Strategic Behaviour		
Reading aloud	Reading the text out loud	I'm reading aloud this part again. I need to understand it.

Table 3 continued

Rereading	Reading the part of the text again	I'm reading this part again because there are so many numbers.
Adjusting reading rate	When rereading, the reader speeds up or slows down	I'm reading slowly- slower now.
Skimming (reading aloud while skipping portions)	Reading aloud while skipping portions of the text	Not present for this participant
Guessing the meaning of a word in context.	Using context clues to figure out what a word means	Dismantle… It may mean height or something else (thinking again). I don't know.
Underlining	Underlining or making other marks in the text	I highlight these dates. They might be important while answering the questions.
Using a text feature (looking at a picture or a table to help understand the text)	Looking at a picture or a table to help understand the text	While I'm reading, I'm looking at the picture at the same time to see what parts can be in the picture and where they are located.
Rehearsing (Repeating information to retain it in memory)	Repeating information to retain it in memory	Various parts of the Falkirk Wheel were all constructed and assembled like one giant toy… (reads the sentence aloud for a few times)
Restate local (restating or paraphrasing at the word, phrase, or sentence level)	Restating or paraphrasing at the word, phrase, or sentence level	The Wheel was moved to somewhere far away from Falkirk.
Restate global (restating or paraphrasing at the paragraph or passage level)	Restating or paraphrasing at the paragraph or passage level	Okay, so they made the wheel at a place, and they moved it somewhere else and 35 lorries were used to carry them.
Deep Level Strategic Behaviour		
Predicting	Saying what the reader thinks is going to happen next	I guess there will be the history of the production of this wheel.
Questioning	Interrogating the text or author's argument with a question	What's the relation between these two canals? (points at Forth &Clyde and Union Canals)
Arguing with text	Disputing the text or author's argument	Why do they dismantle the parts and carry to Falkirk? They could

		have produced it in that place. It is nonsense!
Making connections (+ or -)	Connecting what is in the text to either background knowledge or prior experiences	This wheel reminds me the Suez Canal I guess there is also a process of uplifting the boats and big ships.
Interpreting / elaborating (+ or -)	Making statements that reason beyond information in the text or making statements that require additional information not explicitly in the text	Not present for this participant
Evaluative/ Monitoring Behaviours		
Evaluating comprehension (+ or -)	Monitoring own understanding of the text	I don't understand the words in this paragraph but I try to guess the meaning of them.
Evaluating agreement with text	Monitoring agreement with the text	Not present
Evaluating text quality	Monitoring the quality of the text	This paragraph was too complicated. I could only understand it when I looked at the picture.
Evaluating interest	Monitoring the amount of reader's interest in the text	The second paragraph is boring.
Evaluating importance of text	Monitoring how important part of the text is	
Evaluating task difficulty	Monitoring how difficult part of the text is	Too many information and numbers are presented here!
Monitoring task completion	Monitoring progress toward completion of the text	I continue with the other paragraph.
Other Codes		
Expression of empathy	Sympathy or feelings felt or imputed to others	
Expression of amusement	Thinking something is funny or amusing	What, rolling eggs? That's silly.
Expression of surprise	Expressing surprise at something in the text	(looks at the picture, with a surprised voice) It looks very big and complex!
No code	Not enough information to determine a code	Not present

3.3.3. Adapted ESOL Praxis Test

In the United States (US), to become a teacher, one must take several exams. Before someone enters a teaching program, they should take the Praxis Core Academic Skills for Educators tests by Educational Testing Service (ETS). This is a requirement in many states. It is to assess basic skills in math, reading and writing, which seems similar to YKS (Higher Education Examination). In order to obtain certification, one must take the Praxis Subject Assessments. The numbers of tests you take depend on the one's certification program and the states they want to work in. All the tests are delivered on a computer.

The English to Speakers of Other Languages (ESOL) praxis test aims to measure basic linguistic and pedagogical knowledge for teaching ESOL in elementary or secondary schools. The test number is 5362. As stated in study companion, the candidates taking the test come from a variety of backgrounds. The test consists of 120 multiple-choice questions. The reliability coefficient is reported to be .85. The validity of the test is assured by job analysis process that include surveys and meetings held with teachers in the practice (Swiggett & Robustelli, 2011: p. 6). There are six content areas for this test: (1) foundations of linguistics, (2) foundations of language learning, (3) planning and implementing instruction, (4) assessment and evaluation, (5) culture, and (6) professionalism and advocacy. The foundation of linguistics includes 22 (18 %) questions and it focuses on the underlying topics of linguistics in detail such as phonology, semantics, pragmatics, and sociolinguistics. Foundations of language learning part consist of 26 (22 %) questions that deal with issues related to affective factors in the language acquisition process, similarities and differences between first and second language acquisition, and literacy development of English language learners. Planning and implementing instruction content has 28 (23%) questions focusing on teaching methods, integration of four skills into instruction, and how to select, create or modify materials in accordance with learners' characteristics and needs. The assessment part includes 18 questions, focusing on different ways of assessment, issues related to reliability and validity of the tests, interpreting the assessment results and adapting the instruction

according to the interpretations. Culture questions deal with the relation between language and culture, effects of cultural variables on language acquisition, and differences between acculturation and assimilation. Lastly, professionalism and advocacy questions try to test learners' knowledge on state-specific issues on language learners' rights, how to advocate for language learners and their families, how to cooperate with other school personnel, and importance of the engagement in professional development. Questions that were used for dynamic assessment were compiled and adapted from three main source websites to study and get ready for the exam (ETS praxis study guide companion and GATESOL praxis study companion). There were 50 compiled questions in the adapted test; comprising six underlying sections: (1) foundation of linguistics, (2) foundation of language learning, (3) planning and implementing instruction, (4) assessment and evaluation, (5) culture, and (6) professionalism and advocacy. 50 questions were chosen because the number of questions in OABT was also 50. Questions were dispersed in accordance with the percentages of the sections in the original praxis test. In order to check its validity, the sample test from ETS's sample ESOL praxis test and questions randomly chosen from the compiled test were run for correlation analysis. 38 teachers, who had teaching experience 1-3 years, answered the tests within one week. This was made to meet the criterion validity. All variables were continuous. Then, according to the features of readers, mediations were designed for each reader profile. Examples can be seen in Appendix 4 for a normal DA procedure and in Appendix 5 for the knowledge-reliant readers. For instance, while giving mediation to knowledge-reliant readers, the second mediation included the sound of the words bed. The audio was added because Alexander (2005: p. 20) stated that it could be useful to add alternative media in-text based presentations. When a student answered the question without any mediation, he obtained a 3 point. Scoring went down gradually. When a student could not answer the question at all, she could have 0 points.

3.3.4. Prior knowledge and Prior Interest Inventories

The prior knowledge and prior interest questionnaires assessed students' knowledge and interest for the topics of the texts they read (see Appendix 2 and

Appendix 3). The prior-knowledge test consisted of ten multiple-choice questions, 5 questions for each passage. Questions were created in accordance with the keywords in the text and related topics to the subject. For instance, as the first text was about language acquisition, one of the questions was about the critical period hypothesis. An expert's opinion on the questions was taken.

In terms of the second passage, prior knowledge questions were formed with a mechanical engineer having a master's degree in science using the keywords in the text. As the text was explaining how a boat is lifted by a wheel between two canals by using the displacement principle, Archimedes' principle of displacement was asked in the prior knowledge test. Prior interest measure included in 10 items, 5 for each subject. Experts from the English language teaching and engineering departments shared their opinions about the items and necessary changes in wording and questions were made. Participants rated their interest from 1, not interesting at all to 7 very interesting. Scores for prior knowledge and prior interest for each passage were obtained by creating a factor score (mean of 0 and standard deviation for 1) for each measure by applying exploratory factor analysis, a regression-based factor score. The reliability score for the prior knowledge test was .80 while the prior interest measure yielded .79. Total variance explained for the prior-knowledge factor was 38% and 37% for prior interest.

3.4. DATA COLLECTION PROCEDURE

The data collection procedure consists of three steps. The first step was for deciding on reader profiles of third-grade students. In order to find out students' reader profiles, a cluster analysis was needed. Table 4 shows the necessary data for the cluster analysis, collection methods and score calculations. First of all, prior interest and prior knowledge tests were sent to 3rd grade students via using Google Forms. The researcher sent e-mails to all students who answered the tests to plan video conferences to do think-aloud protocols. The e-mail included the information about what think-aloud meant, how many readings texts there would be, how long

the think-aloud session would be and the session would be recorded. If they accepted to join, they were asked to answer the e-mails. If they did not want to join, they did not have to respond. More than 30 students responded the emails. However, 30 students were selected randomly. The date and time of the session were decided together and the think-aloud sessions were held on the Zoom video conferencing platform. Before the session recording, the researcher showed a clip of verbal reporting and gave an example on a different text on how to think aloud. Students read the texts and thought aloud, shared their ideas about the texts. Each session, adding the answering questions time, lasted 30 to 45 minutes. 10-minute breaks were given between the two texts in order not to tire students and spoil the think-aloud protocols. At the end of the sessions, they were informed that the researcher would get in touch with them again for a teaching knowledge test. After that, the recordings were transcribed into texts. There were 60 think-aloud protocols (2 texts for 30 participants). In order to code participants' verbalizations, a set of codes developed and used in many studies by Dinsmore et al., (2016: p. 10; 2019: p. 481), and based on Pressley and Afflerbach's (1995) overview of verbal protocols of reading were used. These codes consist of surface-level strategies (e.g., rereading, rehearsing, elaborating), deep-level strategies (e.g., predicting, arguing with the text), monitoring strategies (e.g., evaluating comprehension, evaluating task difficulty), and other behaviours (e.g., express surprise) and comprise a total of 31 possible codes (see Table 3 for detailed strategy codes and examples). To enhance inter-rater reliability and control researcher bias, a teacher-researcher also independently coded ten think-aloud sessions (260 total codes) with good inter-rater reliability (Cohen's kappa $d=$ .76; Fleiss, 1981). Disagreements were rectified in the conference and the remaining think-aloud sessions were coded by the researcher.

The second step was checking the validity and reliability of the adapted ESOL praxis test. In order to gather data for reliability and validity, the researcher prepared two tests on Google forms: one of them included the original questions from the study companion shared by ETS; the other was the compiled and adapted praxis test for this thesis. There were 29 questions in the study companion. However, one question was taken out as it was a country-specific question (see figure 4). 28

questions from the adapted test were chosen randomly by using Microsoft Excel. Then, the first test was sent to teachers. The second test was sent four days apart. Then, to check their construct validity, regression analysis was held.

The third step was to apply computerized dynamic assessment to student-teachers. Tests that were designed on the iSpring Suite Max production were shared with students using the iSpring cloud system. Students could answer the test questions on their mobile phones, tablets or laptops. In order to provide validity, the tests were shared with two scholars who had experience in applying dynamic assessment procedures in language assessment. Then, students' correct and incorrect answers were calculated.

Which of the following court cases resulted in a ruling that district-implemented programs for ELs must be evaluated for effectiveness?

(A) *Lau* v. *Nichols*
(B) *Brown* v. *Board of Education*
(C) *Plyler* v. *Doe*
(D) *Castañeda* v. *Pickard*

Figure 4 A Country-Specific Question

Table 4 Data Collected for the Cluster Analyses, Collection Method and Score Calculations

Data	Collection Method	Score Calculation
Prior knowledge	Multiple-choice test	Factor scores
Prior interest	Likert-type survey	Factor scores
Quantity of strategies	Think-aloud protocol	Combined total of strategies coded across all strategies
Variety of strategies	Think-aloud protocol	Total number of strategies used at least once
Quality of strategies	Think-aloud protocol	Percent of successful strategies over combined total of strategies
Level of processing	Think-aloud protocol	Percent of deep-level strategies over combined total of strategies
Connections to prior knowledge	Think-aloud protocol	Number of references to prior knowledge or experiences
Monitoring Strategies	Think-aloud protocol	Combined total of evaluation of monitoring of comprehension codes (both positive and negative)
Evaluations of interest	Think-aloud protocol	Combined total of evaluation (both positive and negative)
Perception of challenge	Think-aloud protocol	Combined total of negative evaluations of monitoring of comprehension plus unsuccessful connections to prior knowledge

3.5. DATA ANALYSIS

First of all, video recordings were transcribed into texts to gather the data. Then, they were coded by the researcher using the verbal protocol coding scheme that has been used by Dinsmore et al. (2019: p. 481) in various research. Table 3 shows the coding scheme. A teacher-researcher also independently coded 10 think-alouds (260 total codes) with good inter-rater reliability (Cohen's kappa $d=$ .76; Fleiss, 1981). Disagreements were rectified in the conference and the remaining think-alouds were coded by the researcher. After that, to find out how the second experimental group was dispersed into reader profiles, hierarchical cluster analysis was performed with SPSS 22.0 software program. Data for analysing the reader profiles consisted of factor scores for prior knowledge, factor scores for prior

interest, the quantity of strategies used, variety of strategies used, quality of strategies, level of strategic processing, and the number of instances of monitoring strategies and evaluation of interest. Necessary data, collection methods and score calculations can be found in Table 4. Scores for prior knowledge and prior interest for each passage were derived by creating a factor score for each measure based on the exploratory factor analysis. The Ward method with the squared Euclidian distance technique was chosen for the hierarchical cluster analysis as it can combine clusters with a small number of observations and able produce clusters with approximately the same number of observations (Hair and Black, 2000). By taking into consideration of big changes in clustering distances and characteristics of the clusters with the help of the scheme used by Dinsmore et al. (2019: p. 481), the number of clusters was decided. In addition to that, the dendrogram obtained from the analysis led the researcher to categorize the participants into four groups. A dendrogram shows a tree of clusters starting from the smallest meaningful clusters to bigger clusters, which in the end reaches one big cluster. The validity of the groupings was checked through the one-way ANOVA measures conducted throughout the data analyses. Tukey test was also conducted as post hoc tests. After that, k-means cluster analysis was conducted to compare if there were any big numbers of changes when another method of clustering was used.

The second part of the data analysis dealt with the validity and reliability of the adapted ESOL praxis test. A regression analysis was conducted. The adapted test was chosen as the independent variable whereas the study companion test was the dependent. By using regression analysis, the predictive power of the adapted test was found.

The third step concerning the data analyses included descriptive statistics, correlation analysis and parametric and non-parametric analyses to compare means between research groups and within the groups of reader profiles. First, descriptive statistics were run to summarize the means of the adapted ESOL praxis test across research groups. Then, another analysis of variance was conducted to find out

significant differences between the research groups. Next, learners' scores were sought for a correlation with academic success by using the Grand Point Average (GPA). After that, parametric and non-parametric tests were run to compare mean scores among groups. Detailed results were presented in Chapter IV.

CHAPTER IV

4. RESULTS

The result section is divided into three parts. The first part presents the emergence of reader profiles in cluster analyses. The second part displays the results of the test scores in general and by looking at the subcategories of the test. Finally, groups are compared to each other and within the reader profile group.

4.1. EMERGENCE OF READER PROFILES IN CLUSTER ANALYSIS

With regard to the first question, first, hierarchical cluster analysis was run to determine which reader profiles emerged. Descriptive statistics for each variable put into analysis was presented in Table 5 showed the descriptive statistics for reading texts for each cluster.

Table 5 Descriptive Statistics and ANOVA Results for The Four-Cluster Solution

Variable	Overall		1		2		3		4		ANOVA		Post hoc test
	M	SD	M	SD	M	SD	M	SD	M	SD	F	P	
(1) Prior interest factor score	.00	1.00	-.56	.63	-.48	.45	.46	.95	.94	1.42	4.72	.00	1<4*
(2) Prior knowledge factor score	.00	1.00	.31	.98	-.24	1.22	-.34	.89	.58	.58	1.33	.28	
(3) Quantity of strategies	76.40	18.62	55	5.67	72.14	2.11	85.50	4.92	109.25	7.36	122.21	.00	1<2* 1<3* 1<4* 2<3* 2<4* 3<4*

Table 5 continued

Variable	Overall		1		2		3		4		ANOVA		
	M	SD	M	SD	M	SD	M	SD	M	SD	F	p	
(4) Variety of strategies	18.77	2.30	16.78	1.71	19.14	2.79	19.60	1.57	20.50	1.29	4.92	.00	1<3* 1<4*
(5) Quality of strategies	.31	.11	.31	.11	.28	.16	.35	.09	.29	.06	.44	.72	
(6) Level of processing	.24	.11	.26	.11	.22	.16	.25	.09	.19	.09	.40	.75	
(7) Connections to prior knowledge	3.27	1.78	2.67	2.12	2.71	1.70	4.00	1.56	3.75	1.25	1.26	.30	
(8) Monitoring strategies	3.80	1.86	3.78	2.10	5.00	2.16	3.20	1.13	3.25	1.89	1.50	.23	
(9) Evaluation of interest	2.53	1.75	2.44	1.81	2.29	.95	2.80	2.20	2.50	2.08	.11	.94	
(10) Perception of challenge	3.20	2.04	3.22	2.27	4.29	2.28	2.50	1.17	3.00	2.70	1.07	.37	

Hierarchical cluster analyses yielded four clusters for this sample, using the coefficients from the agglomeration schedule (i.e., the first large identified gap in the coefficients) and the dendrogram using the Ward linkage also showed the same number of clusters (see Figure 5). In table 5, descriptive statistics related to clusters and their relationship with variables can be seen. The first cluster consisted of nine students, who scored the lowest on the number of strategies (*M*=50) used and the variety of strategies (*M*=16.78) in addition to few references to prior knowledge (M=2.67) in both subjects. They also had the lowest mean score of two texts (see Table 5). The second cluster (*n*=7) inclined to low interest and high challenge. However, it can be seen in Table 6 that they scored second highest in reading both texts (*M*=18.71). The third cluster was the largest of all with ten participants. This cluster was usually above for most of the data points except reported prior knowledge factor score (*M*=-.34). The last cluster (*n*=4) scored high in number and variety of strategies, prior knowledge and prior interest scores overall but the quality and the level of processing were lower than the average.
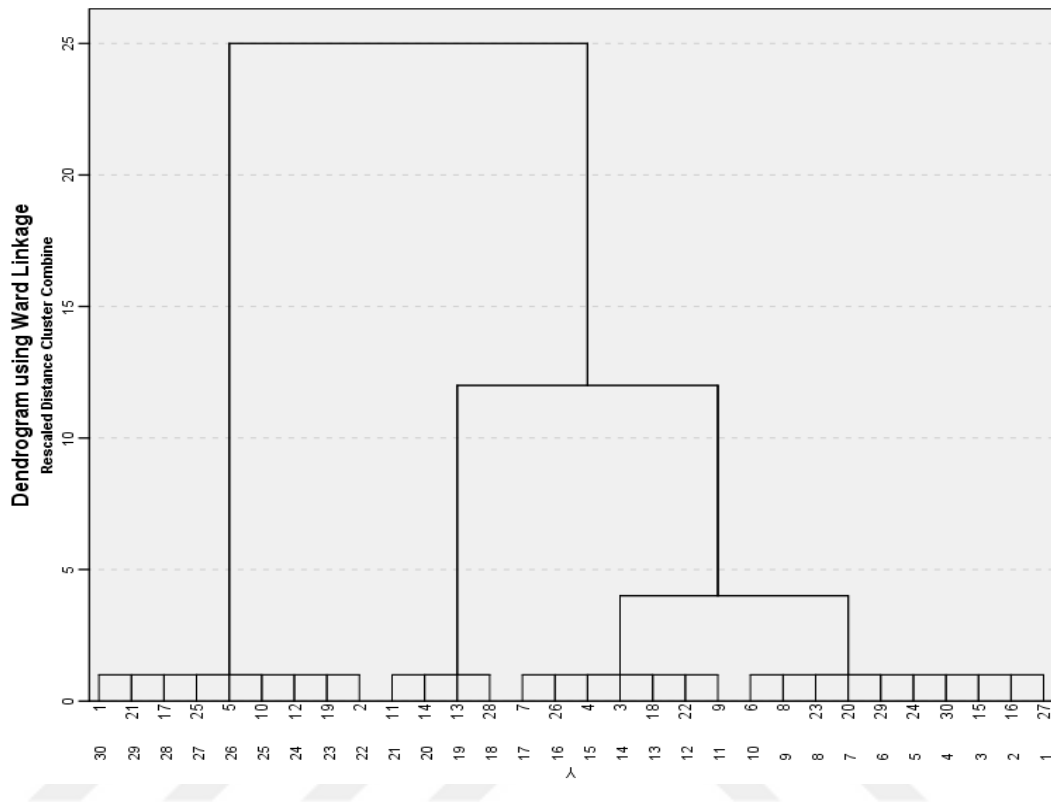
Figure 5 Dendrogram Using the Ward Linkage

K-means cluster also resulted in the same number of clusters, just changing in the number of cases. Clusters sizes were almost equivalent to hierarchical cluster analyses. There were differences in the number of strategies employed, variety of strategies and quality of strategies in an ascending way. Knowledge Reliant Readers ($n=9$) Effortful Processors ($n=7$) Highly Competent Readers ($n=10$) Interest-reliant ($n=4$) K-means clustering shows same number of clusters ($n=4$). Each cluster has similar number of participants as in the hierarchical cluster.

These clusters can be named according to the framework theorized by Alexander (2005: p. 16) and the reader profile rubrics developed by Dinsmore et al. (2019: p. 481). The large cluster was coded as highly-competent readers because they scored higher than the mean scores of reading texts. Their interest was the second highest among other groups and they evaluated their interest in the reading texts the most. 4th cluster had the highest score in reading outcomes; they showed the highest prior knowledge and the prior interest. This cluster involved interest-reliant readers. What distinguished highly-competent readers from the interest-reliant readers were the quality of strategies and level of processing the strategies. Although the fourth cluster used the highest number of strategies, the percent of successful strategies they employed was the 3rd lowest with 29 %. On the other hand, 3rd cluster showed the highest percentage of successful strategy use. Moreover, the percent of deep level strategies used by the 3rd cluster was larger than the 4th cluster. Therefore, the third cluster was named as highly-competent while the fourth cluster was decided to be interest-reliant readers. The second cluster with low interest and the high challenge was effortful processors. They used various type of strategies. However, the quality and the level of processing were somewhat lower than the average of the four clusters. These students used many strategies but they were usually limited to surface-level strategies. The first group was the knowledge-reliant readers. This group showed the second highest factor score, .31. They were the lowest in both texts' means.

Table 6 Descriptive Statistics for Mean Scores of Reading Texts

Clusters	n	First Text		Second Text		Total	
		M	SD	M	SD	M	SD
1	9	8.33	2.17	8.22	2.94	16.56	4.15
2	7	9.14	1.34	9.57	1.13	18.71	1.25
3	10	8.30	1.82	10.00	2.00	18.30	3.23
4	4	9.25	2.50	11.50	1.29	20.75	2.98
Total	30	8.63	1.88	9.56	2.28	18.20	3.32

4.2. PILOTING THE ADAPTED TEST

Before using the adapted ESOL praxis test with 3rd grade students, it was checked for its reliability and construct validity. Table 7 showed the descriptive statistics for the two tests. The mean scores were quite close to each other.

Table 7 Descriptive Statistics for the Original and Adapted Test

Variable	N	Mean	SD	Skew	Kurtosis
Test 1- Original Study Material	38	19.74	2.02	-.40	-.99
Test 2- Randomized Adapted Test	38	19.68	2.18	-.39	-.65

A simple regression analysis was conducted to predict participants' scores in original ESOL praxis test from the adapted ESOL praxis test. Table 8 presented the summary of the analysis. There was a statistically significant relationship between the study sample and adapted randomized praxis test, $F (1, 36) =41.99$, $p=.00$, $R2=.53$, $R2adjusted=.52$. The regression coefficient ($B=.73$) indicated that scores in original study test increased by .73 for every one-point increase in adapted ESOL praxis test. The R2 displayed scores in adapted test explained 53.8 % of the variance in scores at the original study test.

Table 8 Simple Linear Regression Analysis Summary for the Adapted ESOL Praxis Test and Its Predicting Success in the Original Study Test

Variable	*B*	SE *B*	β	*t*	p
Constant	6.35	2.078		3.055	.004
Adapted ESOL praxis test	.680	.105	.734	6.481	.000

$R^2 =.538$ (*N=38, p<.01*)

4.3. RESULTS OF THE ADAPTED ESOL PRAXIS TEST

4.3.1. Control Group

Descriptive statistics of the praxis test, including mean, standard deviation, minimum and maximum scores were presented in Table 9. There were 23 students in the control group. Their mean score for the adapted ESOL praxis test was 87.13 (SD= 19.86) out of 150 and the mean GPA for the control group was 3.14.

Table 9 Descriptive Statistics Results for the Praxis Test and GPA

	N	Min.	Max.	Mean	SD
Adapted ESOL Praxis Test	23	39	120	87.13	19.86
GPA	23	2.52	4	3.14	.36

Table 10 showed the descriptive statistics for the contents of the test. The results show that the minimum and maximum scores for each content-knowledge range from the lowest to the top. For instance, some students could not score any points in culture and professionalism contents.

Table 10 Descriptive Statistics for the Contents of the Adapted ESOL Praxis Test

Subgroups of the test	n	Min	Max	Mean	SD
Linguistics	9	6	27	17.09	4.73
Foundation of learning	11	9	30	22.57	5.34
Planning and implementing instruction	12	6	33	20.87	6.91

Table 10 continued

Subgroups of the test	n	Min	Max	Mean	SD
Assessment	8	3	18	12.13	4.47
Culture	5	0	12	3.41	3.41
Professionalism	5	0	12	3.37	3.37

Students answered the question related to the use of grammar rules correctly the most (*M*= 3). The question can be seen in Figure 6. The least frequently answered question was one from the cultural category (*M*= .65), and the other was one from the professionalism category with a .65 mean score out of 3.

Question

4. Listen to an ESOL student talk about her experience upon arriving in the United States. (Recorded excerpt)

When I arrive in the United States, the first three months for me here were the most difficult experience in my life...

The verb "arrive" in the first line is incorrect with respect to

○ A) tense

○ B) gender

○ C) person

○ D) number

Figure 6 The most frequently answered question by the control group

4.3.2. Experimental Group 1

1st experimental group took the computerized test. Students were given mediation without considering their reader profiles. Table 11 displayed the descriptive statistics for the mediated scores of the test and GPA, and paired-samples t-test results. Table 12 showed the descriptive statistics for the content-knowledge results related to the test.

Table 11 Maximum Score, Mean Actual and Mediated Scores, Gain Scores, Reliability Coefficients and Results of Paired-Sample Tests Comparing Actual and Mediated Scores

	Experimental Group 1 (Reader profiles are not looked)
Number of learners	28
Mean GPA	3.15
Number of Items	50
Maximum Score	150
Mean actual score	76.39 (14.36)
Mean mediated score	111.18 (11.38)
Mean gain score	34.79 (5.88)
Reliability coefficient	.72
t- value	31.32
Significance	.000
Effect size (Cohen's d)	.92

In this group, there were 28 students. The highest score they could have from this test was 150. Experimental group 1 scored 111.18 (SD= 11.38) out of 150. As Table 12 displayed, paired-samples T-test yielded significant differences between the mean actual and mean mediated scores (t= 31.32, p=.000, Cohen's d= .92). So, it can be concluded that this group benefitted from the mediation provided during the test. In addition, learning potential score of the students ranged from .83 to 1.13. So, it supports the microgenetic analysis. Gain and actual score showed a significant negative correlation (r=-.66) at .01 level. Descriptive statistics showed that students' scores ranged from 3 to 32 in content groups. All students earned scores in each subgroup.

Table 12 Mediated Scores by Subgroups of the Test for Experimental Group 1

Subgroups of the test	n	Min.	Max.	Mean	SD
Linguistics	9	18	27	22.61	3.46
Foundation of learning	11	18	32	25.89	3.46
Planning and implementing instruction	12	18	32	26	3.33
Assessment	8	11	22	16.75	3.23
Culture	5	7	14	9.96	1.62
Professionalism	5	3	14	9.96	2.67

For the control group, the most frequently answered question was also same, namely question 4 that deals with a grammar rule. On the other hand, this group scored the lowest ($M= 1.61$) on the question related to being aware of culturally diverse students and how cultural richness of the classroom can be integrated into teaching. It is also observed that students have scored low especially in culture and professionalism content.

42. Ms. Yamamoto teaches an introductory writing class composed of learners from a variety of cultural and linguistic backgrounds. Her primary objective is to encourage her students to brainstorm ideas on a given topic and develop their English writing skills as a result of brainstorming. Which of the following is the most effective strategy Ms. Yamamoto can use to benefit the ELLs in the class during the brainstorming process?

○ A) Encouraging ELLs to use their first languages and cultural knowledge in brainstorming discussions

○ B) Providing ELLs with a detailed outline where they can summarize the beginning, middle, and end of futu...

○ C) Asking ELLs to consult an English dictionary for all necessary words during brainstorming discussions

○ D) Advising the ELLs to look for relevant outside references prior to their brainstorming discussions

Figure 7 The Least Answered Question by the Experimental G.1

4.3.3. Experimental Group 2

First, the group outcomes were shown as a whole in Table 13 and 14. Then, results according to four different reader profiles were analysed and explained.

Table 13 Maximum Score, Mean Actual and Mediated Scores, Gain Scores, Reliability Coefficients, and Results of Paired-Sample Tests Comparing Actual and Mediated Scores

	Group 2 (Reader profiles are looked)
Number of learners	30
Number of Items	50
Maximum Score	150
Mean actual score	73.73 (17.95)
Mean mediated score	109.43 (13.35)
Mean gain score	35.70 (7.10)
Reliability coefficient	.79
t- value	27.52
Significance	.000
Effect size (Cohen's *d*)	1.59

This group included in 30 students. Their mediated score was 109.43 (*SD*= 13.35) out of 150. This group was also similar to the previous groups. Students' scores increased with the help of mediation that was provided during the test. Paired-samples T test revealed a significant difference between the mean for actual and the mediated scores (*t*= 27.52, *p*= .000, Cohen's *d*= 1.59). Cohen's effect size showed a large effect. In a similar vein, all participants benefitted from the mediation. In addition, relationship between the actual and mediated scores yielded strong correlation (*r*= .93). On the other hand, the relation between gain and actual scores resulted in significant negative correlation just as in each reader groups (*r*= -76). The

learning potential scores of the learners ranged from .84 to 1.07. This also approved the positive difference between the two scores.

Table 14 Mediated Scores by Subgroups of the Test for Experimental Group 2

Subgroups of the test	n	Min.	Max.	Mean	SD
Linguistics	9	14	26	20.77	3.29
Foundation of learning	11	13	32	25.67	4.57
Planning and implementing instruction	12	13	33	25.13	4.67
Assessment	8	10	22	16.63	2.87
Culture	5	7	16	11.03	2.60
Professionalism	5	7	14	10.37	1.97

In Table 14, it can be observed that all students obtained points in each content knowledge. Scores ranged from 7 to 33.

4.3.4. Test Results for Each Reader Profiles

Table 15 presented descriptive statistics of the test results for the adapted ESOL praxis test of effortful processor readers. In this group there were seven participants. The highest score they could obtain was 150. Paired samples T-test displayed significant differences between the mean mediated and actual scores ($t=$ 18.77, $p=$ .000, Cohen's $d = 7.09$). These results indicated that as a result of mediation, students' scores improved evidently and all the students benefitted from the mediation. The results showed a significantly strong correlation between the mediated and the actual score ($r=.91$), which can be concluded that the students who show higher actual scores show higher mediated scores. In addition, there was a

negative correlation between the actual score and the gained score (r= -.41), suggesting that the participants having higher actual scores did not benefit from the mediation more compared to the participants who performed lower. However, the result was not statistically significant. The LPS of the learners ranged from .85 to 1.03. Once again, it supported the development of the learners during the test.

Table 15 Maximum Score, Mean Actual and Mediated Scores, Gain Scores, Reliability Coefficients, and Results of Paired-Sample Test Comparing Actual and Mediated Scores

	Effortful Processor Readers
Number of learners	7
Number of Items	50
Maximum Score	150
Mean actual score	75.57(11.63)
Mean mediated score	108.71 (10.56)
Mean gain score	33.14 (4.67)
Reliability coefficient alpha	.63
t- value	18.77
Significance	.000
Effect size (Cohen's d)	2.11

Table 16 showed that all students could obtain points in each content. Each question was three points and the table showed that all the students could not earn the highest points they could obtain.

Table 16 Mediated Scores by Subgroups of the Test for Effortful Processors

Subgroups of the test	n	Min	Max	Mean	SD
Linguistics	9	14	25	19.71	3.86
Foundation of learning	11	21	32	27.71	3.45

Table 16 continued

Subgroups of the test	n	Min	Max	Mean	SD
Planning and implementing instruction	12	21	30	24.57	2.82
Assessment	8	10	19	16.86	3.13
Culture	5	8	14	11.57	2.50
Professionalism	5	7	13	10.14	2.03

Table 17 presented test result statistics for the knowledge-reliant readers in adapted ESOL praxis test. Table 18 summarized the descriptive statistics for the content-subjects. This group included nine participants. The highest score they could obtain was 150. Paired samples *t*-test showed significant differences between the mean mediated and actual scores ($t= 13.44$, $p=.000$, Cohen's $d = 4.48$). As in the previous group of readers, participants' scores improved due to the mediation and all the students benefitted from the mediation. The results displayed a significantly strong correlation between the mediated and the actual score ($r=.97$). Moreover, there was a negative correlation between the actual score and the gained score ($r= -.96$), indicating that participants who performed low independently benefitted more from mediation than those who performed better independently. The LPS of the learners ranged from .98 to 1.07. So, students' scores were in high score category (Kozulin & Garb, 2002: p. 120). According to Table 18, all students got points in each category of contents.

Table 17 Maximum Score, Mean Actual and Mediated Scores, Gain scores, Reliability Coefficients, and Results of Paired-Sample Test Comparing Actual and Mediated Scores

	Knowledge-reliant readers
Number of learners	9
Number of Items	50
Maximum Score	150

Table 17 continued

Mean actual score	82.33 (16.91)
Mean mediated score	118.11 (9.49)
Mean gain score	35.78 (7.98)
Reliability coefficient	.70
t- value	13.44
Significance	.000
Effect size (Cohen's d)	1.84

Table 18 Mediated Scores by Subgroups of the Test for Knowledge-Reliant Readers

Subgroups of the test	N	Min.	Max.	Mean	SD
Linguistics	9	17	26	22.78	3.11
Foundation of learning	11	25	31	28.44	2.00
Planning and implementing instruction	12	24	31	27.67	2.34
Assessment	8	13	21	16.56	2.35
Culture	5	9	16	12.89	2.26
Professionalism	5	8	14	11.33	2.17

Highly competent readers consisted of ten pre-service teachers. Paired- sample T-test showed differences between mean actual score and mediated scores again with a high significance value (*t*= 14.52, *p*=.000, Cohen's *d* = 4.59). In a similar vein, all participants benefitted from the mediation. In addition, relationship between the actual and mediated scores yielded strong correlation (*r*= 93). Besides, the relation between gain and actual scores resulted in similar outcomes as in the last two groups (*r*= -77). The learning potential scores of the learners ranged from .85 to 1.06. So, students' scores vary in the middle and high score categories according to Kozulin and Garb's hypothesis (2002). Table 20 also showed the mean scores in each

content-knowledge, minimum and maximum scores students obtained and the standard deviations.

Table 19 Maximum Score, Mean Actual and Mediated Scores, Gain Scores, Reliability Coefficients, and Results of Paired-Sample Test Comparing Actual and Mediated Scores

	Highly-competent readers
Number of learners	10
Number of Items	50
Maximum Score	150
Mean actual score	68.40 (18.96)
Mean mediated score	104.70 (13.72)
Mean gain score	36.30 (7.90)
Reliability coefficient	.76
t- value	14.52
Significance	.000
Effect size (Cohen's d)	1.55

Table 20 Mediated Scores by Subgroups of the Test for Highly-Competent Readers

Subgroups of the test	N	Min	Max	Mean	SD
Linguistics	9	15	25	19.70	2.83
Foundation of learning	11	16	27	22.40	3.65
Planning and implementing instruction	12	17	33	26.10	4.65
Assessment	8	13	22	17.20	3.45
Culture	5	7	13	9.70	2.26
Professionalism	5	7	12	9.60	1.71

The last group was interest-reliant readers (*n*=4). Paired- sample T-test showed the differences between mean actual score and mediated scores again with a high significance value (*t*= 9.91, *p*=.002, Cohen's *d* = 4.95). In a similar vein, all participants benefitted from the mediation. In addition, relationship between the actual and mediated scores yielded strong correlation (*r*= .96). On the other hand, the relation between gain and actual scores resulted in similar outcomes as in the last two groups (*r*= -.78). The learning potential scores of the learners ranged from .84 to 1.07.

Table 21 *Maximum score, Mean Actual and Mediated Scores, Gain Scores, Reliability Coefficients, and Results of Paired-sample Tests comparing Actual and Mediated Scores*

	Interest-reliant readers
Number of learners	4
Number of Items	50
Maximum Score	150
Mean actual score	64.50 (23.81)
Mean mediated score	103 (18.36)
Mean gain score	38.50 (7.76)
Reliability coefficient	.87
t- value	9.91
Significance	.002
Effect size (Cohen's *d*)	1.28

Table 22 Mediated Scores by Subgroups of the Test for the Interest-Reliant Readers

Subgroups of the test	N	Min	Max	Mean	SD
Linguistics	9	18	23	20.75	2.62
Foundation of learning	11	13	29	24	7.43
Planning and implementing instruction	12	13	24	18	4.96
Assessment	8	13	18	15	2.16
Culture	5	7	11	9.25	1.70
Professionalism	5	9	13	10.50	1.73

The least correct answers for the questions under the various categories varied from foundation of linguistics to culture and professionalism. For instance, students obtained the lowest mean score for a question related to sociolinguistic competence (M= 1.67). Figure 8 shows that question. Similar to the other groups students usually got mean scores lower than 2 for questions on culture and professionalism.

1. Which of the following is the best example of an error in sociolinguistic competence? *

○ A) An ELL wants to borrow a pen from the teacher's desk and says, "I need this" while taking it.

○ B) An ELL doesn't know the word for "highway" and describes it as "the big road where there are a lot of ca…

○ C) A native English speaker asks an ELL where the ELL was born, and the ELL responds "I am come from E…

○ D) An ELL wants to say "Watch out for the curb" but produces the sentence "Watch out for the curve."

Figure 8 One of the Least Frequently Answered Questions

4.4. COMPARING THE GROUPS' TEST RESULTS

First of all, control group, experimental 1 and experimental 2 groups were compared in terms of their test scores, and content-knowledge results. As the first step homogeneity of variance assumption was checked for praxis test results. Levene's Test of Homogeneity of variance revealed that the variances for the test was equal F (2, 78) =.39, p=.67. A Shapiro-Wilk test showed the normality of the three groups. For the control group, the significance was .07, W (23) = .92. The first experimental grouped showed no significant departure from normality, W (28) = .93, p=.10. Second experimental group was also homogeneous in terms of praxis test results, W (30) = .96, p= .40. Then, one-way ANOVA was conducted to compare the mean scores among groups. There was a significant difference in mean test results [F (2, 78) = 21.02, p=.000, η^2_p =.35] among the groups.

Table 23 Summary of Comparison for the Adapted ESOL Praxis Test

	Control		Exper. 1		Exper. 2		F	p
adapted test	M	SD	M	SD	M	SD		
	90.39	12.61	111.18	11.38	109.43	13.35	21.02	.000

Post hoc comparisons using the Tukey HSD test revealed that students in the first experience group, on average, scored higher compared to the control group, 20.79, 95% CI (14.13, 27.44) and it was statistically significant, p= .000. In addition, second experimental group whose members' reader profiles differed in mean test scores compared to control group. Tukey HSD indicated that second experimental group differed in mean score by 19.04 points, 95% CI (12.01,26.06), was statistically significant, p=.000. However, there was no significant (p=.85) difference between the first experimental group and the second experimental group, 1.74, 95% CI (-8.12, 4.62). A Pearson product-moment correlation was run to determine the relationship between the GPA and the ESOL praxis test. The analysis yielded a moderate level of positive correlation between the GPA and the test results of the students r (79) = .39, p=.000. It was significant at the .01 level.

As the content-knowledge variables were not normally distributed and were heterogeneous, they did not fulfil the assumptions for parametric tests. So, Kruskal Wallis H test was performed for each variable. Then, as Field (2005) suggested, Mann- Whitney U tests were applied to instead of post-hoc tests and to lower down the family wise error Bonferroni-adjusted alpha level was also displayed.

A Kruskal-Wallis H test showed that there was a statistically significant difference in linguistics knowledge among the three-research group, $X^2(2) =19.88$, $p=.000$ with a mean ranking score of 24.57 for control group, 41.52 for second experimental group and 53.95 for first experimental group. The test also showed that research group significantly affected the content-knowledge related to foundation of learning, $X^2(2) =7.42$, $p=.02$ with a mean ranking score of 29.87 for the control group, 44.18 for the first experimental group and 46.57 for the second experimental group. Moreover, content-knowledge related to planning and implementing instruction score was significantly affected with the research groups, $X^2(2) =10.15$, $p=.006$ with a mean ranking score of 28.17 for the control group, 43.92 for the second experimental group and 48.41 for the second experimental group. Content-knowledge related to assessment, culture and professionalism were also significantly affected due to research groups. Table 24 showed the detailed mean rankings and p values in detail.

Table 24 Mean Ranks, Chi-square and Significant Values for Sub knowledge

	Category	n	Mean Rank	X^2	p
Linguistics	control	23	24,57	19.85	.000
	experimental 1	28	53,95		
	experimental 2	30	41,52		
Foundation of learning	control	23	29.87	7.42	.024
	experimental 1	28	44.18		
	experimental 2	30	46.57		
Planning and implementing instruction	control	23	28,17	10.15	.006
	experimental 1	28	48,41		
	experimental 2	30	43,92		

Table 24 continued

	Category	n	Mean Rank	X^2	p
assessment	control	23	24,07	16.91	.000
	experimental 1	28	48,39		
	experimental 2	30	47,08		
culture	control	23	30.83	8.56	.014
	experimental 1	28	40.07		
	experimental 2	30	49.67		
professionalism	control	23	23.30	18.62	.000
	experimental 1	28	46.71		
	experimental 2	30	49.23		

There was a strong evidence of a difference ($p <$ .001, adjusted using the Bonferroni correction) between the mean ranks of control group and the first experimental group, control group and experimental group 2 for linguistics. In terms of foundation of learning, and culture there was a significant difference between the control and the second experimental group. Planning, assessment, and professionalism content scores demonstrated the same differences as in linguistics; control and experimental 1, control and experimental 2.

While foundation of learning and assessment did not satisfy the normality assumption, learning score was heterogeneous but assessment score was homogenous in dispersion for the reader profiles. So, one-way ANOVA was not run for these two content-knowledge test scores. Instead, Kruskal Wallis H was applied. Table 25 showed mean rankings, chi-square, and the p value.

Table 25 Rankings, Chi-square, and the p Value.

	Category	N	Mean Rank	X^2	p
Foundation of learning	Knowledge-reliant	9	21.06	12.59	.006
	Effortful	7	19.71		
	Highly-competent	10	8.05		
	Interest-reliant	4	14.25		
assessment	Knowledge-reliant	9	14.89	2.34	.50
	Effortful	7	17.57		
	Highly-competent	10	16.85		
	Interest-reliant	4	9.88		

As Table 25 displayed, mediation changes among groups had a significant impact on students' content-knowledge related to foundation of learning, $X^2(3)$ =12.59, p=.006 with a mean ranking score of 8.05 for highly competent group, 14.25 for interest-reliant group, 19.71 for effortful, and 21.06 for the knowledge-reliant readers. There was not a significant difference among readers in assessment. Dunn's pairwise tests were carried out for the six pairs of groups. There was a very strong evidence ($p < .001$, adjusted using the Bonferroni correction) of a difference between the highly-competent and effortful readers (p=.04), and highly-competent and knowledge-reliant readers (p=.00).

Other variables provided assumptions for one-way ANOVA. So, the analysis was run. As it can be inferred from Table 26, there was a significant difference in planning [F (3, 26) = 6.56, p=.000, η^2_p =.43] and the culture content- knowledge [F (3, 26) = 4.12 p=.01, η^2_p =.32] among the groups. Knowledge-reliant readers scored the highest in planning whereas interest-reliant readers scored the lowest. In terms of culture content-knowledge, knowledge-reliant obtained the highest scores. It may be concluded that they benefitted the mediation most compared to other groups. The results for linguistics and professionalism knowledge yielded in almost the same results that favoured knowledge-reliant readers with highest mean scores.

Table 26 One-way ANOVA Results for Subcategories of the Field Knowledge

	Knowledge-r.		Effortful		Competent		Interest-r.		ANOVA	p
	M	SD	M	SD	M	SD	M	SD	F (3,26)	
linguistics	22.78	3.11	19.71	3.86	19.70	2.83	20.75	2.63	1.85	.16
planning	27.67	2.34	24.57	2.82	26.10	4.65	18	4.97	6.56	.00
culture	12.89	2.26	11.57	2.51	9.70	2.63	9.25	1.71	4.12	.01
professionalism	11.33	2.18	10.14	2.03	9.60	1.71	10.50	1.97	1.30	.29

4.5. SUMMARY OF THE CHAPTER

The findings of the research revealed four reader profiles for the third-grade students. Several significant results were displayed between control and experimental groups, suggesting that mediation that was supplied during the computerized praxis

test helped learners to excel in their test scores, especially the first experimental group benefitted from the mediation most compared to the experimental group whose members took the mediation according to reader profiles they were grouped into. However, it was not statistically significant. It was shown with one-way ANOVA and Kruskal Wallis H, reader profiles differed significantly in content-knowledge related to foundation of learning, planning and implementing instruction, and culture. In all these contexts, knowledge-reliant readers had the highest mean scores.

CHAPTER V

5. DISCUSSION

This section discusses the reasoning of the research findings by looking through the literature. First of all, a small body of studies have searched for reading development as in MDL and referring to reader profiles framework (Alexander, 2005: p. 16). Therefore, variables that shape reader profiles are taken into consideration in the discussion first. Although there are studies that show a positive correlation between the reading outcomes and prior knowledge (Abdelaal &Sase, 2014: p. 125), this research also supports it in three groups except knowledge-reliant readers. Though these readers reported high prior knowledge before the think-aloud sessions, they could not show prior knowledge-connections during think-aloud sessions and they also gained low reading scores. That is to say, they had a prior knowledge about the texts but they could not activate their knowledge and use them properly. The results for the knowledge-reliant readers also corroborates with the low-profile group's results in comprehension tasks in Alexander et al. (1994: p. 465), passive and superficial groups in Renkl (1997: p. 26) and poor learners in Recker and Pirolli's (1995: p. 14) study.

Knowing and applying strategies properly is also an important aspect in reading. Anderson's (1991: p. 460) study with adult university students revealed a significant correlation between knowing and reporting a great deal of knowledge about reading strategies and high scores. It showed that poor and good readers could use similar numbers of strategies. However, the quality of strategies used was what was important in better reading comprehension. So, it can be concluded that knowing a lot of strategies and how to utilise those appropriately may not mean the same thing. The current research both supports and rejects these outcomes. Students in the interest-reliant and highly competent readers used the highest numbers of strategies

and the mean differences for these groups between the other groups were statistically different. Besides, the variety of strategies was high and they scored higher in both reading texts compared to knowledge-reliant readers. Knowledge-reliant readers used the least number of strategies but the percentage of level of processing was the largest for this group. That is to say, they used the deep-level strategies the most. In addition to that, knowledge-reliant readers scored higher in the percent of successful strategies over total number strategies. It can be inferred from these results that even though students use strategies appropriately, or they use deep-level strategies over surface-level strategies more, it may not result in success in reading comprehension tasks. So, knowing strategies alone is not enough for a successful reading comprehension. The possible reason of these results may be due to the lowest variety of strategies, low level of interest towards the subjects and few numbers of connections to prior knowledge. In this situation, the importance of combination of variables can be observed. Nothing is important alone in reading or enough to reason for poor or good reading comprehension.

Students were expected to display higher mean scores in the first text that deals with language acquisition because of their domain knowledge. However, all the groups performed higher in the second text's tasks. This result can be attributed to students' age and proficiency in language because as Cantrell & Carter (2009: p. 199) stated, adolescents and adults were more aware of self-regulated strategy use compared to young learners. So, it can be said that though the participants did not have much information about a domain, they tried to compensate for this deficiency with deliberate strategy use. It can be observed in the number and variety of strategies used by good readers in the present study. Hence, deliberate strategy use can help older learners to understand the text more.

Furthermore, participants reported higher prior interest in the subjects related to language acquisition as it was expected because of the domain they study. On the other hand, they showed low interest in the engineering domain. It was shown in previous research (Hattan & Dinsmore, 2019: p. 26; Hattan & Alexander, 2018: p. 8)

that highly competent and interest-reliant readers displayed higher scores for prior interest in different subjects while effortful and knowledge-reliant readers showed lower scores in prior interest scale. Students in the present research supported the previous research for highly competent and interest-reliant reader profiles because, in addition to prior interest tests, they showed many instances of evaluation of their interest towards the texts during the verbal protocols.

Early studies for profiling learners focused on profiling learners in terms of their learning types. These studies resulted in various outcomes by using the main factors to determine reader profiles. For instance, Alexander and Murphy's (1998: p. 436) study with undergraduate students who were taking the educational psychology course revealed four distinct groups of learners. These emergent groups were different in interest, strategy and domain knowledge. For example, effortful processors were showing a moderate level of interest in the topic and they were persistent in the strategy use to handle tasks. Although they were struggling, their effort helped them to have a moderate level of performance in tasks. This group of learners were similar to participants in the effortful processor group in the present study. Effortful processors in the present study did not show a high level of interest towards the domains but they still performed better in the reading tasks compared to knowledge-reliant readers. Findings of the present research related to reader profiles were conversely displayed by Dinsmore et al. (2019: p. 484) in terms of the number of clusters, number and variety of strategies reported by the learners because of the age difference between these two research participants; the present study had undergraduate level students while Dinsmore had primary school students as participants. The variety of clusters was also different as the participants in this study were competent in reading. For instance, there was not a challenged reader in the present study.

Hattan and Dinsmore (2019: p. 26) showed for the same participants that compared to interest-reliant readers, effortful processors had a higher mean score in reading outcome. Rogiers et al, (2019: p. 390), depending on text-based tasks,

revealed four learner profiles. Their test results showed that limited strategy users were using low-level strategies more. This result confronted with the present study's results for the quantity and the level of strategies. Knowledge-reliant readers used the fewest number of strategies but their strategy use mostly depended on deep-level strategic processing. In a similar vein, information organizers displayed the second highest mean score for self-evaluation strategies whereas knowledge-reliant readers scored highest in monitoring strategies. So, these students can be said to strictly monitoring their reading during the reading process in terms of whether they understand the text or not. Hattan and Alexander (2018: p. 8) also searched for whether scaffolding and activating prior knowledge had any significant effect on reading tasks for undergraduate level students. The results displayed those students did not benefit from scaffolding prior knowledge activation on multiple-choice questions but on higher-level questions. However, the present research contrasted with the results of it because knowledge-reliant readers demonstrated that they benefitted from knowledge activation during the field-knowledge test by a mean gained score of 35.78.

A cross-domain study by Fox et al. (2005) with six undergraduate and highly gifted young readers showed that participants who had domain-specific expertise inclined to show high scores in texts. Fox, Dinsmore, Maggioni & Alexander (2008) also showed that students usually performed better when texts were familiar. This research also depicted similar outcomes for knowledge-reliant readers. However, the other readers scored higher in the second text. So, it can be said that the text topics did not affect the reading performance of readers in a better way for familiar texts. In the light of these results, this research contributed to the reader profiles framework in MDL research studies. So, all in all there were similar outcomes for reader profiles in the present study as in the literature. These reader profiles led researcher to determine the mediations to be given in the test.

In Turkey, teachers are tested for their content and pedagogical knowledge after they graduate from the university. This exam is called OABT. Researchers have

studied with new teachers for OABT by only taking into consideration of their feelings, attitudes and the necessity of a test to evaluate teachers' knowledge (Atav &Sönmez, 2013: p.1; Erdem & Soylu, 2013: p. 220; Gökçe, 2013: p. 171; Karaer, Karaer & Kartal, 2018: p. 40). However, there is insufficient body of research that deals with actual scores and its relationship with the courses students take or any other variables that can affect the success of the teachers. Therefore, this study aimed to gain solid results for how students can perform on a test. What areas are needed to be developed and what knowledge domains are matured in student-teachers. By looking at these issues, if things are necessary or not or what is needed in teaching curriculum can be found.

To assess teachers' field knowledge, the ESOL praxis test was used instead of OABT. It includes tests of academic skills and subject-specific assessments related to teaching (Technical Manual for the Praxis Tests, 2020: p. 7). The reason to use this test was because of the its fairness and validity. The test is developed by Educational Testing Service (ETS) to provide fair and valid tests to help states in United States to give teachers licensure and certificates. ETS provides detailed information about how the test is developed, how it is assured to be reliable and valid. All test items are reported to be evaluated for bias while ETS develops them. They also conduct job analysis, content validation surveys to have a valid test. On the other hand, OSYM does not provide sufficient information how they develop these tests and give information about how they assure the validity. The last report about the OABT that can be retrieved was from 2018 for the 2017 year. In this report, the test was shown to be testing students' language proficiency the most instead of their knowledge about teaching and content. The language proficiency questions were almost comprising 50% of the questions (2017 OABT Evaluation Report, 2018: p. 8). This report showed that the internal reliability was high. It also showed that students obtained 24.61 mean score out of 50. The authors of this research reported that students were successful. So, the students may have shown to be successful but the test did not provide a good content validity because the largest section was for language proficiency. However, the number of questions changed in 2019 by giving the large portion to field education questions. Still, the test is insufficient in terms of

definitions and details of the sub groups of the test and it also tests language proficiency of teachers, which can be developed and assessed during their university education not after graduation; it should not be the priority in the test. Because of the problematic areas of validity, ESOL praxis test was used as the mean of data collection.

In terms of the first research question concerning the performance of the pre-service English teachers on the C-DA process, students who took mediation performed better compared to the control group which took the test in a static way. This result corroborates the previous research on the developing performance of learners when they are provided with mediation (Darhower, 2014; p. 221; Kamrood et al., 2019: p. 21 Lantolf & Poehner, 2013: p. 151; Zhang & Lu, 2019: p. 92; Poehner, Zhang & Lu, 2015: p. 337). So, student-teachers' responsiveness to mediation helped them gain a notable change in their performance (Poehner & Lantolf, 2013). Therefore, they can be said to be in the developmental zone. This results also supports many studies that focused on integrating SCT into interactionist DA procedures to develop a variety of teaching areas in that student teachers were immature of specific teaching areas but with the help of mediation by using a dialogic approach, they showed their potential to develop (Golombek, 2011: p. 121; Kaivanpanah, 2017: p. 89; Yoshida, 2011: p. 150; Johnson & Arshavskaya, 2011: p. 168; Verity, 2011: p. 153).

As it can be seen in the raw scores of sub categories of the praxis test, some students could not obtain any points in culture and professionalism questions in the control group. On the other hand, experimental groups which took mediation could gain points in those questions. Therefore, it can be inferred that pre-service English teacher have unmatured knowledge about professionalism and culture subject. The explanation for this finding might be due to the fact that students could take these two courses electively. So, some students may not even be taking related courses, too. It was put importance by a great deal of research (Doan, 2014: p. 91; Kidwell, 2019: p. 8) on teaching culture and having student-teachers to become aware of

culture, Importance of culture in language teaching and its significance that was viewed by student-teachers were also supported by Devrim and Bayyurt (2010: p. 4). However, culture is not emphasized in OABT and it is obvious that students do not have much information about cultural issues due to the compulsory courses. In addition to that, until shifts in teacher education programme in 2018, pre-service English teachers did not have any courses related to professionalism for their future after university. Moreover, they were not trained how to advocate to students, how they can develop themselves after they have become teachers in practice. Students especially start the university with unformed pedagogical beliefs (Aksu et al., 2010: p. 91). Therefore, they need to be developed in terms of career planning and how to develop themselves during their teaching career. Moreover, experimental groups were similar in the mean scores. However, there can be seen in the results that the control group is far from them with low scores. Although they take many hours of instruction, they still cannot apply their knowledge on the tests. So, they are not fully developed or maybe not aware of how to use them.

In terms of the relationship between the academic success and the praxis results, academic success correlated significantly with test outcomes in a positive way. So, students showing success in academia can obtain higher scores from the adapted ESOL praxis test. The possible reason for this might be that students take a number of pedagogical and content courses. So, they can obtain higher scores in field knowledge tests if they are successful in their courses, too. Further research is needed; however, to investigate the relationship between the academic success of students and their performance on field knowledge assessing content and pedagogical knowledge since these two areas have never been searched for before in Turkish context.

Finally, as the results of the tests showed, the first experimental group that was provided mediation without looking at their reader profile obtained the best mean score among other groups. The second experimental group was expected to have obtained the best result from the adapted ESOL praxis test because of the specific

mediations provided for them but it did not differentiate the results. In sub contents of the adapted praxis test, there were significant mean differences among research groups in all contents of the test. The second experimental group could only have the higher mean scores in foundations of learning, culture and professionalism. Among reader profile groups, mean rankings showed that effortful processors performed the best in assessment though it was not statistically significant. In foundations of learning, linguistics, culture and professionalism, knowledge-reliant readers benefitted from the mediation best and they scored the highest mean scores. So, different types of mediation that were honed by the categories reasoned these significant differences. These results indicate that mediations that were given to knowledge-reliant readers helped them to activate their knowledge in the test. So, especially these learners benefitted from scaffolding knowledge activation (Hattan & Alexander, 2018: p.8). Moreover, results of Yeşilçınar and Çakır's (2020: p. 363) study revealed that not only content knowledge or pedagogical knowledge was important in teachers' requirement for knowledge, understanding the learners' needs and the need for a constant development, which is linked to professionalism, were important issues. So, knowledge-reliant readers were the most aware of these needs and they could apply their knowledge to the assessment tasks.

Alagöz (2017: p. 244) put emphasis on the importance of culture becoming successful in communication competencies in the language classrooms and it is best reached by helping learners to access the target language and culture So, culture is a key aspect in teacher training and the teachers need to understand its relationship with the language (Liu, 2013: p. 128). Mean scores for culture unveiled the inadequate knowledge of learners in the control group: some students scored 0 for the culture part and the experimental groups' scores were ranging from seven to 16. Thus, it can be said that students did not have any knowledge or had unmatured knowledge about the relation between culture and language.

It can be concluded from these outcomes that dynamic assessment can be used in educating and assessing teachers' progress in professional development. Student-

teachers have a great deal of knowledge about the subjects that are specific in the teaching English domain but they look not matured enough to apply them in various situations presented in the test questions. Therefore, mediation and interventionist approach in dynamic assessment can serve as a pathway for teacher educators to how prospective English teachers can be taught the fundamentals of field knowledge.

CONCLUSION

SUMMARY OF THE RESEARCH

The purpose of the research was to examine the effects of computerized dynamic assessment on students' field's knowledge by considering the developing reader profiles. To this aim, 23 4th grade students were assigned to the control group while the experimental group 1 included 28 3rd grade students who were assessed by interventionist C-DA and the second experimental group consisted of 30 students whose mediations were designed according to their developing reader profiles.

Some data were needed to be collected by using think-aloud protocols. So, in order to find out the reader profiles, two prior knowledge and interest tests were first sent to 3rd grade English language teaching students. 30 of them responded back to emails to plan think-aloud sessions. So, their responses created the second experimental group. They thought aloud while they were reading two texts. Then, the ESOL praxis test was adapted by the teacher's field knowledge test conducted in Turkey in terms of the number of questions that were 50. Then, to validate the tests, the original test and the adapted test were taken by novice teachers in between 4 four days. Next, it was sent to the control group. After that, computerized tests were created using the iSpring Suite Max program for each experimental group. For its validity, the tests were shared with two scholars who had experience in DA procedures. Minor changes were made on prompts. Then, the experimental groups took the tests. After the data collection procedure, analyses were run to compare research groups in terms of their mean test scores, correlation with their academic success. Parametric and non-parametric tests were applied to compare mean scores for content-knowledge underlying the praxis test between the research groups and within the reader profiles group. In that vein, four research questions were addressed:

Research Question 1. How do pre-service English language teachers perform at a field test when they are given mediations based on an interventionist computerized dynamic assessment (C-DA) process?

This research found out that when students were provided with mediation during the adapted praxis test for field knowledge, they performed better and showed a potential of development compared to their actual scores. The control group showed that students had insufficient knowledge about culture and professionalism and advocacy because some students could not answer any questions at all. These results were not surprising because in teacher education, students are usually instructed for content-knowledge related to the English language such as linguistics and teaching courses such as teaching English to young learners, teaching language skills and language acquisition. However, when the current research's author graduated from the English language education department in 2018, they were not taking any courses for professional development. However, with the new teacher training program (YOK, 2018) student-teachers can still take cultural courses as an elective course and they can choose career planning and developing as a selective course to gain information about how they can develop themselves during and after university education but it is still limited.

Research Question 2. Does academic success correlate significantly with the test scores for a field test for pre-service English language teachers?

The result of Pearson correlation analysis indicated a moderate level of positive correlation between the GPA and the test results of the students r (79) = .39, p=.000. It was significant at the .01 level. Therefore, it can be concluded that academic success correlates with higher mean scores for the praxis test. This was an expected result because the field test tries to assess candidate teachers' knowledge for the whole university education.

Research Question 3. How do pre-service English language teachers differ when they are given the mediations according to their reader profiles groups?

One-way ANOVA yielded significant differences between the control and the second experimental group. However, there was no significant difference between experimental groups. Although students benefitted from the mediation compared to the control group, the reason was not the mediation provided in accordance with the

developing reader profiles but the nature of mediation itself. It can be seen from the culture and professionalism content scores that the control group did not have enough knowledge but experimental groups could gain at least 7 points. So, they may be said to have a basic knowledge but it is not enough when tested. Therefore, if educators want to assess teachers' knowledge, they can conduct dynamic ways of assessment to form and shape teacher education for the areas of teachers in need of development.

Research Question 4. How do content-knowledge scores in the praxis test differ among research groups and within the reader profiles group, namely experimental group 2?

All aspects of the field praxis test resulted in significant differences among research groups. For each content-knowledge, experimental groups 1 and 2 outnumbered the control group while the first group sometimes had higher mean scores for different content variables. It was not an expected result because the second experimental group was given mediation according to their reader profiles and their distinctive features were expected to have a distinctive effect on test scores but it did not happen. Thus, it can be concluded that providing mediation in following reader profiles did not have any significant effect on assessing students' field knowledge. Comparisons within the reader profiles presented significant mean differences for foundations of learning, planning and implementing instruction and culture. So, these content areas need to be emphasized by the educators and put importance to be developed.

IMPLICATIONS OF THE RESEARCH

This research contributed significantly to the literature in terms of interventionist DA procedures in assessing teachers' knowledge in addition to reader profile studies. Firstly, it contributed to literature a new body of research that focused on interventionist approach in assessing teachers' field knowledge because the review of literature presented those researchers generally preferred using dialogic

mediation in developing teaching practices and opinions of prospective or novice teachers. So, this research is a pioneer. Besides, the thesis supported the developing reader profiles developed by Alexander (2005: p. 16). Moreover, no study combined reader profiles with such different variables as testing teacher's knowledge. As the studies in Turkish context have mostly focused on the views of the learners about testing teachers' field knowledge, this thesis put also emphasis on the assessing teachers' knowledge and its relationship with the subjects that students are taught.

LIMITATIONS OF THE RESEARCH

There were several limitations in this research. First of all, participants were not equal in size (n= 23 for the control group, n= 28 for the first experimental group and n=30 for the second experimental group). For further research, this study can be conducted with larger and equal sample sizes. The researcher had to collect all data online. So, face to face data collection procedures may have yielded different results.

In addition to that, the lack of assessing teachers' knowledge and comparisons related to different variables led the researcher to few references to literature. So, insufficient research resulted in fewer references. Moreover, the academic success of the learners was evaluated by the GPA that encompassed all grades in their university education. Therefore, grades to calculate GPA do not only include field-specific subjects but also include subjects to improve students' language skills and subjects that were delivered in Turkish. Thus, their GPA might be high due to these courses. From these limitations, it can be concluded that the research findings should be interpreted cautiously.

SUGGESTION FOR FURTHER RESEARCH

First of all, for further studies, the current research participants can be compared for their actual OABT scores and their mediated scores in the current paper to evaluate if the potential developmental areas have matured after some time.

They can be tested in their fourth year or when they take the actual test after they graduate from the university. This can help researchers to evaluate the need for a dynamic assessment procedure in assessing teachers' knowledge and how far English teachers may develop their knowledge after a period of time. In addition, academic success can be evaluated by only using grades that are taken from field subject courses because other course grades may give a misleading perception about the academic success of the learners.

Secondly, to compare the findings of the current research's results, it may be replicated in other contexts with interventionist forms of DA. Longitudinal research may also be conducted starting from the first year of the students to gain deeper insides into the needs of teachers and the developmental process of a teacher's field knowledge. This longitudinal study can be combined and compared with experiences that are gained during the teaching practicum. In long term, these studies can shape the teacher education curriculum. Moreover, teachers and educators' attitudes towards DA can also be investigated for further studies.

Finally, many studies have been conducted in clustering learners into reader profiles in the first language. However, second language learners have been searched for less. Therefore, a great deal of importance can be put forward for the L2 learners. It can be searched in the classroom environment to improve language learners' learning process and it may also be searched for lifespan development of L2 learners just as in the L1 in domain learning and development of reading. So, further research can be conducted by taking into consideration these views and the data and the results of the current research can be used for the recommended suggestions of research.

REFERENCES

1. __Books__

Alexander, Patricia A., Tamara L. Jetton (2020). "Learning from text: A multidimensional and developmental perspective". In: Eds. M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr. Handbook of reading research. Lawrence Erlbaum Associates Publishers, 285-310.

Antón, Marta (2012). "Dynamic assessment". In: Eds. Glenn Fulcher, Fred Davidson. The Routledge handbook of testing. London: Routledge, 106-119.

Alexander, A. Patricia (1997). "Mapping the multidimensional nature of domain learning: The interplay of cognitive, motivational, and strategic forces". In: Eds. M. L. Maehr & P. R. Pintrich. Advances in motivation and achievement, Greenwich, CT: JAI Press 10: 213-250.

Brown, Ann, Roberta A. Ferrera (1985). "Diagnosing zones of proximal development". In: Ed. James V. Wertsch. Culture, communication and cognition: Vygotskian perspectives. Cambridge: Cambridge University Press, 273-305.

Budoff, Milton (1987). "Measures for assessing learning potential". In: Ed. Carol S. Lidz. Dynamic assessment: An interactional approach to evaluating learning potential. New York: Guilford, 173–195.

Campione, Joseph C., Ann L. Brown (1987). "Linking dynamic assessment with school achievement". In: Dynamic assessment: An interactional approach to evaluating learning potential. New York: Guilford Press, 82–115.

Creswell, John W., J. David Creswell (2017). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. Fifth edition. Los Angeles: SAGE.

Dinsmore, Daniel. L., Courtney, Hattan, Alexandra, List (2017). "A meta-analysis of strategy use and performance in the model of domain learning". In: H. Fives & D. L. Dinsmore. The model of domain learning. New York, NY: Routledge, 37-55.

Doan Ngoc.B. (2014). "Teaching the target culture in English teacher education programs: Issues of EIL in Vietnam". In: Eds. Marlina R., Giri R. The pedagogy of English as an international language. English Language Education. Cham: Springer, 79-93. https://doi.org/10.1007/978-3-319-06127-6_6

Dörnyei, Zoltán (2007). Research methods in applied linguistics: Quantitative, qualitative, and mixed methodologies. Oxford: Oxford University Press.

Elkonin, Daniil B. (1998). "Epilogue". In: Ed. Rieber, R. W. The collected works of L. S. Vygotsky, Vol. 5: Child Psychology N-Y: Plenum Press, 297–317.

Ellis, Rod (2008). The Study of Second Language Acquisition. Oxford: Oxford University Press.

Feuerstein, Reuven, Raphael S. Feuerstein, Louis H. Falik, and Ya'acov Rand (2002). The dynamic assessment of cognitive modifiability: The Learning Propensity Assessment Device: Theory, instruments and techniques, Rev. and exp. ed. of The dynamic assessment of retarded performers. Jerusalem: ICELP Publications.

Fleiss, Joseph L. (1981). Statistical Methods for Rates and Proportions. London: John Wiley & Sons, 218.

Fox, Emily, Meghan M. Parkinson (2017). "Domain Explorations of the Model of Domain Learning–Reading." The model of domain learning. London: Routledge, 89-107.

Gass, Susan M. (2013). Second language acquisition: An introductory course. London: Routledge.

Golombek, Paula R. (2011). "Dynamic assessment in teacher education: Using dialogic video protocols to intervene in teacher thinking and activity" In Research on second language teacher education: A sociocultural perspective on professional development. London: Routledge.

Hacker, D. J. (1998). "Self-regulated comprehension during normal reading". In: Eds D. J. Hacker, J. Dunlosky, & A. C. Graesser Metacognition in educational theory and practice. Mahwah, NJ: Lawrence Erlbaum, 165-192.

Hair, Joseph F. and William C. Black (2000). "Cluster analysis". In: Eds Lawrence E. Grimm and Paul R. Yarnold. Reading and Understanding More Multivariate Statistics: New York: American Psychological Association, 147–296.

Hamers, Johan H., Wilma, Resing. (1993). "Learning potential assessment: Introduction". In Learning potential assessment: Theoretical, methodological and practical issues. Lisse: Swets & Zeitlinger Publishers, 23–41.

Johnson, Course, Karen E., Ekaterina Arshavskaya (2011). "Strategic mediation in learning to teach: Reconceptualizing the microteaching simulation in an MA TESL methodology course." Research on second language teacher education. London: Routledge, 182-200.

Kozulin, Alex (1998). Psychological tools: A sociocultural approach to education. Harvard: Harvard University Press.

Kozulin, Alex (2003). "Psychological tools and mediated learning". In: Eds Alex Kozulin, Boris Gindis, Vilademir S. Ageyev, Suzanne M. Miller. Vygotsky's

educational theory in cultural context. Cambridge: Cambridge University Press, 15-38.

Krapp, A., Hidi, S., & Renninger, K. A. (1992). "Interest, learning, and development". In: Eds K. A. Renninger, S. Hidi, & A. Krapp, The role of interest in learning and development. Hillsdale, NJ: Lawrence Erlbaum Associates, 3-25.

Kulikowich, Jonna M., and Michelle L. Hepfer (2017). "The model of domain learning (MDL): Stages of component interplays in academic development." The Model of Domain Learning. Routledge, 1-18.

Lantolf, James P. (2000). Sociocultural theory and second language learning. Oxford: Oxford University Press.

Lantolf, James P., Gabriela Appel (1994). Vygotskian approaches to second language research. California: Greenwood Publishing Group.

Lantolf, James, P., Matthew E. Poehner (2007). "Dynamic assessment". In: Eds. Elena Shohamy, Nancy Hornberger. Encyclopedia of language and education: Volume 7. Language testing and assessment. Berlin: Springer, 273–285.

Lidz, Carol Schneider (1991). Practitioner's guide to dynamic assessment. New York: Guilford Press.

Lidz, Carol S., Boris Gindis (2003). "Dynamic assessment of the evolving cognitive functions in children". In: Eds. Alex Kozulin, Boris Gindis, Vilademir S. Ageyev, Suzanne M. Miller. Vygotsky's educational theory in cultural context. Cambridge: Cambridge University Press, 99–118.

Mackey, Allison., Susan M. Gass (2005). Second language research: Methodology and design. United States: Lawrence Erlbaum Associates Publishers.

McNamara, Danielle S., Arthur C. Graesser, Philip M. McCarthy, Zhiqiang Cai (2014). Automated evaluation of text and discourse with Coh-Metrix. Cambridge, UK: Cambridge University Press

Paris, S. G., & Winograd, P. (1990)." How metacognition can promote academic learning and instruction". In: Eds B. F. Jones & L. Idol. Dimensions of thinking and cognitive instruction. Hillsdale, NJ: Erlbaum,15–51.

Poehner, Matthew, E. (2008). Dynamic assessment: A Vygotskian approach to understanding and promoting second language development. Berlin: Springer Publishing.

Pressley, M. (2000). "What should comprehension instruction be the instruction of?" In: Eds M. Kamil, P. Mosenthal, P. Pearson, & R. Barr, Handbook of reading research. Mahwah, NJ: Erlbaum, 545-561.

Pressley, Michael, and Peter Afflerbach (1995). Verbal protocols of reading: The nature of constructively responsive reading.

RAND Reading Study Group (2002). "Reading for understanding: Toward an R&D program in reading comprehension". Santa Monica: CA

Sternberg, Robert J., Elena L. Grigorenko (2002). Dynamic testing: The nature and measurement of learning potential. Cambridge: Cambridge University Press.

Tsui, Amy. (2003). Understanding expertise in teaching: Case studies of ESL teachers. Cambridge, MA: Cambridge University Press.

Verity, Deryn P. (2011). "The reverse move: Enriching informal knowledge in the pedagogical grammar class." Research on Second Language Teacher Education. London: Routledge, 167-181.

Vygotsky, L. (1978). Mind in society. Cambridge, MA: Harvard University Press.

Vygotsky, Lev Semenovich (1997). The collected works of LS Vygotsky: Problems of the theory and history of psychology. Vol. 3. Berlin: Springer Science & Business Media.

Wertsch, James V (1985). Vygotsky and the social formation of mind. Cambridge, MA: Harvard University Press.

Yoshida, Tatsuhiro (2011). "Moodle as a mediational space: Japanese EFL teachers' emerging conceptions of curriculum." Research on Second Language Teacher Education. London: Routledge, 150-166.

2. *Journal Articles, Papers, Other Printed Publications*

Abdelaal, Noureldin Mohamed, and Amal Saleh Sase (2014). "Relationship between Prior Knowledge and Reading Comprehension." Advances in Language and Literary Studies, 5(6): 125-131.

Afflerbach, Peter, Peter Johnston (1984). "On the use of verbal reports in reading research". Journal of Literacy Research, 16(4): 307–322. https://doi.org/10.1080/10862968409547524

Alagözlü, Nuray (2017). "Türkiye 'de İngilizce Öğretmeni Yetiştirme Sorunları". Türkbilig, 34, 241-248.

Alexander, Patricia A., Diane L. Schallert, and Victoria C. Hare (1991). "Coming to Terms: How Researchers in Learning and Literacy Talk About Knowledge." Review of Educational Research, 61(3), 315-343.

Alexander, Patricia A., Tamara L. Jetton, Jonna M. Kulikowich (1995). "Interrelationship of knowledge, interest, and recall: Assessing a model of domain learning". Journal of Educational Psychology, 87, 559-575.

Alexander, Patricia A., Steven Graham, Karen R. Harris (1998). "A perspective on strategy research: Progress and prospects". Educational Psychology Review, 10(2), 129-154.

Alexander, Patricia A., P. Karen Murphy (1998). "Profiling the differences in students' knowledge, interest, and strategic processing". Journal of Educational Psychology, 90(3), 435-447.

Alexander, Patricia A. (2005). "The Path to Competence: A Lifespan Developmental Perspective on Reading". Journal of Literacy Research, 37(4), 413–436. https://doi.org/10.1207/s15548430jlr3704_1

Aljaafreh, Ali, James P. Lantolf (1994). "Negative Feedback as Regulation and Second Language Learning in the Zone of Proximal Development". The Modern Language Journal, 78(4), 465-483. doi: 10.2307/328585

Alvermann, Donna E. (2001). Effective literacy instruction for adolescents. [Executive Summary and Paper Commissioned by the National Reading Conference.] Chicago, IL: National Reading Conference. http://nrc.oakland.edu/documents/2001/alverwhite2.doc

Anderson, Neil J (1991). "Individual differences in strategy use in second language reading and testing." The Modern Language Journal, 75(4), 460-472.

Atav, Esin, Suzan Sönmez (2013). Öğretmen adaylarının kamu personeli seçme sınavına ilişkin görüşleri. Hacettepe Üniversitesi Eğitim Fakültesi Dergisi, 1, 01-13.

Bråten, Ivar, Øistein, Anmarkrud (2013). "Does naturally occurring comprehension strategies instruction make a difference when students read expository text". Journal of Research in Reading, 36(1), 42–57. doi:10.1111/j.1467-9817.2011.01489.x

Budoff, Milton, Martin Friedman (1964). "Learning potential as an assessment approach to the adolescent mentally retarded". Journal of Consulting Psychology 28(5), 434–439.

Cantrell, Susan Chambers, Janis C. Carter (2009). "Relationships among learner characteristics and adolescents' perceptions about reading strategy use". Reading Psychology 30(3), 195-224.

Carlson, Jerry S., Karl Heinz Wiedl (1992). "Principles of dynamic assessment: The application of a specific model." *Learning and Individual Differences* 4(2), 153-166.

Darhower, Mark A. (2014). "Synchronous computer-mediated dynamic assessment: A case study of L2 Spanish past narration. CALICO Journal, 31(2), 221–243. doi:10.11139/cj. 31.2.221-243

Deutsch, Ruth, and Yvonne Reynolds. "The use of dynamic assessment by educational psychologists in the UK." *Educational psychology in practice* 16.3 (2000),311-331.

Devrim, Devo Y., Yasemin Bayyurt (2010). "Students' understandings and preferences of the role and place of 'culture 'in English Language Teaching: A focus in an EFL context." TESOL Journal 2(1), 4-23.

Dinsmore, Daniel L., Patricia A. Alexander (2016). "A multidimensional investigation of deep-level and surface-level processing". The Journal of Experimental Education, 84(2), 213-244.

Dinsmore, Daniel L., Emily Fox, Meghan M. Parkinson, Devrim Bilgili (2019). "Using Reader Profiles as Snapshots to Investigate Students Reading Performance". Journal of Experimental Education, 87(3), 470–495.

Entwistle, Noel, Velda McCune (2004). "The conceptual bases of study strategy inventories". Educational Psychology Review, 16(4), 325–345. doi:10.1007/s10648-004-0003-0.

Erdem, Emrullah, Yasin Soylu (2013). "Öğretmen adaylarının KPSS ve alan sınavına ilişkin görüşleri". Sosyal Bilimler Enstitüsü Dergisi, 4(1): 223-236

Ericsson, K. Anders, and Herbert A. Simon. (1980). "Verbal reports as data". Psychological Review, 87(3): 215-251.

Fabio, Rosa Angela. "Dynamic assessment of intelligence is a better reply to adaptive behavior and cognitive plasticity." *The Journal of General Psychology* 132.1 (2005): 41-66.

Fani, Tayebeh, Farid Ghaemi. (2011). "Implications of Vygotsky's zone of proximal development (ZPD) in teacher education: ZPTD and self-scaffolding". Procedia Social and Beahavioral Sciences, 29, 1549-1554.

Feuerstein, Reuven, Mildred B. Hoffman, Yaacov Rand, Mogens R. Jensen, David Tzuriel, David B. Hoffmann (1985). "Learning to learn: Mediated learning experiences and instrumental enrichment". Special Services in the Schools, 3(1-2): 49-82.

Fox, Emily, Daniel L. Dinsmore, Maggioni, Liliana, & Patricia A. Alexander (2008). "Undergraduates' independent and scaffolded reading of course texts: Further evidence of fragile understanding". In annual meeting of the American Educational Research Association, New York.

Fox Emily, Maggioni, Liliana, Riconscente M. (2005).” Exploring expertise in reading and with reading: Characteristics and methodological issues”. In P. Alexander (Chair). The road to domain expertise: Texts, situations, technology, and methodology. Symposium presented at the annual meeting of the American Psychological Association, Washington, DC.

Fox, Emily,Patricia A. Alexander. (2004) "Reading, interest, and the model of domain learning: A developmental model of interest, knowledge, and strategy use in text comprehension." meeting of the American Educational Research Association, San Diego: CA.

Fox, Nathan A., Heather A. Henderson, Peter J. Marshall, Kate E. Nichols, and Melissa M. Ghera. (2004) "Behavioral Inhibition: Linking Biology and Behavior within a Developmental Framework." Annual Review of Psychology, 56(1), 235–262. doi: 10.1146/annurev.psych.55.090902.141532.

Fox, Emily, Daniel L. Dinsmore, Maggioni Liliana, Patricia Alexander. (2009). "Undergraduates reading of course texts. Paper presented at the annual meeting of the American Educational Research Association", San Diego.

Gökçe, Feyyat. (2013). "Lisans öğrencileri ile formasyon programına devam eden kursiyerlerin KPSS konusundaki görüşleri.". Hacettepe Üniversitesi Eğitim Fakültesi Dergisi, (1), 171-190.

Guthke, Jürgen (1982). "The learning test concept—an alternative to the traditional static intelligence test". German Journal of Psychology, 6(4): 306–324.

Hattan, Courtney, Alexander Patricia. (2018). "Scaffolding Reading Comprehension for Competent Readers". Literacy Research: Theory, Method, and Practice, 238133691878688. doi:10.1177/2381336918786885

Hattan, Courtney, Daniel L. Dinsmore (2019). "Examining Elementary Students' Purposeful and Ancillary Prior Knowledge Activation When Reading Grade Level Texts". Reading Horizons: A Journal of Literacy and Language Arts, 58 (2): 3. Retrieved from https://scholarworks.wmich.edu/reading_horizons/vol58/iss2/3

Hidi, Suzanne, K. Ann Renninger. (2006)." The four-phase model of interest development". Educational Psychologist, 41(2): 111–127.

Kaivanpanah, Shiva, Rezaee, Abbas Ali, Neamatollahi, Morteza (2017). "The Influence of Strategic Mediation on Novice EFL Teachers' Pedagogical Knowledge". English Language Teaching, 4: 89-107.

Karaer, Hatice, Fergan Karaer, Elif Kartal (2018). "Kamu Personeli Seçme Sınavındaki Öğretmenlik Alan Bilgisi Testlerine Yönelik Öğretmen Adaylarının Görüşleri". Erciyes Journal of Education 2: 40-58

Kidwell, Tabitha (2019). "Teaching about Teaching about Culture: The Role of Culture in Second Language Teacher Education Programs." *TESL-EJ* 22(4): n4.

Kozulin, Alex, Erica Garb (2002). "Dynamic assessment of EFL text comprehension of at risk students". School Psychology International, 23(1), 112–127.

Krapp, Andreas (1999)." Interest, motivation and learning: An educational psychological perspective". European Journal of Psychology of Education, 14(1): 23-40.

Lantolf, James P. (2009) "Dynamic Assessment: The Dialectic Integration of Instruction and Assessment." Language Teaching, 42(3), 355–368. doi:10.1017/S0261444808005569.

Lantolf, James P., Matthew E. Poehner (2013). "The unfairness of equal treatment: Objectivity in L2 testing and dynamic assessment." Educational Research and Evaluation, 19 (2–3): 141–157. doi:10.1080/13803611.2013.767616

Lee, Lina (2008). "Focus-on-form through collaborative scaffolding in expert-to-novice online interaction". Language Learning & Technology, 12(3), 53–72.

List, Alexandra, Lori A. Stephens, Patricia. A. Alexander (2019)." Examining interest throughout multiple text use". Reading and Writing 32(2): 307–333. https://doi.org/10.1007/s11145-018-9863-4

Liu, Siping (2013)."Pedagogical Content Knowledge: A Case Study of ESL Teacher Educator." *English Language Teaching* 6(7): 128-138.

Luria, Aleksandr Romanovich (1961). "Study of the abnormal child." American Journal of Orthopsychiatry: A Journal of Human Behavior,31(1): 1–16.

Kamrood, Mehri A., Mohammad Davoudi, Saeed Ghaniabadi, Seyyed Mohammad Reza Amirian. (2019). "Diagnosing L2 learners' development through online computerized dynamic assessment". Computer Assisted Language Learning, 1-30. https://doi.org/10.1080/09588221.2019.1645181

Murphy, P. Karen, Patricia A. Alexander (2002). "What counts? The predictive power of subject-matter knowledge, strategic processing, and interest in domain-specific performance". Journal of Experimental Education, 70(3): 197-214.

Poehner, Matthew E., James P. Lantolf (2005). "Dynamic assessment in the language classroom." Language Teaching Research 9(3): 233-265.

Poehner, Matthew E., James P. Lantolf (2010). "Vygotsky's Teaching-Assessment Dialectic and L2 Education: The Case for Dynamic Assessment." Mind, Culture, and Activity: 17(4): 312–330.

Poehner, Matthew E., Jie Zhang, Xiaofei Lu (2015). "Computerized dynamic assessment (C-DA): Diagnosing L2 development according to learner responsiveness to mediation." Language testing, 32(3): 337-357.

Pressley, Michael. (2001). "Effective beginning reading instruction". [Executive Summary and Paper Commissioned by the National Reading Conference.] National Reading Conference. Chicago, IL. http://nrc.oakland.edu/documents/2001/pressleywhite2.doc

Recker, Margaret. M., Peter Pirolli (1995)." Modeling Individual Differences in Students' Learning Strategies". Journal of the Learning Sciences, 4(1): 1–38. doi:10.1207/s15327809jls0401_1

Renkl, Alexander (1997). "Learning from worked-out examples: A study on individual difference". Cognitive Science, 21(1). 1-29.

Rogiers, Amélie, Emmelien Merchie, Hilde Van Keer (2019). "Learner profiles in secondary education: Occurrence and relationship with performance and student characteristics." The Journal of Educational Research, 112(3): 385-396.

Schiefele, Ulrich, Andreas Krapp2 (1996). "Topic interest and free recall of expository text". Learning and Individual Differences, 8(2): 141–160.

Schiefele, Ulrich. (1999)." Interest and learning from text". Scientific Studies of Reading, 3(3): 257–279.

Sert, Ceyda (2015). "The role of teacher field knowledge test on teachers' knowledge". Procedia-Social and Behavioral Sciences, 199: 801-805.

Susan R. Goldman, M. Anne Britt, Willard Brown, Gayle Cribb, MariAnne George, Cynthia Greenleaf, Carol D. Lee, Cynthia Shanahan & Project READI (2016): Disciplinary Literacies and Learning to Read for Understanding: A Conceptual Framework for Disciplinary Literacy, Educational Psychologist.

Swiggett, Wanda D, Stacy L. Robustelli (2011). "Validity evidence to support the development of a licensure assessment for teachers of English to speakers of other languages: A job-analytic approach". ETS Research Memorandum

Teo, Adeline K. (2012) "Effects of dynamic assessment on college EFL learners' reading skills." Journal of Asia TEFL 9(1).

Tzuriel, David, and Ruth Kaufman. "Mediated learning and cognitive modifiability: Dynamic assessment of young Ethiopian immigrant children to Israel." *Journal of Cross-Cultural Psychology* 30.3 (1999): 359-380.

Wang, Tzu-Hua. "Implementation of Web-based dynamic assessment in facilitating junior high school students to learn mathematics." *Computers & Education* 56.4 (2011): 1062-1071.

Warford, Mark K. (2011). "The Zone of Proximal Teacher Development." Teaching and Teacher Education, 27(2): 252–258.

Wood, David, Jerome S. Bruner, Gail Ross (1976). "The role of tutoring in problem-solving". Journal of Child Psychology and Psychiatry and Allied Disciplines, 17(2): 89-100.

Yesilcinar, Sabahattin, Cakir Abdulvahit (2020). "Suggesting a Teacher Assessment and Evaluation Model for Improving the Quality of English Teachers". Education and Science, 45(202): 363-392.

Zhang, Jie, Xiaofei Lu, (2019). "Measuring and Supporting Second Language Development Using Computerized Dynamic Assessment". Language and Sociocultural Theory 6 (1): 92-115. https://doi.org/10.1558/lst.31710.

Zimmerman, Barry J. (1990). "Self-regulated learning and academic achievement: An overview". Educational Psychologist, 21: 3-18.

3.Electronic Sources

Coh-Metrix. (2017). http://cohmetrix.com/

ESOL Praxis Study Companion. https://www.ets.org/s/praxis/pdf/5361.pdf

Technical Manual for the Praxis Tests and Related Assessments.(2020). https://www.ets.org/s/praxis/pdf/technical_manual.pdf

Georgia Assessments for the Certification of Educators. (2021). https://www.gace.ets.org/

Ispring Solutions. (2021). https://www.ispringsolutions.com/

Student Selection and Placement Center. (2021). www.osym.gov.tr

YOK- Teacher Education Programmes. (2021). yok.gov.tr

2020-YKS Statistic Information about the university entrance exam. (2020). osym.gov.tr

APPENDICES

APPENDIX 1: English Language Education Course Structures

1st Semester Courses	2nd Semester Courses
Reading Skills I	Reading Skills II
Writing Skills I	Writing Skills II
Listening and Pronunciation I	Listening and Pronunciation II
Oral Communication Skills I	Oral Communication Skills II
Introduction to Education	Structure of English
Educational Sociology	Educational Psychology
Ataturk's Principles and History of	Philosophy of Education
Turkish Revolution I	Ataturk's Principles and History of
Turkish Language I	Turkish Revolution II
Foreign Language I	Turkish Language II
Information Technologies	Foreign Language II
3rd Semester Courses	**4th Semester Courses**
Instructional Technologies	History of Turkish Education
Principals and Methods of Teaching	Research Methods in Education
Approaches in English Language	Curriculum in ELT
Learning and Teaching	English Literature II
English Literature I	Linguistics II
Linguistics I	Second Language Acquisition
Critical Reading and Writing	Elective I- General Culture
Elective I- General Culture	Elective II- Educational Elective
Elective II- Educational Elective	Elective III- Area Elective
Elective III- Area Elective	
5th Semester Courses	**6th Semester Courses**
Classroom Management	Assessment and Evaluation in Education
Morals and Ethics in Education	Turkish Education System and School
Teaching Foreign Language to Young	Management
Learners I	Teaching Foreign Language to Young
Teaching English Language Skills I	Learners II
Language and Literature Teaching I	Teaching English Language Skills II
Elective I- General Culture	Language and Literature Teaching II
Elective II- Educational Elective	Elective I- General Culture
Elective III- Area Elective	Elective II- Educational Elective
	Elective III- Area Elective
7th Semester Courses	**8th Semester Courses**
Teaching Practice I	Teaching Practice II
Special Education and Inclusion	Counselling in Schools
Community Services	Testing in English Language Teaching
Instructional Design in English	Elective I- Educational Elective
Language Teaching	Elective II- Area Elective
Translation	
Elective I- Educational Elective	
Elective II- Area Elective	

APPENDIX 2: Prior Knowledge Test

Prior Knowledge Test

Choose the best option for each question considering your prior knowledge.

1. Young children…

A) can be very tolerant to any activities although they do not like the activity much.

B) can easily be distracted when they see that they are video recorded or tape-recorded.

C) are accustomed to be observed as their parents are always around them.

D) are somewhat difficult to observe in their natural conditions as there have been no device to watch them without their notice.

2. How many ways are there in order to study children's acquisition of a language?

A) There are several ways of studying language acquisition by combining several disciplines.

B) It is usually limited to how the researcher can observe the children.

C) There is only one way to study a child's language acquisition, which is called Linguistics.

D) Everything has been searched about language acquisition. So, there is no need to study it.

3. What does *linguistic ability* refer to?

A) creativity of one's utterances in difficult situations

B) dividing sentences to chunks and morphemes

C) hearing impaired children do not possess any abilities

D) the ability to learn and use the language

4. In first language acquisition,

A) Children acquire the language arbitrarily.

B) children are only limited with family environment for rich input.

C) There are some developmental stages that children should follow.

D) imitation is the utmost source of learning something new.

5. What does *the Critical Period Hypothesis* refer to?

A) It refers to the age range 10-15 when children are open to learn another language.

B) It refers to specific time period or barrier after which children can have difficulties or may never acquire language.

C) This hypothesis asserts the idea that children can acquire more than two languages until they reach puberty.

D) Children cannot learn anything about their first language after they become 15.

6. What does *boat lift* mean?

A) It is a machine for transporting boats between water at different heights.

B) It is a machine to vacuum the water under the boats.

C) It creates waves around a boat so that the other boats can be alarmed when that boat is too close.

D) It is a machine for searching a suitable place for securing a boat under heavy rain.

7. Dismantle means

A) taking apart a machine or structure so that it is in separate pieces

B) tearing apart something violently

C) vomiting when something is mentally disturbing.

D) reconstructing parts of a structure.

8. What does bolt mean?

A) a long, narrow piece of metal that you slide across the inside of a door or window in order to lock it

B) brave and confident; not afraid to say what you feel or to take risks

C) to join pieces of metal together by heating their edges and pressing them together

D) a place where two bones are joined together in the body in a way that enables them to bend and move

9. According to Archimedes' principle of displacement,

A) when an object is put in the water, the water does not displace under the circumstances that the object is heavier than a gold.

B) if the weight of the water displaced is equal to the weight of the object put in the water, the object will float.

C) anything put in the water floats.

D) anything put in the water sinks although it is lighter than the water.

10. Which one is true about the gear systems in general?

A) Each cog transmits the same amount of energy.

B) It is only used in the automobiles.

C) It helps transmitting speed, torque, and power relating to each other.

D) Inner cogs and outer cogs move at the same pace.

11. What does deductive reasoning mean?

A) It is the process of reasoning from a general conclusion to special reasons.

B) It is the process of reasoning from general statements to reach a logical conclusion.

C) It is about predicting a reason from sceptical clues.

D) It is the segregation of various reasons into small parts.

12. According to behaviourism,

A) teachers should not always control students' learning because each person is independent and self-monitoring is the key in learning.

B) learner is responsible for his/her own learning process and shapes it as the needs arise.

C) learners can achieve a task with the help of their social environment.

D) a change in external behaviour achieved through using reinforcement and repetition (to shape behaviour of learners.

13. Which one can be true about learning tasks which require inferential processes?

A) Tasks are achieved by the combination of various other activities' results.

B) These tasks can be done without referring to other resources.

C) Tasks are one-way so that learners do not need to waste their time to infer anything else.

D) For these tasks, teachers ask learners for direct solutions.

14. According to behaviourism, how can learning or changing behaviours best be achieved?

A) Through giving responsibilities to the learners

B) Through negative reinforcement and punishment

C) Through using reinforcement and repetition

D) Only with the interference of parents

15. Which of the following statements **may not be** an example for inductive reasoning?

A) The left-handed people I know use left-handed scissors; therefore, all left-handed people use left-handed scissors.

B) The chair in the living room is red. The chair in the dining room is red. The chair in the bedroom is red. All the chairs in the house are red.

C) Ray is a football player. All the other football players on the high school team weigh more than 170 pounds. Therefore, Ray must weigh more than 170 pounds.

D) All numbers ending in 0 or 5 are divisible by 5. The number 35 ends with a 5, so it must be divisible by 5.

APPENDIX 3- PRIOR INTEREST SCALE

Topic Interest Inventory

Put a tick from <u>1 to</u> 7 for your interest in the following topics.

How interesting is/are... for you?	1 not interesting	2 Slightly interesting	3	4 Somewhat interesting	5	6 Fairly interesting	7 very interesting
Linguistic studies							
Language acquisition							
History of research in first language acquisition							
Research methods							
Different ways of data sampling							
Mechanical engineering							
Assembling process of a building							
Materials behaviour in different circumstances							
Fluid dynamics							
Archimedes' Principle							
Thinking process							
Psychology and its relation with education							
Research studies in psychology							
Learning processes							
Deductive and inductive reasoning							

Investigating Children's Language

A) For over 200 years, there has been an interest in the way children learn to speak and understand their first language. Scholars carried out several small-scale studies, especially towards the end of the 19th century, using data they recorded in parental diaries. But detailed, systematic investigation did not begin until the middle decades of the 20th century, when the tape recorder came into routine use. This made it possible to keep a permanent record of samples of child speech, so that analysts could listen repeatedly to obscure extracts, and thus produce a detailed and accurate description. Since then, the subject has attracted enormous multi-disciplinary interest, notably from linguists and psychologists, who have used a variety of observational and experimental techniques to study the process of language acquisition in depth.

B) Central to the success of this rapidly emerging field lies the ability of researchers to devise satisfactory methods for eliciting linguistic data from children. The problems that have to be faced are quite different from those encountered when working with adults. Many of the linguist's routine techniques of enquiry cannot be used with children. It is not possible to carry out certain kinds of experiments, because aspects of children's cognitive development – such as their ability to pay attention, or to remember instructions – may not be sufficiently advanced. Nor is it easy to get children to make systematic judgments about language, a task that is virtually impossible below the age of three. And anyone who has tried to obtain even the most basic kind of data – a tape recording of a representative sample of a child's speech – knows how frustrating this can be. Some children, it seems, are innately programmed to switch off as soon as they notice a tape recorder being switched on.

C) Since the 1960s, however, several sophisticated recording techniques and experimental designs have been devised. Children can be observed and recorded through one-way-vision windows or using radio microphones, so that the effects of having an investigator in the same room as the child can be eliminated. Large-scale sampling programmes have been carried out, with children sometimes being recorded for several years. Particular attention has been paid to devising experimental techniques that fall well within a child's intellectual level and social experience. Even pre-linguistic infants have been brought into the research: acoustic techniques are used to analyse their vocalisations, and their ability to perceive the world around them is monitored using special recording equipment. The result has been a growing body of reliable data on the stages of language acquisition from birth until puberty.

D) There is no single way of studying children's language. Linguistics and psychology have each brought their own approach to the subject, and many variations have been introduced to cope with the variety of activities in which children engage, and the great age range that they present. Two main research paradigms are found.

E) One of these is known as 'naturalistic sampling'. A sample of a child's spontaneous use of language is recorded in familiar and comfortable surroundings. One of the best places to make the recording is in the child's own home, but it is not always easy to maintain good acoustic quality, and the presence of the researcher or the recording equipment can be a distraction (especially if the proceedings are being filmed). Alternatively, the recording can be made in a

research centre, where the child is allowed to play freely with toys while talking to parents or other children, and the observers and their equipment are unobtrusive.

F) A good quality, representative, naturalistic sample is generally considered an ideal datum for child language study. However, the method has several limitations. These samples are informative about speech production, but they give little guidance about children's comprehension of what they hear around them. Moreover, samples cannot contain everything, and they can easily miss some important features of a child's linguistic ability. They may also not provide enough instances of a developing feature to enable the analyst to make a decision about the way the child is learning. For such reasons, the description of samples of child speech has to be supplemented by other methods.

G) The other main approach is through experimentation, and the methods of experimental psychology have been widely applied to child language research. The investigator formulates a specific hypothesis about children's ability to use or understand an aspect of language, and devises a relevant task for a group of subjects to undertake. A statistical analysis is made of the subjects' behaviour, and the results provide evidence that supports or falsifies the original hypothesis.

H) Using this approach, as well as other methods of controlled observation, researchers have come up with many detailed findings about the production and comprehension of groups of children. However, it is not easy to generalise the findings of these studies. What may obtain in a carefully controlled setting may not apply in the rush of daily interaction. Different kinds of subjects, experimental situations, and statistical procedures may produce different results or interpretations. Experimental research is therefore a slow, painstaking business; it may take years before researchers are convinced that all variables have been considered and a finding is genuine.

Questions 1-5

This reading passage has eight paragraphs, **A-H**.

Which paragraphs contain the following information?

Write the correct letter **A-H** into the blank.

NB You may use any letter more than once.

1. the possibility of carrying out research on children before they start talking ....
2. the difficulties in deducing theories from systematic experiment ....
3. the differences between analysing children's and adults' language ....
4. the ability to record children without them seeing the researcher ....
5. the drawbacks of recording children in an environment they know ....

Questions 6-9

Do the following statements agree with the information given in the passage?

Write in the blank

TRUE   if the statement agrees with the information

FALSE   if the statement contradicts the information

NOT GIVEN   if there is no information on this

6. In the 19th century, researchers studied their own children's language. ....

7. Attempts to elicit very young children's opinions about language are likely to fail. ....

8. Radio microphones are used because they enable researchers to communicate with a number of children in different rooms. ....

9. Many children enjoy the interaction with the researcher. ....

Questions 10-14

Complete the summary below.

Choose **NO MORE THAN TWO WORDS** from the passage for each answer.

Write your answers in the blanks.

Ways of investigating children's language

One method of carrying out research is to record children's spontaneous language use. This can be done in their homes, where, however, it may be difficult to ensure that the recording is of acceptable   . Another venue which is often used is a   , where the researcher can avoid distracting the child. A drawback of this method is that it does not allow children to demonstrate their comprehension.

An alternative approach is to use methodology from the field of_____. In this case, a number of children are asked to carry out a_____, and the results are subjected to a_____.

THE FALKIRK WHEEL

A unique engineering achievement

The Falkirk Wheel in Scotland is the world's first and only rotating boat lift. Opened in 2002,it is central to the ambitious £84.5m Millennium Link project to restore navigability across Scotland by reconnecting the historic waterways of the Forth & Clyde and Union Canals.

The major challenge of the project lays in the fact that the Forth & Clyde Canal is situated 35 metres below the level of the Union Canal. Historically, the two canals had been joined near the town of Falkirk by a sequence of 11 locks - enclosed sections of canal in which the water level could be raised or lowered - that stepped down across a distance of 1.5 km. This had been dismantled in 1933, thereby breaking the link. When the project was launched in 1994, the British Waterways authority were keen to create a dramatic twenty- first-century landmark which would not only be a fitting commemoration of the Millennium, but also a lasting symbol of the economic regeneration of the region.

Numerous ideas were submitted for the project, including concepts ranging from rollingeggs to tilting tanks, from giant seesaws to overhead monorails. The eventual winner was a plan for the huge rotating steel boat lift which was to become The Falkirk Wheel. The unique shape of the structure is claimed to have been inspired by various sources, both manmade and natural, most notably a Celtic double headed axe, but also the vast turning propeller of a ship, the ribcage of a whale or the spine of a fish.

The various parts of The Falkirk Wheel were all constructed and assembled, like one giant toy building set, at Butterley Engineering's Steelworks in Derbyshire, some 400 km from Falkirk. A team there carefully assembled the 1,200 tonnes of steel, painstakingly fitting the pieces together to an accuracy of just 10 mm to ensure a perfect final fit. In the summer of 2001, the structure was then dismantled and transported on 35 lorries to Falkirk, before all being bolted back together again on the ground, and finally lifted into position in five large sections by crane. The Wheel would need to withstand immense and constantly changing stresses as it rotated, so to make the structure more robust, the steel sections were bolted rather than welded together. Over 45,000 bolt holes were matched with their bolts, and each bolt was hand-tightened.

The Wheel consists of two sets of opposing axe-shaped arms, attached about 25 metres apart to a fixed central spine.Two diametrically opposed water-filled 'gondolas', each with a capacity of 360,000 litres,are fitted between the ends of the arms. These gondolas always weigh the same, whether or not they are carrying boats. This is because, according to Archimedes' principle of displacement, floating objects displace their own weight in water. So when a boat enters a gondola, the amount of water leaving the gondola weighs exactly the same as the boat. This keeps the Wheel balanced and so, despite its enormous mass, it rotates through 180° in five and a half minutes while using very little power. It takes just 1.5 kilowatt-hours (5.4 MJ) of energy to rotate the Wheel -roughly the same as boiling eight small domestic kettles of water.

Boats needing to be lifted up enter the canal basin at the level of the Forth & Clyde Canaland then enter the lower gondola of the Wheel. Two hydraulic steel gates are raised, so as to seal

the gondola off from the water in the canal basin. The water between the gates is then pumped out. A hydraulic clamp, which prevents the arms of the Wheel moving while the gondola is docked, is removed, allowing the Wheel to turn. In the central machine room an array of ten hydraulic motors then begins to rotate the central axle. The axle connects to the outer arms of the Wheel, which begin to rotate at a speed of 1/8 of a revolution per minute. As the wheel rotates, the gondolas are kept in the upright position by a simple gearing system. Two eight-metre-wide cogs orbit a fixed inner cog of the same width,connected by two smaller cogs travelling in the opposite direction to the outer cogs – so ensuring that the gondolas always remain level. When the gondola reaches the top, the boat passes straight onto the aqueduct situated 24 metres above the canal basin.

The remaining 11 metres of lift needed to reach the Union Canal is achieved by means of a pair of locks. The Wheel could not be constructed to elevate boats over the full 35-metre difference between the two canals, owing to the presence of the historically important Antonine Wall, which was built by the Romans in the second century AD. Boats travel under this wall via a tunnel, then through the locks, and finally on to the Union Canal.

Questions 1-6
Do the following statements agree with the information given in Reading Passage?

In blanks 1-6, write

TRUE   if the statement agrees with the information
FALSE   if the statement contradicts the information
NOT GIVEN if there is no information on this

1. ....   The Falkirk Wheel has linked the Forth & Clyde Canal with the Union Canal for the first time in their history.

2. ....   There was some opposition to the design of the Falkirk Wheel at first.

3. ....   The Falkirk Wheel was initially put together at the location where its components were manufactured.

4. ....   The Falkirk Wheel is the only boat lift in the world which has steel sections bolted together by hand.

5. ....   The weight of the gondolas varies according to the size of boat being carried.

6. ....   The construction of the Falkirk Wheel site took into account the presence of a nearby ancient monument.

Questions 7-13

Label the diagram below.
Choose **ONE WORD** from the passage for each answer.

How a boat is lifted on the Falkirk Wheel

A pair of **7** .... are lifted in order to shut out water from canal basin

A **8** .... is taken out, enabling Wheel to rotate

13 .... raise boat 11 m to level of Union Canal

Hydraulic motors drive **9** ....

Boat is raised, floating in one of Wheel's two gondolas

Boat travels through tunnel beneath Roman **12** ....

Boat reaches top Wheel, then moves directly onto **11** ....

A range of different-sized **10** .... ensures boat keeps upright

7.

8.

9.

10.

11.

12.

13.

Adapted ESOL Praxis Test

This test consists of 50 questions which aim to assess your knowledge about teaching English to speakers of other languages . There are six groups of questions:

1. Foundation of Linguistics
2. Foundation of Learning
3. Planning and Implementing Instruction
4. Assessment and Evaluation
5. Culture
6. Professionalism and Advocacy

Abbreviations:
CBEC: Content-Based ESL Curriculum
CALP: Cognitive Academic Language Proficiency
BICS: Basic Interpersonal Communication Skills
LEP: Limited English Proficiency
ELL: English Language Learner
ESOL: English to Speakers of Other Languages

Please do not get any help from the internet. Test yourself. There is no time limit. **If your answer to a question is wrong, you will get a feedback and you can try to answer the question again.**

5. An English language learner(ELL) approaches the ESOL teacher and says "Give me a piece of paper." The ELL's utterance is best characterized as an error in

○ article usage

○ word order

○ register

○ conjuction

SUBMIT

5. An English language learner(ELL) approaches the ESOL teacher and says "Give me a piece of paper." The ELL's utterance is best characterized as an error in

( ) article usage

( ) word order

( ) register

(•) conjuction

Incorrect   ⌄

This answer is wrong. Try again.

CONTINUE >

5. An English language learner(ELL) approaches the ESOL teacher and says "Give me a piece of paper." The ELL's utterance is best characterized as an error in

(•) article usage

( ) word order

( ) register

( ) conju

Incorrect   ⌄

This answer is wrong. The learner is speaking to the teacher. The learner should adapt her request according to who she speaks to.

TRY AGAIN

5. An English language learner(ELL) approaches the ESOL teacher and says "Give me a piece of paper." The ELL's utterance is best characterized as an error in

○ article usage

◉ word order

✔ ○ regist **Incorrect** ⌄

○ conju

The answer is wrong. In this example, the EL has addressed the teacher in a manner that is too informal for their relationship, making it an error in the appropriate use of register (formal vs. informal).

CONTINUE ›

APPENDIX 6- DYNAMIC ASSESSMENT KNOWLEDGE-RELIANT READERS

Question List

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2. Listen to an ESOL student read the following sentence aloud. Recorded excerpt
He finally went to bed. (Student pronounces "bed" as [bEt]) The error in pronunciation in the word "bed" indicates a problem with

◯ final intonation patterns

◯ places of articulation

◯ voiced and voiceless sounds

◉ word

Incorrect

This answer is wrong. You should look carefully where the error happens.

CONTINUE >

Question List

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2. Listen to an ESOL student read the following sentence aloud. Recorded excerpt
He finally went to bed. (Student pronounces "bed" as [bEt]) The error in pronunciation in the word "bed" indicates a problem with

◉ final intonation patterns

◯ places of articulation

◯ voice

◯ word

Incorrect

This answer is wrong. There is a problem with the pronunciation of the last phoneme. D and t are pronounced in different ways.

TRY AGAIN

2. Listen to an ESOL student read the following sentence aloud. Recorded excerpt
He finally went to bed. (Student pronounces "bed" as [bEt]) The error in pronunciation in the word "bed" indicates a problem with

○ final intonation patterns

○ places

✓ ○ voice

◉ word

Incorrect

The answer is wrong. Stress and intonation do not determine final consonant forms, and [t] and [d] have the same place of articulation. However, [t] is a voiceless sound and [d] is a voiced sound. Correct answer is voiced and voiceless sounds.

CONTINUE >

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CONFERENCE PRESENTATIONS

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PUBLICATIONS

Keten, U. (2021). Investigating Language Learning Strategies and Language Learning Anxiety of Preparatory School Students. *FIRE: Futuristic Implementations of Research in Education*, *2*(1), 13-23.

ACADEMIC INTERESTS

Dynamic Assessment, Language Assessment in Practice, Young Learners

LANGUAGE

Turkish---Mother Language

English--- Advanced