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DIFFERENT STAKEHOLDERS' LOCALIZED CONCEPTUALIZATION OF TECHNOLOGY-ENHANCED LANGUAGE ASSESSMENT LITERACY IN HIGHER EDUCATIONAL CONTEXT IN TÜRKİYE

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ÖZET

Nazlı BULUT

Türkiye'de Yüksek Öğretim Bağlamında Teknoloji Destekli Dil Değerlendirme Okuryazarlığının Farklı Paydaşlar Tarafından Yerelleştirilmiş Kavramsallaştırılması

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Bu nicel çalışma, Teknoloji Destekli Dil Değerlendirme Okuryazarlığının (TELAL) Türkiye'deki Yükseköğretim bağlamında, paydaşların yerelleştirilmiş kavramsallaştırmalarını araştırmaktadır. Çalışma, 139 katılımcıdan oluşan, özel bir üniversitedeki dört temel paydaş grubunun TELAL perspektiflerini araştırmaktadır. Araştırmanın verileri Likert ölçek formatında anket aracılığıyla toplanmıştır. Ek olarak, çalışma veri analizi için SPSS kullanılarak, Çok Değişkenli Varyans Analizi (MANOVA) ve radar grafikleri de dahil olmak üzere tanımlayıcı ve çıkarımsal analizler yapılmıştır.

Bulgular, dijital kaynakların dil değerlendirmesinde gerekliliğine dair ortak bir inanç olduğunu vurgulamaktadır. Bunun yanı sıra farklı paydaşların dijital kaynakların farklı derecelerde dil değerlendirme sürecine entegre edilmesi gerektiğini düşündükleri gözlemlenmiştir. Çalışma, katılımcıların dil değerlendirme sürecindeki rollerinin TELAL'ın tüm boyutlarındaki yeterliliklerini de önemli ölçüde etkilemediğini ortaya koymaktadır. Paralel olarak, çalışmada dil değerlendirilmesi için web tabanlı teknolojiler konusunda eğitime önemli bir ihtiyaç olduğunu da ortaya koymaktadır.

Anahtar Kelimeler: Teknoloji Destekli Dil Değerlendirme Okuryazarlığı (TELAL), Dil Becerilerinin Değerlendirilmesi, Eğitim Teknolojileri, İngilizcenin Yabancı Dil Olarak Öğretimi

ABSTRACT

Nazlı BULUT

Different Stakeholders' Localized Conceptualization of Technology-Enhanced Language Assessment Literacy in Higher Educational Context in Türkiye

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This quantitative study investigates the localized conceptualization of Technology-Enhanced Language Assessment Literacy (TELAL) within the higher education context in Türkiye. Focused on a foundational university, the research explores TELAL perspectives across four crucial stakeholder groups: EFL language instructors, administrators, testing unit members, and EFL teacher trainers. Utilizing purposeful sampling and an adapted questionnaire, the study engages 139 participants. Methodologically, using SPSS, the research employs descriptive and inferential analyses, including Multivariate Analysis of Variance (MANOVA) and radar graphics.

The findings emphasize a general belief in the effectiveness of technology in language testing, accompanied by varying degrees of integration of online resources. It is noteworthy that the study reveals that participants' roles within the language assessment process do not significantly impact their proficiency across all dimensions of TELAL. The study reveals a significant need for training in web-based technologies for language assessment.

Key Words: Technology-Enhanced Language Assessment Literacy (TELAL), Language Assessment, Educational Technology, English as a Foreign Language

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SYMBOLS AND ABBREVIATIONS

ANOVA	Analysis of Variance
AL	Assessment Literacy
MANOVA	Multivariate Analysis of Variance
LAL	Language Assessment Literacy
TEA	Technology-enhanced Language Assessment
TELL	Technology-enhanced Language Learning
TELA	Technology-enhanced Language Assessment
TELAL	Technology-enhanced Language Assessment Literacy
UNESCO	United Nations Educational, Scientific and Cultural Organization

CHAPTER I

INTRODUCTION

This chapter presents and discusses background to the research, provides the statement of the problem, explains the purpose and significance of the study, and presents the research questions.

1.1. Background of the Study

The profound impact of technological advancements on human existence has become increasingly evident, particularly over the last two decades. In contemporary society, people are continuously and extensively utilizing their smartphones and other smart devices for a wide array of activities, including communication, social interaction, information gathering, and more. These technologies have granted individuals access to cutting-edge artificial intelligence-driven healthcare monitoring systems, vast stores of information, online education, internet banking and shopping, and seamless video conferencing capabilities, all available at their convenience. The influence of these advancements extends beyond personal life and into both educational and everyday settings. Many modern classrooms are now equipped with interactive whiteboards, which provide students with internet access, enabling them to tap into a wealth of audio and video resources, online educational tools, and various opportunities for knowledge enrichment through technology. Consequently, educational paradigms have been steadily shifting towards digitally driven teaching, learning, and assessment environments.

Within the realm of language teaching and learning, innovative concepts such as Technology-enhanced Language Learning (TELL) and Technology-enhanced Language Teaching (TELT) have emerged in response to the evolving educational landscape. These approaches leverage information and communications technologies to enhance language instruction and adapt it to the digital age. Language teaching and assessment practices have also undergone substantial transformation with the aid of online educational tools and technology-enhanced teaching and assessment platforms, benefiting educators and students worldwide. As a result of these developments, the term Technology-enhanced Language

Assessment (TELA) has emerged as an umbrella term encompassing various methods of language assessment that harness technological means to enhance evaluation processes.

It is crucial to recognize that these advancements extend their influence across diverse aspects of human life, from education to healthcare and communication. They have ushered in new opportunities and challenges, and as technology continues to advance, it is poised to reshape our future in even more profound and unforeseen ways. Therefore, adapting to and harnessing the benefits of these technological changes while addressing the challenges they present is essential for navigating the evolving digital landscape effectively.

Computer-based learning resources have indeed been in use for an extended period, and their application now extends to both language evaluation and instruction. These concepts have previously gone by various names, including E-Assessment, Computer Adaptive Testing, Mobile Assisted Language Learning (MALL), and Computer Assisted Language Learning (CALL). However, it is important to note that online assessments are no longer confined solely to traditional computers. Thanks to technological advancements, language assessment can now be conducted not only on desktop and laptop computers but also on a wide range of devices, including smartphones (Bahari 2021). Furthermore, the landscape of e-learning has undergone a significant transformation, evolving into what is now termed "*ubiquitous learning*." This evolution is attributed to the growing availability of free wireless network access points, which has a profound impact on how end-users interact with their smart devices. Ubiquitous learning embraces a state of constant connectivity and accessibility to educational resources through digital technology, allowing learners to engage with content, assessments, and educational materials in various settings, both inside and outside of the traditional classroom environment. This shift has revolutionized the learning experience, making education more flexible, accessible, and adaptive to the needs of modern learners (Ebner et al., 2009). The use of technology in education and language assessment continues to evolve as new innovations emerge, and it is expected to play an increasingly central role in shaping the future of learning and evaluation.

Today's global pandemic, Covid-19, forced the majority of schools to suspend face-to-face education due to the global lockdowns. For a significant amount of time, all language instruction, as well as other subjects, had to be conducted online, through

blended, or hybrid teaching methods. Some schools and universities have announced that they would henceforth adopt various forms of education precisely because they have been proven to be practical, helpful, and advantageous. Most of the educational institutions have started to use blended teaching and learning models more extensively. As a natural outcome, both instruction and assessment have shifted to online platforms. It appears that assessments are conducted on various mobile devices, including tablets, personal computers, and even smartphones, for both formative and summative purposes. As a result, instructors must possess a certain literacy to make informed judgments about students' abilities and a variety of talents.

The rapid advancements in technology have fundamentally reshaped the landscape of educational assessment methods. Öz (2014) underlines the significant role of Information and Communication Technologies (ICT) in fostering web-based assessments, establishing them as viable alternatives for both formative and summative evaluations. This technological evolution holds particular significance within language teaching, where assessment serves multifaceted purposes. Language instructors utilize assessment tools not only to evaluate student progress across diverse contexts but also to align their teaching strategies with predefined learning objectives (Gronlund, 1998). In the domain of language education, teachers frequently bear the responsibility of evaluating students and monitoring their linguistic development, necessitating a substantial allocation of their professional time to assessment-related activities (Plake, 1993). Consequently, educators actively engage in various facets of the assessment process, highlighting the pivotal role of their assessment literacy. Mede & Atay (2017) emphasize the critical nature of teachers' assessment literacy in ensuring the quality of language testing and assessment (LTA). This literacy, defined by Inbar-Lourie (2008) as a comprehensive knowledge base grounded in theory and interlinked with education, linguistics, and applied linguistics, stands as an essential foundation for educators. Malone (2011) further accentuates the indispensable nature of a robust grounding in assessment literacy, asserting its pivotal role in enabling educators to adeptly implement assessment procedures within their educational settings, thereby facilitating effective teaching and learning experiences.

All in all, today digital literacies, technology-literacies, technology-enhanced literacies are just as crucial as language assessment literacy, especially in the context of testing and assessment during and after the global pandemic. Correspondingly, UNESCO (2011) asserts that merely possessing Information and Communications Technology (ICT)

skills and being able to convey them to students is no longer sufficient for instructors. All parties involved in language teaching and assessment should be knowledgeable about the new technology-enhanced language learning, teaching, and assessment procedures. In this context, it is important for language teachers and other stakeholders to increase their language assessment literacy levels so that technology can be used effectively in the field of language education and offer the best education to students. Given the rapid changes in technology and language teaching, acquiring, and maintaining these literacies plays a critical role in improving the quality of education and student success.

1.2. Statement of Problem

The emergence of the COVID-19 global pandemic has led to a significant transformation in the field of education, necessitating a transition towards remote and hybrid learning contexts. Consequently, significant changes were made to the environment of student assessment. The conventional methods of conducting examinations, which heavily relied on physical presence, faced significant limitations as a result of the constraints imposed by the pandemic. Educational professionals promptly adjusted their practices, shifting their focus from standardized assessments to prioritizing the evaluation of problem-solving skills and critical thinking capabilities. Additionally, continuous assessment has become increasingly prominent in educational settings, providing students with valuable feedback. However, a number of challenges emerged, with particular emphasis on the need to ensure equal access to technology for assessments and to ensure the dependability and fairness of online evaluations. Along with these changes, educators encountered a dynamic environment in which assessment methods underwent simultaneous evolution alongside the ongoing transformations in the field of education.

Furthermore, in this ever-changing teaching, learning, and assessment environment, students who are born into the information era and are native speakers of digital language are referred to as "*digital natives*" and those who did not grow up in a digital world are often called "*digital immigrants*" (Prensky, 2012). As Prensky (2012) pointed out, "our Digital Immigrant instructors, who speak an outdated language (that of the pre-digital age), are struggling to teach a population that speaks an entirely new language" (p.2). As society and technological needs rapidly evolve, instructors in higher education are required to be proficient in digital technologies and capable of assessing students' skills simultaneously.

When it comes to supporting and enhancing language assessment, technology can be a valuable tool. However, the effectiveness of any technological tool depends on the knowledge and skills of the certified language teacher who manages and supports the language learning environment. In addition to this, the quality of education is significantly influenced by teachers' knowledge on assessment (Malone, 2013).

According to Stiggins (2007), instructors will need to increase their assessment literacy levels in the future. In the past, they weren't expected to be highly literate in assessment and digital technology. However, as society and circumstances have changed, there is a growing demand for teachers to become much more proficient in these areas. As a result, the demand for enhanced literacy in language testing and assessment extends beyond language teachers, encompassing test developers, researchers, and various stakeholders involved in language education. This collective expertise is vital in meeting the evolving needs dictated by changes in society and educational circumstances, emphasizing the growing importance of assessment literacy within these domains.

In light of the assessment literacy literature's findings that teachers often lack sufficient assessment skills, the question of how instructors can effectively evaluate students' skills using technology tools is a subject of discussion (Şahin & Hatipoğlu, 2023). Moreover, if any of the parties involved in the assessment process lacks the necessary literacy in language evaluation, it raises concerns about the overall validity of the assessment process. According to studies (Vogt and Tsagari, 2014; Tsagari and Vogt, 2017), English language teachers often lack a comprehensive understanding of Language Assessment Literacy (LAL) and are unfamiliar with appropriate evaluation procedures and approaches to enhance their students' language learning experiences. Consequently, it's reasonable to assume that language teachers may also be unfamiliar with technology competencies related to assessment.

Furthermore, the establishment of technology-enhanced learning environments in universities and the integration of technological tools into learning, teaching, and assessment have given rise to specific concerns. The knowledge and theoretical prerequisites for technology-based evaluation may differ depending on the roles of the stakeholders involved. Different tasks in language assessment require distinct competencies. Even though there have been studies on the language assessment literacy (LAL) demands of various stakeholders (Pill and Harding, 2013; Taylor, 2013), there has

been limited research on the technology-enhanced language assessment literacy demands of various stakeholders and the development of a tool to measure their perceived level of TELAL.

Overall, the abrupt shift prompted by the global pandemic has brought attention to the disparity between conventional instructional approaches and the need for technology-based evaluation methods. As a result, a considerable number of educators face challenges in terms of their readiness and resources to effectively incorporate these emerging assessment methods into their instructional approaches. As a result, there's a pressing need for comprehensive training and support mechanisms to assist teachers in navigating and mastering these evolving assessment modalities. In Türkiye several studies have been conducted to examine teachers' needs and perceptions concerning TELT, and TELA (Aydın, 2013; Demir et al., 2022; Turgut & İrgin, 2009; Öz, 2014). However, to the best of the researcher's knowledge, there has been limited research related to EFL teachers' and various stakeholders' conceptualizations of TELAL. Therefore, it is a logical conclusion that the assessment component of these concepts, now referred to as TELAL, requires further investigation.

The landscape of language assessment within English Language Teacher Education Programs in Turkey has faced significant challenges, as highlighted by Şahin (2019). Her comprehensive study, "An Analysis of English Language Testing and Evaluation Course in English Language Teacher Education Programs in Turkey," uncovered substantial limitations within the English Language Testing and Evaluation Course (ELTEC) concerning the development of Language Assessment Literacy (LAL) among pre-service EFL teachers. The study shed light on critical deficiencies within ELTEC, emphasizing that the existing course structure might inadequately equip pre-service teachers. These findings align with the broader challenges observed within the educational landscape, especially the ongoing transition towards technology-enhanced assessment methods. In the wake of the COVID-19 pandemic, educators encountered a dynamic environment where assessment methods underwent simultaneous evolution alongside transformations in the field of education. The emergence of technology-enhanced learning environments in universities has highlighted the need for educators to be proficient in both digital technologies and assessment methodologies. Moreover, the lack of comprehensive understanding of LAL among English language teachers, as highlighted in Şahin's (2019) research, potentially extends to their familiarity with technology competencies related to

assessment. This critical gap in understanding the technology-enhanced language assessment literacy demands of various stakeholders necessitates further exploration.

While previous studies have delved into teachers' perceptions concerning TELT and TELA, there remains a need of research related to the conceptualizations of TELAL among EFL teachers and various stakeholders. Therefore, this study aims to address this gap by investigating how educators and stakeholders conceptualize the aspects of TELAL within the evolving landscape of language assessment, particularly within Türkiye's educational context. Moreover, Şahin's (2019) study provides a crucial baseline for comprehending the current state of LAL within the Turkish EFL teacher education landscape. Building upon her insights, this study further examines TELAL within the same context, aiming to delve deeper into the integration of technology into language assessment practices among educators and stakeholders.

1.3. Purpose of the Study

According to Taylor and Harding (2020) it is crucial to enhance public awareness of what testing and assessment entail, how they can be conducted, and how various techniques can complement each other rather than work against one another. When tests undergo changes, it becomes essential to gather and present new forms of empirical data. Additionally, regarding the Language Assessment Literacy (LAL) requirements of various stakeholders, Pill and Harding (2013) state, "different levels of expertise or specialization will necessitate varying degrees of [language assessment] literacy, and distinct needs will determine the type of knowledge most valuable for stakeholders" (p. 383). Grasping the roles of stakeholders and their corresponding assessment literacy levels, especially concerning technology, presents a complex endeavor. This complexity is highlighted by the concept of a *localized* context, signifying the customization of TELAL conceptualization to precisely fit the unique needs, diverse contexts, and varied practices within the Turkish educational setting. This customization is deemed essential due to the considerable variations in educational contexts, teaching methodologies, and technological infrastructure observable between different regions or institutions within a country. By closely examining the localized conceptualization of TELAL, this study aims to gain insight into how stakeholders within the Turkish educational landscape perceive, understand, and implement technology-enhanced language assessment literacy within their

unique settings. Such an approach ensures a comprehensive consideration of the diverse perspectives, needs, and practices specific to the Turkish educational context, thereby enabling a more nuanced and contextually relevant understanding of TELAL among stakeholders. Therefore, the aim of this study is to investigate the localized conceptualization of TELAL among different stakeholders in the Turkish educational context.

1.4. Research Questions

1. What is the localized conceptualization of Technology-enhanced Language Assessment Literacy (TELAL) in the Turkish educational context?
    1.1. What is the required level of knowledge across TELAL dimensions for Turkish EFL language instructors?
    1.2. What is the required level of knowledge across TELAL dimensions for administrators at universities?
    1.3. What is the required level of knowledge across TELAL dimensions for testing unit members?
    1.4. What is the required level of knowledge across TELAL dimensions for EFL teacher trainers?
2. Are there any significant differences in the required level of knowledge across TELAL dimensions among different stakeholders?

1.5. Significance of the Study

This quantitative study will provide valuable data on the localized conceptualization of TELAL in the Turkish educational context. By assessing the required level of knowledge across TELAL dimensions for different stakeholder groups, the research will identify potential gaps in TELAL understanding and inform targeted professional development programs for language instructors, administrators, testing unit members, and teacher trainers. The findings will contribute to evidence-based decision-making for integrating technology effectively in language assessment practices in Türkiye. Moreover, by investigating if there are any significant differences in TELAL knowledge among stakeholders, the research will shed light on potential disparities and highlight the areas

where additional support and training may be needed to ensure consistent and high-quality technology-enhanced language assessment practices in the Turkish educational context. Moreover, as technology transcends geographical boundaries, the study's implications can also be global. Educators worldwide could benefit from understanding and implementing technology in language assessment practices accordingly.

1.6. Assumptions

Defining the roles, job descriptions, potential responsibilities, and the level of assessment literacy in relation to technology for the aforementioned stakeholders may be challenging, given the diverse range of educational institutions employing various instructional methods.

Since the purpose of this study is to analyze how various stakeholders conceptualize technology-enhanced language assessment in the context of their local environments, it is assumed that responsibilities of stakeholders may not necessarily influence the levels of literacy levels by technology-enhanced language assessment. This assumption is based on the premise that anyone involved in the field of language instruction and assessment is expected to have knowledge of the latest technological advancements in the modern world. It is anticipated that a comprehensive understanding of all aspects of technology-enhanced language assessment should be possessed not only by EFL teachers or language instructors but also by all other parties involved in the language assessment process.

Furthermore, it was assumed that the respondents who completed the questionnaire had a thorough understanding of the questions and had provided accurate responses with the assistance of the explanations provided.

CHAPTER II

REVIEW OF LITERATURE

This chapter presents and discusses the study's background, problem statement, goals, and definitions of key terms such as Assessment Literacy (AL), Language Assessment Literacy (LAL), Technology-Enhanced Language Teaching (TELT), Technology-Enhanced Language Learning (TELL), Technology-Enhanced Assessment (TEA), and Technology-Enhanced Language Assessment (TELA). It also introduces the concept of Technology-Enhanced Language Assessment Literacy (TELAL). Additionally, this chapter reviews relevant studies conducted worldwide as well as those in the Turkish context.

2.1. Assessment Literacy (AL)

On the one hand, *literacy*, as defined by the Cambridge Dictionary, pertains to knowledge of a specific subject or type of knowledge. In alignment with this definition, various types have emerged in the realm of education, such as assessment literacy, cultural literacy, digital literacy, and technological literacy. According to Taylor (2013), individuals and communities are now in a position where they must develop multiple literacies. Consequently, there is a growing demand to acquire an expanding body of information, skills, and competence across a multitude of disciplines in our daily lives. On the other hand, the concept of *assessment* has emerged as a crucial element in the teaching and learning process allowing instructors to observe how students learn and adapt their teaching methods, accordingly, as noted by Harris, Irving, and Peterson (2008). Assessment, as described by Huba and Freed (2000), is a process that entails gathering and analyzing information from various sources to obtain a comprehensive picture of what students know, comprehend, and can do with their knowledge as a result of educational experiences.

Assessment is a concept closely associated with literacy. While numerous scholars have attempted to define *assessment literacy*, there is lack of consensus on its precise definition of this word. As a result, academics have provided their own interpretations of

the concept. First, Stiggins (1991) coined the term Assessment Literacy (AL) into the literature. Mertler and Campbell (2005) defines AL as the ability of teachers to use concepts and techniques of assessment to promote practice and decision-making. Correspondingly, Stiggins (1995, p.240) defines AL as “knowing the difference between sound and unsound assessment”. This means that teachers must use appropriate assessment methods to effectively evaluate student achievement. This includes the ability to understand what they are evaluating and why. Teachers should use the appropriate assessment method(s), sample their students' achievement, minimize bias distortion in order to discern between sound and unsound evaluation. It comprises the abilities to understand what and why they are evaluating, how to evaluate students' accomplishments effectively, how to provide quality performance samples, and how to avoid assessment-related issues before they arise (Stiggins, 1995). Assessment Literacy (AL) plays a critical role as teachers' ability to understand assessment processes, implement them effectively, obtain quality examples of student achievement, and recognize assessment-related problems in advance. This forms the basis of effective assessment in education and is important for supporting student learning.

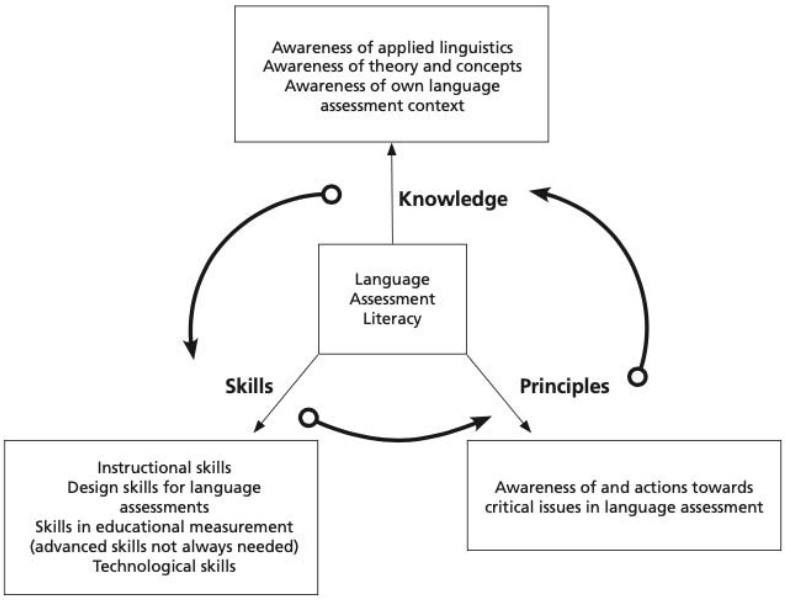
The concept of assessment literacy was expanded by Fulcher (2012, p. 125) in the following manner: Assessment literacy encompasses the knowledge, skills, and abilities necessary for designing, developing, maintaining, or evaluating large-scale standardized and/or classroom-based tests. It involves familiarity with the test processes and awareness of the principles and concepts that guide and underpin assessment practices, including ethics and codes of conduct. Assessment literacy also includes the capability to contextualize knowledge, skills, processes, principles, and concepts within broader historical, social, political, and philosophical frameworks. This contextualization allows us to comprehend why certain assessment practices have evolved as they have and to assess the role and impact of testing on society, institutions, and individuals. In summary, as Fulcher pointed out, 'Research into assessment literacy is still in its early stages,' considering all that has been discussed (2012, p. 117).

2.2. Language Assessment Literacy (LAL)

When delving into Language Assessment Literacy (LAL), several scholars have delineated differing perspectives. Taylor (2009) presents a broader outlook, defining LAL

as “the level of knowledge, skills, and understanding of assessment principles and practice that is increasingly required by other test stakeholder groups, depending on their needs and context” (p. 24). Conversely, Lam (2015) characterizes LAL as “teachers’ understandings and mastery of assessment concepts, measurement knowledge, test construction skills, principles about test impact, and assessment procedures which can influence significant educational decisions within a wider social context” (p. 172). Davies (2008) offers another viewpoint, outlining the need for teachers proficient in item writing, statistics, test analysis, software programs for test delivery, ethical standards, and contextual understanding to guide assessment processes effectively and ethically. Moreover, Giraldo (2017) builds upon Davies' components, developing a Core List of Language Assessment Literacy based on fundamental dimensions established by Davies (2008). In the study "A Core List of Language Assessment Literacy Dimensions: Knowledge, Skills, and Principles" by Giraldo (2017) can be seen in figure 1. The author examines the knowledge, skills, and principles needed for language assessment literacy, specifically for language teachers.

Figure 2.1. A Core List of Language Assessment Literacy Dimensions: Knowledge, Skills, and Principles



In the study "A Core List of Language Assessment Literacy Dimensions: Knowledge, Skills, and Principles", Giraldo examines the knowledge, skills, and principles

needed for language assessment literacy, specifically for language teachers. The study proposes a core list of assessment dimensions, including:

- Knowledge:
    - Awareness of applied linguistics
    - Awareness of theory and concepts
    - Familiarity with language teaching and learning processes
    - Understanding of assessment purposes and types
    - Knowledge of test development and validation
- Skills:
    - Ability to design and develop assessments
    - Skill in selecting and adapting existing assessments
    - Competence in scoring and interpreting test results
    - Literacy in providing constructive feedback
    - Skill in using technology for assessment purposes
- Principles:
    - Ethical considerations in assessment
    - Fairness and equity in assessment practices
    - Alignment of assessment with instructional goals
    - Use of assessment for decision-making and improvement

The core list of language assessment literacy dimensions provides a framework for understanding the essential components of language assessment literacy for language teachers. This understanding can inform the design of language assessment training programs and support the professional development of language teachers.

2.2.1. Categories of Test Stakeholders

When it comes to having assessment literacy in language assessment, it is safe to argue that it was a blend of skills, knowledge, and principles when considering the major elements of AL (Davies,2008). Although test writers are typically thought to be the only ones who perform language testing and assessment, other parties also need to be aware of these key components. The categories of test stakeholders have been the subject of several research (Rea-Dickins, 1997; Malone, 2013; Pill & Harding, 2013; Taylor, 2000; Saville,

2009) based on the extent of their assessment engagement. Davies (2008) suggests a "skills + knowledge" approach to assessment literacy, emphasizing the importance of both practical skills and theoretical knowledge in understanding and applying language assessment principles. According to Pill & Harding (2013) language assessment literacy is viewed as a repertoire of competences, including knowledge of using assessment methods, applying suitable tools, understanding, assessing, constructing language tests, and analyzing test data. Stiggins (1999) defines assessment literacy as the knowledge assessors need to possess, enabling them to understand, assess, construct language tests, and analyze test data. Jeong (2013)'s study on language assessment courses for language testers and non-language testers revealed significant differences in the content of the courses based on the teachers' background in test specifications, test theory, basic statistics, classroom assessment, rubric development, and test accommodation. Giraldo (2017)'s study on language assessment literacy for language teachers proposes a core list of assessment knowledge, skills, and principles, highlighting the importance of understanding means, modes, medians, bell curves, and standard errors in language assessment. Kremmel and Harding (2020)'s research focuses on developing a comprehensive, empirical model of language assessment literacy across stakeholder groups, emphasizing the need for teachers to possess the knowledge and skills to design and administer effective testing activities, interpret students' scores accurately, formulate appropriate teaching plans, and make rational education decisions. In summary, assessment literacy in language assessment involves a combination of skills, knowledge, and principles, enabling stakeholders to understand, design, and implement effective language testing and assessment practices.

"Stakeholders are identified as those who make decisions and those who are affected by those decisions" states Rea-Dickins (1997). Her stakeholder group consists of learners as test-takers, teachers, parents, government and official bodies and the marketplace. Teachers are one of the key components of this group. They may not have received adequate training for the role of implementing new programs when they are introduced since they are not always engaged in test creation. To what extent have instructors been skilled enough to create their own exam instruments or know how to assess students when they are needed is an issue. As a result, preparing teachers to implement the demands of the "new" curriculum through a variety of techniques is a vital aspect of stakeholder participation in innovation. She concludes that we now have a better understanding of the

challenges of educational transition, including modifications to tests, testing procedures, and assessment programs.

According to Taylor (2013), the degree of LAL and the themes and skills of language testing and assessment defined by the demands of various stakeholders. Similarly, different stakeholders need different levels of LAL since they might have different roles and responsibilities. Parents, students, teachers, and administrators are among the several stakeholders mentioned in the literature. Instead of producing a list of them, Taylor (2013) presented a different model. Each consecutive ring in this model indicates the level of content required to meet the needs of a certain set of stakeholders as shown in Figure 1 by Taylor (2013). It all begins with the test creators and researchers. It grows to include course instructors and language teachers in the outer circle. Policymakers and the general public form the outer circle.

Figure 2.2. Levels of AL/LAL based on stakeholder constituency (Taylor, 2013, p.409).

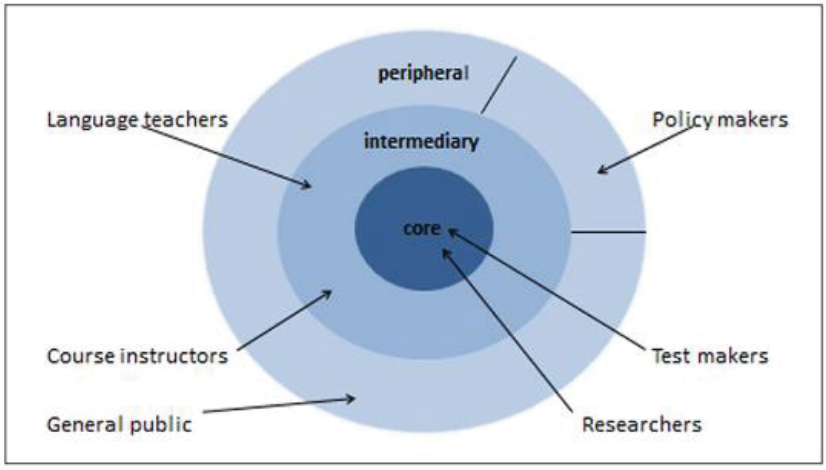
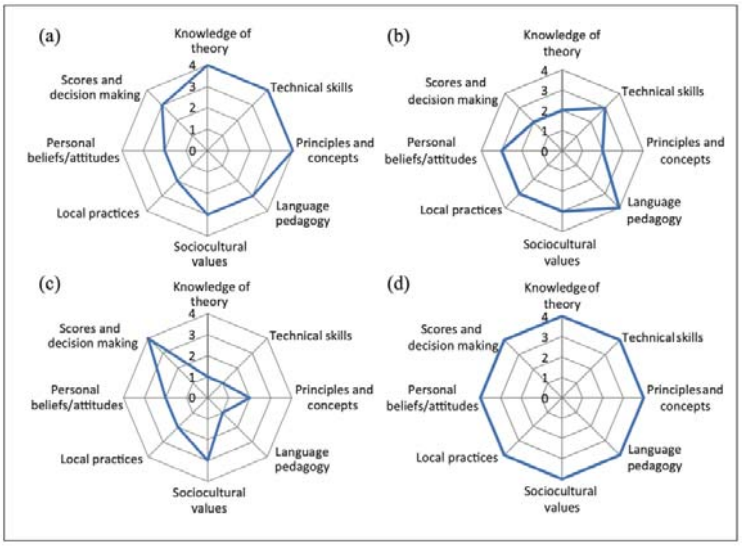


Figure 2.3. illustrates four profiles including test writers, classroom teachers, university administrators and professional language testers. It shows cases how Taylor (2013) profiles the skill and knowledge levels of various stakeholder groups regarding testing and assessment related issues based on her language assessment literacy model. Taylor is of the opinion that not all stakeholder groups need to possess the same level of competence or knowledge. The data clearly indicates that language teachers in classrooms primarily focus on practical skills required for creating assessments, just briefly touching on theoretical ideas and moral standards.

Figure 2. 3. Differential Assessment Literacy and Language Assessment Literacy profiles for four constituents.



Taylor (2013) created distinct Language Assessment Literacy (LAL) profiles tailored to four primary stakeholder categories within language assessment. These profiles offer comprehensive perspectives on the requisites, deficiencies, and preferences unique to each group concerning assessment literacy. These stakeholder groups encompass: (a) Test writers' profile, (b) Classroom teachers' profile, (c) University administrators' profile, and (d) Professional language testers' profile. Test writers are tasked with the creation and formulation of language assessments. Their Language Assessment Literacy (LAL) profile encompasses an in-depth comprehension of assessment principles, test structuring, item construction, and evaluation criteria. Literacy in diverse test formats is essential, coupled with the capability to craft assessments that are both valid and reliable. Meanwhile, classroom educators hold a pivotal role in language assessment, overseeing the administration and evaluation of assessments. Their LAL profile includes understanding assessment basics, choosing appropriate assessment methods, and interpreting outcomes to improve teaching. University administrators contribute to pivotal decisions associated with language assessment, involving literacy benchmarks establishment and the adoption of assessments for admission criteria. Their LAL profile includes understanding language assessment goals and limitations, making informed judgments using assessment data. Learners, as the individuals undergoing assessment, are recognized as stakeholders in language assessment. Their LAL profile encompasses understanding the rationale behind assessments, self-assessment of language abilities, and the capacity to utilize assessment

feedback to enrich their learning experiences (Giraldo, 2020). These distinctive LAL profiles emphasize the distinct requisites and functions of each stakeholder group within language assessment. Understanding these profiles helps researchers, practitioners, and policymakers create specific strategies to improve assessment skills for each group.

2.3. Technology-Enhanced Language Teaching (TELT) and Technology-Enhanced Language Learning (TELL)

Since the early 1990s, computers have been extensively used in language learning and teaching, spanning from K-12 to higher education. During this time, many schools began to establish computer labs in order to create a technologically advanced environment. However, the use of computers has become increasingly costly over time, not only in terms of the financial investment made by institutions in infrastructure, equipment, and technical support staff, but also in terms of the personal investment made by faculty and students in using technology for teaching and learning (Kirkwood & Price, 2003). As time passed, we have entered the decade of 2020, computers along with other mobile devices like smartphones, tablets, and laptops have been increasingly ubiquitous especially in the recent years. Students may now carry anything around with them at all times, including thousands of books in a small phone or tablet, and use devices for every aspect of their lives. Consequently, learning environments have also adapted to these changes. Computer Assisted Language Learning (CALL) or Mobile Assisted Language Learning (MALL) were popular concepts before. CALL, which involves learning a language with the help of a computer, is a field of study that explores how technology can be used as one of the tools for the language learning process (Chun, 2011). E-learning expanded to include mobile computational devices such as mobile phones and personal computers, giving rise to what is referred to as mobile learning (mLearning). The term "mLearning" also encompasses to the process of acquiring knowledge through interactions with personal interactive technology and dialogues that take place in a variety of settings (Sharples et al., 2007). Another term, coined by Koehler and Mishra in 2005, is TPACK, which stands for "technological pedagogical content knowledge," and it was developed to serve as a conceptual framework for the knowledge base that educators need to effectively teach using technology. After its introduction, the TPACK framework quickly expanded into the areas of technology integration and professional development. Other researchers have

addressed similar ideas, often under different labeling schemes, including integration literacy and technology-enhanced PCK (Niess, 2005). The concept of TPACK quickly expanded into the areas of technology integration and professional development after 2005 (Voogt et al., 2012). TPACK has been recognized as a distinctive approach to professional development in technology integration for teachers. The TPACK framework has been found to enhance teacher candidates' ability to use technology in their learning and later in their professions. It is a specialized, highly applied type of knowledge that supports content-based technology integration. TPACK is useful for understanding the types of knowledge needed to make technology integration successful in the classroom (Kurt,2018).

However, because technological advancements are not restricted to just computers, we now use the term Technology-Enhanced Language Teaching (TELL) to refer to the use of technology to support learning. It can also be said that technology-supported learning settings aim to create instructional resources suitable for various learner characteristics (Ruştıoğlu et al., 2021). The more assistive technologies and technologically enhanced learning environments are integrated into lesson plans, the more successful and motivated the students are.

2.4. Technology-Enhanced Assessment (TEA) and Technology-Enhanced Language Assessment (TELA)

Technology-enhanced assessment (TEA) refers to the utilization of information and communication technology to administer assessment activities, record responses, and offer feedback. It involves a range of methodologies, tools, and procedures (Cook & Jenkins, 2010). The application of Technology-Enhanced Assessment (TEA) can extend beyond language assessment and be utilized in several domains to optimize the administration and implementation of tests. During the COVID-19 epidemic, the educational landscape has seen a substantial transformation, necessitating the use of assessment techniques that are secure, accurate, dependable, satisfactory, practical, and equitable (Khan & Jawaid, 2020). Online evaluations have become prominent because they have the ability to meet these demands. The use of TEA has several advantages, such as adaptability, expandability, and the capability to promptly deliver feedback to learners (Fuller et al., 2022).

The major features of an e-assessment platforms have been thoroughly researched by some scholars, especially in the past two decades. In their work Ashrafzadeh & Sayadian (2015) found out that technology integration with in-class education was seen as a *benefit* by all the respondents. The following are some of the benefits mentioned by the instructors: it provides better learning opportunities and can improve the quality of instructions, it motivates students and helps them achieve their learning goals, it makes teaching easier, and language learning is intertwined with technology.

When it comes to early technology-enhanced language testing and assessment projects, they were limited to a few demonstration projects used in university language classes in face-to-face concepts. The results of these research projects can be found in two edited collections, namely "*Technology and Language Testing*" (Stansfield 1986) and "*Computer-Assisted Language Learning and Testing: Research Issues and Practice*" (Dunkel 1991). These collections explain in detail how computer-assisted language teaching and testing impact education, as well as the flaws, and advantages. The use of technology in language assessment has evolved over the years, with advancements in computer-based testing, artificial intelligence, and adaptive testing. For example, Cambridge Assessment English has integrated computer-based testing and artificial intelligence while keeping the learner central to the process. Computer-adaptive testing (CAT) tailors test questions to each candidate's language ability, providing a more personalized and accurate assessment. Some of the advantages of technology-enhanced language testing include: Tailoring test questions to each candidate's language ability, improving the accuracy of the assessment, integrating state-of-the-art technologies into test design, keeping the test construct or the language skills being assessed up-to-date and uniting assessment with learning, providing a personalized and engaging learner experience (Chapelle, Voss, 2008).

Utilizing technology in language assessment Computer-Assisted Language Testing (CALT) or Computer-Assisted Language Assessment used to refer to the use of computer technology in language evaluation, however this is no longer the case with the aid of technological developments (Chapelle and Voss, 2017). According to Chapelle and Voss (2017), technical improvements are divided into three phases: *computer-adaptive testing (CAT), effective technology usage in testing,* and *efficiency-oriented research*. CAT has been a significant area of interest since the 1970s and is still prevalent in language testing. In CAT, the level of complexity of the exam is adapted to the test-takers' level of skill,

taking individual performance into account (Chapelle, Voss, 2008). This approach has been found to increase the efficiency of literacy and placement testing. The second phase of technological development focuses on utilizing technology to provide computer-based feedback, such as Automated Writing Assessment (AWE). This has made testers' jobs easier and has the potential to improve the quality of instruction and learning opportunities for students. Efficiency-oriented research aims to compare the meaning of scores for computer-enhanced exams and other scoring methods. This has been a concern for all computer-assisted language tests, as the validity and reliability of these tests need to be established (Chapelle, Voss, 2016).

TELA practices involve a range of advanced methods designed specifically for assessing language education using technology. TELA utilizes online platforms and adaptive testing to provide learners with the benefits of flexible scheduling and personalized evaluations. This approach employs Artificial Intelligence (AI) to automatically score diverse question formats, guaranteeing consistency and efficiency in grading. Moreover, multimedia integration, which incorporates audio, video, and interactive elements, enhances assessment experiences by accommodating various learning styles. Remote proctoring technologies guarantee the integrity of exams in situations where testing is done remotely. Additionally, TELA provides learners with instant feedback and generates detailed analytics for educators, promoting an instruction method that relies on data analysis. Furthermore, mobile-based assessments enhance convenience and accessibility, adapting to the changing educational environment by allowing assessments to be conducted on smartphones and tablets. These various practices together influence TELA, enhancing language assessments in the current digital educational framework (Demir, 2022).

TELA brings forth various advantages and limitations within language education. Its advantages encompass the convenience of assessment delivery, fostering consistency in evaluation methods, and harnessing natural language processing for enhanced interactions and analysis. Moreover, TELA introduces new task types, diversifying assessment approaches. Yet, challenges persist, such as inaccuracies in automatic response scoring, potentially leading to misleading results, and negative consequences arising from these inaccuracies, affecting learners' progress and confidence. Balancing TELA's strengths and limitations is essential for educators and policymakers, necessitating a nuanced approach to

optimize its benefits while addressing its challenges in language assessment (Chapelle & Douglas,2006).

TELA consolidates diverse tools to facilitate language evaluation processes. Several crucial tools used in TELA encompass (Cambridge Assessment, n.d.):

- **Online Assessment Platforms:** Tailored systems or learning management platforms delivering customizable assessments, question repositories, and grading mechanisms designed specifically for language appraisal.
- **Language Learning Management Systems (LLMS):** Dedicated platforms for language learning, offering assessment utilities, content delivery, and monitoring of learner progress.
- **Automated Grading Systems:** AI-driven tools capable of objectively grading assessments, including multiple-choice queries, written responses, or spoken language, ensuring uniform and efficient evaluation.
- **Adaptive Testing Software:** Platforms adjusting test content based on learner responses, dynamically aligning difficulty levels with individual literacy, and learning advancement.
- **Multimedia Assessment Tools:** Applications incorporating audio, video, or interactive elements to comprehensively assess listening, speaking, reading, and writing skills.
- **Remote Proctoring Solutions:** Software allowing remote monitoring during online assessments, ensuring test integrity and security.
- **Digital Portfolios/E-Portfolios:** Platforms enabling learners to compile language learning artifacts, written work, or multimedia projects as evidence of literacy growth.
- **Analytics and Reporting Tools:** Systems offering data analytics on learner performance, highlighting strengths, weaknesses, and areas for improvement to personalize learning paths.
- **Interactive Whiteboards or Virtual Classroom Tools:** Platforms facilitating real-time interactions between instructors and learners, enabling language assessment activities in virtual settings.

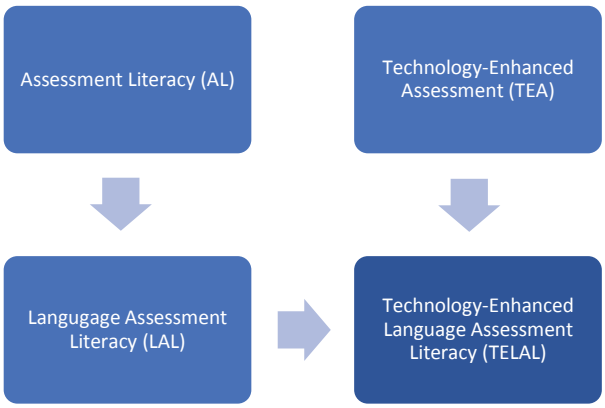
2.5. Technology-Enhanced Language Assessment Literacy (TELAL)

Although the main focus of education is to promote literacy, the rapidly changing digital environment necessitates the development of new skills and literacies, which fall under the broad category of 'digital literacies' (Hockly, 2011). Nowadays, digital or technology-enhanced assessments that require digital literacies and methodologies are universally applied. They are used not only for formative or summative purposes in classrooms but can also be seen in high-stakes tests and low-stakes exams. Hague and Payton (2010) assert that having access to a wide range of cultural practices and materials is necessary for being digitally literate. To be digitally literate means being able to use these digital tools effectively. It is the capacity to produce and express meaning in a variety of forms and formats, to collaborate successfully, and to communicate while recognizing how and when digital technology can be most effectively employed to support these activities. As previously noted, in order to bridge the gap with digital natives, language teachers must become digitally literate.

As a natural outcome, different stakeholders' knowledge and abilities in language testing and assessment must be expanded or updated in accordance with various technical demands. In the same vein, it has become evident that all stakeholders, from policymakers to language instructors, will almost certainly employ the aforementioned technology-based evaluations today and in the future.

As shown in the figure, assessment literacy is the starting point and at the heart of language assessment literacy. Furthermore, as Rudner and Schafer (2002) state, the use of technology has been proposed as a part of the equation in teachers' assessments of literacy. When AL, LAL and TEA are combined, the term “technology-enhanced language assessment literacy” (TELAL) is coined.

Figure 2.4. Development of Technology Technology-Enhanced Language Assessment Literacy (TELAL)



Technology-Enhanced Language Assessment Literacy (TELAL) refers to the integration of technology in language assessment practices to enhance learning and evaluation processes. Some key developments in TELAL include:

- **Adaptive testing based on a candidate's level of ability:** Computer-adaptive testing (CAT) has been prevalent since the 1970s and is still widely used in language assessment. These tests adapt the level of complexity based on the test-taker's performance, providing a more personalized and accurate evaluation.
- **Quick reporting and feedback:** Technology allows for faster and more efficient reporting of test results, enabling test-takers to receive timely feedback on their performance and areas for improvement.
- **Integration of state-of-the-art technologies:** Language assessment providers, such as Cambridge English, are striving to integrate new technologies into their test designs while keeping the learner at the center of the assessment process. This integration aims to improve the stakeholders' experience, update the language skills being assessed, and unite assessment with learning.
- **Personalized and engaging learner experience:** Future language assessments are expected to move away from the one-time test model and towards a more personalized and engaging experience that combines the power of technology and human interaction.
- **Technology-Enhanced Active Language Learning (TEALL):** TEALL focuses on using technology to enhance active learning in the ESL context. Computer-Assisted Language Learning (CALL) and Mobile-Assisted Language Learning

(MALL) are examples of technologies that can boost students' motivation and provide a more interactive learning experience (Hashim et al.,2023).

- **Importance of qualified language teachers:** While technology can play a significant role in supporting and enhancing language learning, the effectiveness of any technological tool depends on the knowledge and expertise of the qualified language teacher who manages and facilitates the language learning environment (Patel,2014).

2.6. Relevant Studies from Around the World

Diverse studies (Fulcher, 2012; Kremmel & Harding, 2020; Ashrafzadeh & Sayadian, 2015; Tsagari & Vogt, 2017; Yang & Chen, 2007; Chang & Hung, 2019; Wang, Chen & Tian, 2023; Shadiev & Yang, 2020; Trace, Brown & Rodriguez, 2018; Liu, Zhang, & Gao, 2023, Yan & Zhang & Fan, 2018) collectively explore various facets of language education, encompassing assessment literacy, technology integration, pedagogical challenges, and the necessity for comprehensive frameworks to enhance language learning. Some studies examine teachers' competence in evaluating students through scales and questionnaires, while others utilize diverse methodologies to assess teachers' assessment literacy. Each study uniquely contributes to comprehending the complexities of language education, underlining the significance of refining instructional strategies and frameworks for effective language learning. The following descriptions provide a chronological overview of these studies.

The study by Yang & Chen (2007) explores participant views regarding the integration of Internet tools in language learning activities. This study examined how integrating technology tools into language learning processes, especially internet-based learning activities, can be effective in terms of student opinions. The research addressed the experiences and perceptions of high school students participating in the "Advanced Joint English Teaching" (AJET) project in Taiwan. Research results show that offering internet-based learning activities to students gives them the opportunity to try new technologies, thus increasing their learning possibilities. Students have loved learning English online, but they have some different views on its benefits. This points to students' different perspectives on technology-enabled language learning. Additionally, this study highlights that students passively learning languages via the Internet may need pedagogical

guidance. It is important to make students aware that learning English using multimedia technology may require new strategies and self-regulated learning. As a result, this study makes an important contribution to understanding the impact of technology-supported language learning on students and developing more effective pedagogical practices in this field. Such studies are especially useful for educators who want to understand how language learning processes can be improved with technology. This study provides insights into the potential benefits and challenges of technology-enhanced language learning in the Turkish educational context. It can be a valuable resource for educators and policymakers interested in integrating technology into language learning programs.

For the purpose of identifying the assessment training needs of language instructors, Fulcher (2012) developed a survey instrument, tested it, and made it available online for language instructors to utilize. The findings were used to the create new instructional materials and the further improvement of online tools that could enhance program delivery. This project makes two significant contributions. Firstly, it provides a new empirically grounded understanding of the concept of assessment literacy, which serves as a framework for developing educational materials. Secondly, it identifies methodological issues with current survey procedures that may have influenced previous research and offers recommendations for addressing these issues. The study by Fulcher (2012) is part of a broader research agenda on language assessment training, which has been increasingly recognized as a crucial aspect of language testing and assessment. While there have been studies exploring the training of language instructors in various contexts, such as primary and secondary school teachers, there has been relatively little attention given to the assessment training needs of university English instructors, particularly in the Chinese context (Gan&Lam,2020). Understanding the assessment training needs of language teachers is essential for designing effective language assessment training programs. This knowledge can help ensure that the programs meet the actual needs of teachers and contribute to their professional development.

In their study Ashrafzadeh and Sayadian (2015) sought to investigate the concerns and viewpoints of Iranian EFL university professors regarding the use of technology in their classrooms. They employed the Stages of Concern Questionnaire (SoCQ) by Hall, George, and Rutherford (1977) and the Diffusion of Innovation (DOI) questionnaire by Rogers (1995). Additionally, a semi-structured interview was conducted as part of a sequential mixed method design. The quantitative data from the study indicated that

instructors" concerns about technology integration were primarily attributed to a lack of administrative support, instructors" technological literacy, and accessibility of technology for all students. Therefore, it can be reasonably concluded that for effective technology integration into instruction, all the necessary resources must be readily available. The study's findings contribute to the understanding of the challenges faced by university EFL instructors in technology integration, particularly in the Asian context. Addressing these challenges and providing adequate support can help promote successful technology adoption and integration in language classrooms.

Tsagari & Vogt (2017) conducted semi-structured interviews with 63 EFL instructors from Cyprus, Germany, and Greece, who worked in primary and secondary public schools. The majority of the participants mentioned that they had received either "no" or "little" instruction in Language Testing and Assessment (LTA) during their undergraduate studies. As a result, the study revealed that EFL teachers had relatively low levels of Language Assessment Literacy (LAL). It was observed that EFL teachers were proficient in evaluating grammar and vocabulary. However, they demonstrated limited expertise in other aspects, such as creating valid and reliable assessment tools, grading, scoring, and employing alternative assessment techniques. The study also highlighted that teachers recognized the need for training in various aspects of LTA, with varying priorities depending on their local educational contexts.

Yan, Zhang, and Fan (2018) focused on the exploration centered on three secondary-level English as a Foreign Language (EFL) educators in China to investigate the influence of contextual and experiential factors on the development of language assessment literacy (LAL). Employing structured retrospective interviews, the study unveiled two notable revelations: firstly, the instructors exhibited a distinctive LAL profile, showcasing specific strengths and areas necessitating improvement. Secondly, the research highlighted a stronger inclination among these professionals toward training in assessment practice rather than assessment theory. These insights were shaped by multifaceted factors encompassing the educators' prior assessment experiences, their network of stakeholders, prevailing assessment policies, accessibility to assessment training resources, and practical constraints encountered. These findings substantially contribute to our comprehension of how language educators cultivate LAL and pinpoint critical facets of assessment training essential for their professional advancement.

The study (Trace, Brown & Rodriguez, 2018) examines how technology is perceived by different stakeholder groups in The Language Flagship programs. The researchers administered questionnaires to three stakeholder groups: 14 directors, 34 instructors, and 100 learners at various institutions. The study has three main goals: Investigate what technologies the directors, instructors, and learners find useful for language instruction, explore how and to what degree the perceptions of the directors, instructors, and learners agree about technologies they use and study how learners' views vary with regard to the value of various technologies for language learning inside and outside the classroom. The Language Flagship program is a national initiative in the United States that aims to change the way Americans learn languages through a groundbreaking approach to language education. It offers intensive language instruction in strategic languages at domestic institutions and overseas locations. The study's findings can provide valuable insights for teaching and research communities planning on designing language learning and teaching activities supported by technologies. The Language Flagship Technology Innovation Center, which serves as a hub for integrating existing technologies and piloting new ones, can also benefit from the study's implications and suggestions.

Kremmel and Harding (2020) developed a tool known as the Language Assessment Literacy Survey to investigate the multidimensional nature of Language Assessment Literacy (LAL) and to create profiles of the requirements for different stakeholder groups. They initially describe the steps involved in survey production, including expert review and pretesting. Following this, they present the results of an exploratory factor analysis based on data gathered from a large-scale survey. The survey's effectiveness is then demonstrated by highlighting key findings from the large-scale survey, particularly by comparing the perspectives of language instructors, language testing/assessment creators, and language testing/assessment researchers. The LALS aimed to illuminate the dimensionality of LAL and generate profiles of needs for different stakeholder groups. The survey's results provided insights into the various dimensions of LAL and the specific requirements of language instructors, testing/assessment creators, and testing/assessment researchers. This research project made significant contributions to the understanding of LAL by developing a comprehensive and empirically grounded model of LAL across different stakeholder groups. The findings can be used to inform the development of educational materials and improve language assessment practices.

Shadiev and Yang (2020) provides a comprehensive overview of the literature in this field. This review provides evidence for claims that technology can facilitate improved learning performance of language learners in terms of output, interaction, and feedback. This review study can serve as a guide for teaching and research communities planning on designing language learning and teaching activities supported by technologies.

Mei-Mei Chang and Hsiu-Ting Hung (2019) aims to synthesize research on technology-enhanced language learning published from 1990 to 2015. The results show a large effect size of 0.993 for the major studies. This remarkably demonstrates the positive effects of technology interventions on students' learning of a second or foreign language. Furthermore, the results suggest that technology interventions may produce greater effects than instruction without technology integration when education is delivered on mobile phones with general-purpose applications, especially in cases involving small samples of participants in higher education. These findings provide concrete evidence in support of the use of the technology and offer practical implications that guide future applications. It has been concluded that technology can positively affect language learning processes and be more effective in education offered through mobile applications, especially for small sample groups in higher education. This can be considered an important study that highlights the importance of technology use in the field of language learning and provides guidance for future applications.

A Roadmap for Enhancement in a Digital World for the Years 2015–2017 was developed by the National Forum for the Enhancement of Teaching and Learning in Higher Education (National Forum, Ireland). This initiative laid the foundation for a national effortto promote educational practices (National Forum, 2015). To gain a better understanding of the evidence supporting the use of technology in higher education assessment, a systematic literature review was conducted. The primary objective of this review was to analyze and synthesize peer-reviewed research on technology-enhanced Assessment OF/FOR/AS Learning in higher education. The study's findings suggest the need for long-term, successful longitudinal studies of TEA implementations in higher education to draw more conclusive conclusions regarding the successful integration of assessment planning and implementation. Overall, the use of technology in assessment can help transform education by enabling more personalized, continuous feedback loops, and immersive learning experiences.

The research by Wang, Chen & Tian (2023) aims to create a platform for sharing creative and successful technology-enhanced language learning and teaching experiences among a larger community of language educators and learners. This study may be useful for educators and institutions that want to promote technology-supported language learning and teaching. Additionally, better understanding the needs of students and teachers and encouraging them to share their good practices in this field can be an important step in creating a more effective and interactive community in the field of language learning.

Liu, Zhang, and Gao (2023) explores how language teachers incorporate technology into their teaching and learning experiences. The study aims to explore how language teachers incorporate technology into their teaching and learning experiences. The review focuses on how language teachers apply technology pedagogically in their language teaching. It provides insights into the challenges and opportunities of technology integration, as well as the various pedagogical approaches used by teachers. The study's findings can inform the design of technology-enhanced language education programs and provide guidance for language teachers in integrating technology effectively.

ASCILITE, a professional organization dedicated to informing and maintaining the quality of online learning environments in tertiary education, has established certain learning standards known as TELAS (Technology-Enhanced Learning Accreditation Standards). These standards are designed to serve as performance metrics for assessing online learning environments. However, it's worth noting that the performance criteria and success indicators are not clearly divided among the various stakeholders involved in language assessment. The TELAS framework has been internationally benchmarked and is used to assess the quality of online learning in various educational contexts. While it may indirectly influence language assessment practices in online learning environments, it does not provide specific guidelines for language assessment or address the unique challenges and considerations of language assessment in technology-enhanced settings.

2.7. Relevant Studies in the Turkish Context

While prior research in Türkiye (Ballıdag, A., & Inan-Karagul, B. (2021); Coşkun, M. H., & Yıldız, R. (2018).; Hatipoğlu, Ç. (2010); Hatipoğlu, Ç. (2015a); Mede, E., & Atay, D. (2017).; Ölmezer-Öztürk, E., & Aydın, H. (2018); Öz, H., & Atay, D. (2017);

Sarıyıldız, M. (2018); Şahin, Ş. İ. (2019); Şahin, Ş. İ., & Hatipoğlu, Ç. (2023); Yastıbaş, N. G., & Takkaç, Z. (2018) has explored Language Assessment Literacy (LAL), it hasn't particularly centered on technology. To the best of researchers' knowledge, specific investigations on TELAL in Türkiye are currently lacking. Nevertheless, comparable studies have scrutinized the use of technology, attitudes, and literacy among foreign and second language instructors concerning language assessment, offering insights into the broader landscape of language assessment literacy and its intersection with technology (Akayolu et al., 2020; Akbulut, 2008; Ata & Yıldırım, 2019; Cirit, 2015; Elçiçek & Kahyaoğlu, 2022; Karakaya, 2010; Öz, 2014; Ruştıoğlu et al., 2021; Şengül & Demirel, 2022; Tufan, 2022; Yılmaz Ergül & Taşar, 2022, Yıldırım & Kılıç, 2021). The following studies are listed in chronological order.

The study by Akbulut (2008) focused on exploring the attitudes of freshman foreign language students at a Turkish state university towards using computers. The research aimed to expand on the design of Warschauer's (1996) survey and specifically examined the motivating aspects of computer-assisted instruction in terms of writing and e-mailing. The study utilized an exploratory factor analysis conducted on the adapted survey to analyze the data. The findings of the study revealed several aspects of using a PC for writing and communication that created positive attitudes among the participants. These included the convenience and speed of writing on a computer, the ability to edit and revise easily, the opportunity to communicate with others through e-mail, and the enhancement of language skills through computer-assisted communication. This study provides insights into the perspectives on technology-related literacies in Türkiye, specifically among freshman foreign language students. Understanding the attitudes and motivations of students towards using computers can help educators in designing effective computer-assisted language learning (CALL) materials and activities to enhance language learning outcomes.

The research conducted by Karakaya (2010) aimed to delve into the attitudes held by Turkish English language teachers regarding computers and the extent to which they integrate technology into their lessons. Employing a mixed-methods approach, the analysis of the data yielded interesting insights into the relationship between teachers' attitudes and their actual use of technology. The findings indicated a positive stance among English teachers toward technology, with favorable attitudes prevalent. However, a noteworthy discrepancy emerged when examining the practical integration of technology in the

classroom. While the teachers' attitudes were conducive to technology adoption, their actual implementation of technology into their teaching practices did not align with these positive sentiments. The study's conclusions underscored the prevalent approval of technology integration in language education among the majority of instructors. However, the challenges they encountered in effectively incorporating technology into their teaching were evident. To address this disparity, a key recommendation emerged: pre-service English Language Teaching (ELT) teacher education programs should incorporate technology-related courses. Equipping future educators with the necessary knowledge and skills to effectively employ computer technologies in language instruction is deemed essential to bridge the gap between positive attitudes and practical application.

The study conducted by Öz (2014) aimed to explore the attitudes of pre-service English teachers toward web-based assessment in the context of a pedagogical content knowledge course. The research involved a cohort of 50 novice instructors enrolled in a pedagogical content knowledge course at a prominent state university in Ankara, Türkiye. The study employed a combination of data collection methods, including survey responses scored on a five-point Likert scale and interviews. The study's findings revealed a nuanced picture of the participants' attitudes. While the pre-service teachers did not appear to have a comprehensive understanding of the potential value of web-based testing in their course and expressed limited interest in utilizing it in future sessions, they displayed a positive attitude toward computers and a favorable evaluation of the usability of technology. This suggests that, although they held a generally positive view of technology, they may not have fully recognized its potential for enhancing assessment practices within language education. This research sheds light on the importance of conducting further investigations into students' attitudes and perceptions concerning web-based assessment. It underscores the need to consider context-specific factors and challenges when implementing technology in language teaching and learning. The study serves as a reminder that favorable attitudes toward technology may not necessarily translate into a full understanding of its pedagogical potential, emphasizing the significance of bridging this gap in pre-service teacher education programs.

The study conducted by Cirit (2015) aimed to investigate the effects of activities pre-service EFL instructors were involved in during a methodological course utilizing Web 2.0 resources on their perceptions and attitudes regarding the use of conventional, alternative, and online LTA tools. The study utilized an experimental study design to gather data. The

findings of the study revealed that pre-service EFL teachers had favorable perspectives of alternative evaluation methods, and these perceptions and attitudes tended to be more constructive after using Web 2.0 tools. The study highlights the importance of introducing instructional technology into LAL training of pre-service EFL teachers to increase their digital literacy level and prepare them for the needs of the teaching profession in the 21st century. This study provides insights into the potential benefits of using Web 2.0 tools in language assessment training and the importance of incorporating technology into teacher education programs to enhance the digital literacy level of pre-service teachers. Further research in this area can contribute to the development of effective technology integration strategies in language education and the improvement of language assessment practices.

"Ata and Yıldırım (2019) investigate the digital literacy perceptions of pre-service teachers in Türkiye. The study found that pre-service teachers have positive perceptions of digital literacy, but they lack the necessary skills to integrate technology into their teaching practices. This highlights the urgent requirement for specific training programs and improvements in the curriculum of teacher education to address this gap. The study highlights the need for practical training programs to equip pre-service teachers with the necessary skills to effectively integrate technology in classrooms. This will ultimately improve the quality of education provided to students.

Another research by Akayolu et al. (2020) that used a qualitative technique to examine how Turkish pre-service teachers conceptualized digital literacy provided information on the current level of digital literacy among Turkish pre-service teachers. This involved examining how pre-service teachers defined this idea, the tools they employed, and the applications for which they favored using digital tools. The study's findings indicate that the idea of digital literacy as used by pre-service teachers has numerous facets, ranging from knowledge to usage to critical, creative, and collaborative use. Second, they noted that college teachers are crucial in the growth of pre-service teachers' levels of digital literacy. Another outcome of the research is that it was discovered that pre-service teachers make extensive use of social media platforms for a variety of objectives. However, they found that pre-service teachers require more guidance for their continued professional development. Overall, the study emphasizes the need for comprehensive digital literacy education in teacher preparation programs and recognizes the influence of college teachers in shaping the digital literacy skills and perceptions of

pre-service teachers. It also highlights the role of social media in their digital interactions and learning experiences.

The Assistive Technologies Usage Skills Assessment Scale (ATUSAS), which measures teacher applicants' literacy with assistive technologies, is another noteworthy study conducted by Turkish researchers (Ruştıoğlu et al., 2021). This scale was developed in Turkish literature to evaluate teachers' abilities to use assistive technology. The validity and reliability of the ATUSAS were tested through various statistical analyses, including the KMO and Bartlett tests, exploratory factor analysis, descriptive statistics, Cronbach's alpha, and confirmatory factor analysis. Content validity and construct validity were also assessed. The findings demonstrated that the ATUSAS is a reliable and valid measurement tool for evaluating teachers' abilities to use assistive technology. This study contributes to the field of education by providing a standardized instrument for assessing teacher candidates' literacy in using assistive technologies. The scale can be used in teacher training programs to identify areas of improvement and enhance the integration of assistive technologies in classrooms, promoting inclusive education for students with diverse learning needs.

Şengül and Demirel (2022) examine the digital literacy levels of Turkish language teacher candidates and their attitudes towards digital writing. The research examines the relationship between these variables and identifies their moderate levels, providing insight into the current level of preparedness among future Turkish language educators in terms of digital literacy and their approach to digital writing. The findings show that the digital literacy levels of Turkish language teacher candidates and their attitudes towards digital writing are moderate. This observation is significant for influencing teaching methods and designing educational programs for teachers, highlighting the necessity for focused interventions and improved training to strengthen digital literacy abilities. Gaining insight into this correlation facilitates the development of tactics to enhance the literacy of prospective teachers in digital skills, promoting a more efficient incorporation of digital resources in language teaching, and ultimately influencing the level of education provided to students.

Yıldırım and Kılıç (2021) explore the perceptions of elementary school teachers in Türkiye regarding the integration of technology into teaching literacy skills in the post-COVID-19 era. The study found that teachers have positive attitudes towards technology

integration, but they lack the necessary skills and resources to effectively integrate technology into their teaching practices. Overall, this study emphasizes the importance of not only fostering positive attitudes toward technology among teachers but also providing the necessary training and support to bridge the gap between attitude and effective implementation. It highlights the need for ongoing professional development and teacher education in the area of technology integration in language instruction.

Elçiçek and Kahyaoğlu (2022) analyze the research trends of postgraduate theses published in the field of digital literacy in Türkiye. The study found that the majority of the theses were conducted in the Department of Computer and Instructional Technologies. The analysis provides valuable insight to researchers and educators regarding the current focus of research efforts, offering guidance for future studies or improvements in TELAL practices.

In their research, Yılmaz Ergül and Taşar (2022) sought to create and verify the effectiveness of the "Teachers' Digital Competence Scale" (TDiCoS), a thorough evaluation instrument designed to assess educators' digital skills in different academic disciplines. TDiCoS assesses teachers' self-evaluation and reported implementation of digital technologies in classroom environments, based on global standards and policy reports. After conducting validation with 288 teachers currently working, the scale exhibited strong reliability, internal validity, and a single-dimensional structure across its 19 items. The results indicate that TDiCoS is a useful tool for guiding policy decisions and creating teacher training programs that aim to improve educators' digital skills.In their research, Yılmaz Ergül and Taşar (2022) sought to create and verify the effectiveness of the "Teachers' Digital Competence Scale" (TDiCoS), a comprehensive evaluation instrument designed to assess educators' digital skills in different academic areas. TDiCoS assesses teachers' self-evaluation and reported implementation of digital technologies in classroom environments, based on global standards and policy reports. The scale exhibited strong reliability, internal validity, and a unidimensional structure across its 19 items, as confirmed by validation with 288 in-service teachers. The results indicate that TDiCoS is a useful tool for guiding policy decisions and creating teacher training programs that aim to improve educators' digital skills.

In alignment with the focus on digital assessment literacy within the Turkish educational context, Tufan's (2022) research investigated the digital assessment literacy

levels of English instructors employed at foundation universities in Istanbul, Turkey. This empirical study employed the Digital Assessment Literacy Survey to assess the instructors' digital assessment knowledge and explored the impact of demographic features on their proficiency. The findings revealed a high overall level of digital assessment literacy among the instructors. Notably, variables such as possessing a graduate degree and participating in digital assessment training were identified as statistically significant factors influencing digital assessment knowledge. Despite self-perceived competence in this domain, instructors expressed a demand for increased institutional support, alignment of digital assessment practices with curriculum outcomes, and additional training opportunities. Tufan's (2022) study provides valuable insights into the landscape of digital assessment literacy among English instructors in Turkish foundation universities, highlighting both strengths and areas for further development in the integration of digital tools in language assessment practices.

In examining the landscape of language testing and evaluation within Turkish language education programs, the study conducted by Şahin and Hatipoğlu (2023) provides a critical analysis of the English Language Testing and Evaluation Courses (ELTEC) offered in English Language Teacher Education Programs (ELTEPs) in Türkiye. Their research examines the structure, content, and pedagogical resources employed in these courses, identifying significant gaps and limitations. Particularly noteworthy is the persistent use of outdated Language Testing and Assessment (LTA) textbooks, suggesting a lack of integration of recent developments and methodologies in language assessment, such as formative assessment tools and alternative evaluation techniques. This empirical investigation emphasizes the pressing need to reevaluate the existing ELTEC curriculum, advocating for a more comprehensive and updated framework that aligns with current advancements in language assessment. Additionally, the study highlights the crucial role of instructors' assessment literacy, emphasizing the importance of adequately preparing educators to effectively teach language assessment courses. The recommendations proposed in the study include a restructuring of course sequences, introducing specialized courses dedicated to essential assessment principles, practical applications, and classroom-based language assessment. Integrating these findings into the broader discourse on TELAL the Turkish educational context enriches the understanding of challenges and deficiencies in language assessment training, emphasizing the urgency of aligning

educational programs with contemporary assessment methodologies and technological advancements.

All in all, these studies collectively depict a diverse spectrum of perceptions, from positive attitudes toward technology integration (Karakaya, 2010) to a recognition of the need for training programs to bridge the gap between favorable perceptions and practical implementation (Ata & Yıldırım, 2019; Ruştıoğlu et al., 2021). The localized conceptualization of TELAL becomes apparent through this spectrum, emphasizing the need for targeted and context-specific training initiatives to enhance educators' language assessment literacy within the technological landscape. The current landscape of research in the Turkish educational context has notably contributed to understanding digital literacy, technology integration, and language assessment attitudes among language instructors and pre-service teachers. However, a distinct focus on TELAL remains an underexplored area. The existing studies, while informative, have primarily centered on broader aspects of digital literacy and technology integration within language education, leaving a gap in the comprehensive exploration of TELAL. Hence, this research endeavors to fill this gap by investigating the relation between literacy, language assessment practices, and technology in the Turkish educational setting. By analyzing the localized conceptualization and implementation of TELAL among various stakeholders, this research aims to offer a comprehensive understanding that caters specifically to the unique needs, practices, and challenges prevalent in the Turkish educational landscape.

CHAPTER III

METHODOLOGY

This chapter presents and discusses the research approach and design. It provides details about the study's setting and its participants. Additionally, it discusses the data collection process, instrumentation, and pilot study. In the last section of this part is data analysis.

3.1. Research Design

For this research, a survey research design, a fundamental component of quantitative research methodology, was selected. The survey design offers the advantage of collecting quantitative data, which in turn allows for the generalization of findings or the extrapolation of inferences from a sample to a broader population (Creswell, 2014). The primary objective of this study was to investigate the localized conceptions of TELAL as perceived by various stakeholders within the context of the Turkish educational system. As stated by Dörnyei (2007), questionnaires are among the most widely used instruments in social science research. This preference arises from the fundamental nature of scientific inquiry, which demands a systematic approach to data collection to seek answers to research questions. Surveys, as an integral component of questionnaire-based research, provide credible statistical and quantitative evidence. The use of survey research design affords researchers the ability to gather quantitative data, adding to the methodology's appeal and versatility.

Surveys are particularly suitable for exploring various aspects of personality characteristics, including beliefs, assumptions, and behaviors, among others. Through this method, researchers can assess relevant variables and empirically test hypotheses via structured surveys. As a result, this research incorporated closed-ended questions to elicit quantitative data from language instructors, testing unit members, teacher trainers, and administrators.

This study utilized purposeful sampling, also referred to as purposive sampling, which allows the researcher to deliberately select individuals who have experience with the

primary phenomenon or central concept under consideration in the study. More specifically, the study employed a sampling approach known as maximal variation sampling, which involves selecting a diverse group of people expected to have various perspectives on the central phenomenon. The rationale behind this technique is that by purposefully selecting participants who are different from the outset, their varied perspectives will enrich the study, providing a comprehensive understanding of the issue. For this reason, the study included language teachers, teacher trainers, testing unit members, and administrators, as their viewpoints were expected to contribute to a diverse range of responses and outcomes.

Drawing from Pill and Harding's (2013) dimensions of language assessment literacy and Taylor's (2013) profiles for different stakeholders, this research delineates the dimensions and parameters essential for analyzing stakeholders' perspectives on TELAL. The synthesized combination of these frameworks helps to introduce a novel framework tailored to the specific context of TELAL in the Turkish educational setting, aiming to explore the literacy levels and specific requirements among stakeholders. The framework encompasses multiple dimensions:

- Stakeholder Profiling: Identify and categorize the various stakeholders involved in language assessment within the Turkish educational context. This profiling includes language instructors, administrators, testing unit members, and teacher trainers.
- Technology Integration in Language Assessment: Explore the extent of technology integration in language assessment practices among stakeholders. This involves assessing their literacy in utilizing digital tools for assessment purposes.
- Assessment Literacy Dimensions: Investigate the levels of literacy across specific dimensions of assessment literacy, emphasizing technology-enhanced assessment.
- Perceptions and Needs: Analyze stakeholders' perceptions, attitudes, and specific needs concerning technology-enhanced language assessment literacy. This involves understanding their beliefs about the effectiveness of technology in assessment and their requirements for training or development in the field.

To ensure the validity of the survey instrument used in this study, multiple steps were taken. Content validity was established through an extensive review process involving

language assessment experts and educators familiar with technology integration in language teaching. Their feedback aided in refining the survey questions, ensuring comprehensive coverage of dimensions pertinent to technology-enhanced language assessment literacy. Construct validity was supported by aligning survey items with established frameworks in language assessment and technology integration within educational settings. Additionally, to ascertain reliability, a pilot test was conducted with a small subset of participants to assess the clarity, comprehensibility, and coherence of the survey instrument. Furthermore, survey administration protocols were standardized, and detailed instructions were provided consistently to all participants to minimize response variability. These measures collectively aimed to enhance the reliability and validity of the survey instrument used to capture stakeholders' perspectives on technology-enhanced language assessment literacy within the Turkish educational context.

3.2. Setting

The study is conducted at Atılım University, a foundational institution in Ankara, Türkiye, where English is the medium of instruction. The study is hosted by the Basic English Department of the preparatory school. The goal of the English teaching program is to help students become proficient in the English language, meeting the standards set by the faculties. Students with insufficient English language literacy receive language instruction at the Basic English Department for one academic year. The Basic English Department uses a modular approach with four available levels: D, C, B, and A. These levels correspond to beginner, elementary, pre-intermediate, and intermediate levels, respectively, according to the CEFR. Additionally, there is a pre-faculty level, sometimes referred to as 'pre-fac,' where students practice advanced English. The educational program is divided into four terms, each lasting between 8 and 10 weeks. During the 8-week term, each level receives 25 hours of English instruction. To pass a module, students must achieve a minimum score of 20% based on the total points they earn from their assignments in these classes. Furthermore, the institution has been utilizing tablets as a teaching tool since 2017. Before students begin their lessons, all level-specific books and electronic materials are installed on their tablets, eliminating the need for printed books or hard copies of any materials.

In addition to their regular classes, students also participate in reading, creative writing, and project lessons which they should complete using their tablets. They are required to finish their assigned homework using learning management systems. For instance, each term, students are assigned reading tasks and are expected to complete the reader portfolio homework. Additionally, the portfolio homework includes both reading and writing assignments. After completing their assignments, students receive feedback from Turnitin, an online feedback software platform.

The institution employs several technologically enhanced language assessment systems in the preparatory school. Students are required to use these online tools and environments as part of the portfolio evaluation system. One of these systems is the learning management platform called Moodle. Administrators, members of the testing unit, level heads, and language instructors can create courses, assign tasks, and monitor students' progress using this system. It is also used to maintain a record of each student's term-long academic grades. Another system in use is a tool for evaluating student work for citation errors and preventing plagiarism, known as Turnitin. It allows teachers to provide feedback through the Turnitin online feedback studio, which is integrated into the portfolio system. The CLMS (Cambridge Learning Management System) is another tool integrated into the curriculum. It provides a platform for both instructors and students to access course materials online. Students are required to complete tasks assigned by their instructors through this system, allowing teachers to easily monitor students' progress.

In addition to remote assignments that students can complete at their convenience as long as they meet the deadlines, some technology-enhanced language assessment methods are also employed in face-to-face classroom settings for formative assessment. One of the tools used in the curriculum for enhancing productive language skills is Padlet, an online notice board. Instructors have students utilize Padlet to create texts following the presentation and practice part of the session. Students have the option to include links, videos, photos, and document files in their own writing. Another resource used in these lectures is Quizlet, which aids students in improving their vocabulary skills by providing access to online flashcards.

3.3. Participants

The academic curriculum in this institution is designed to incorporate both face-to-face and online learning and assessment systems in accordance with the enhanced definition of blended learning. Blended learning combines traditional classroom teaching and learning with technology-enhanced online platforms, providing students with control over the time, pace, and location of their learning. This research specifically delved into the current educational landscape where blended learning is already being implemented.

Level heads are the coordinators responsible for overseeing each level. They play a crucial role in designing, organizing, and implementing the academic program in the classroom. Additionally, they are responsible for integrating TELA tools into the curriculum at the beginning of each year and continuously updating them to meet the needs of students, instructors, and administrators. The provided syllabi are intended to be followed by language instructors, who are also expected to complete the assignments and activities outlined in the syllabi. Language teachers in preparatory schools have some flexibility in their schedules, as long as they fully implement the syllabus. Teacher trainers are among the language teachers assigned to the Professional Development Unit (PDU). They organize conferences and workshops for in-service training and conduct classroom observations twice during a term for professional development purposes. Members of the testing unit in the preparatory school are responsible for designing summative exams, including achievement and literacy assessments. Additionally, this unit oversees a periodic standardization system for instructors known as the “rater performance categorization system.” Language instructors evaluate anonymous students' previous exam papers and recordings once per academic term, providing grades through the Moodle system. This process results in specific scores and categories used to define the instructor's rater category, ranging from A+ to A, B, C, D, and E, based on their performance in the standardization procedure.

3.3.1. Participants Profile

3.3.1.1. Demographic Information

In a study investigating the perceptions of technology-enhanced language assessment literacy among educators in Türkiye, demographic characteristics such as age, teaching experience, and educational background are crucial. Understanding these demographics aids in comprehending the varied perspectives and competencies regarding the integration of technology into language assessment practices. For instance, the average age of participants, coupled with their years of teaching experience, offers insights into generational perspectives towards technology adoption. Experienced educators might possess considerable teaching experience but potentially varying levels of comfort and familiarity with technological tools compared to younger counterparts. This demographic aspect might influence their perceptions of the effectiveness or challenges in utilizing technology for language assessment.

Moreover, educational backgrounds diversify the understanding of how different academic institutions approach technology integration. Educators graduating from institutions known for embracing innovative teaching methodologies might exhibit a more proactive stance towards technology use in language assessment compared to those from traditional educational backgrounds. Therefore, these demographic characteristics and background information serve as essential contextual factors influencing participants' attitudes, experiences, and approaches to technology-enhanced language assessment literacy. Understanding the participant profile allows for a more nuanced analysis of the participants' perspectives and competencies, shedding light on the potential challenges or advantages in implementing technology within language assessment practices in Turkish educational settings.

The information was gathered to provide a clearer understanding of the characteristics and makeup of the participant cohort engaged in exploring the localized conceptualizations of TELAL within the Turkish educational context. A total of 139 participants actively engaged in the survey, providing valuable data for this study. The participants' profile indicates an average age of 36.88 years, with a standard deviation of 10.39. Additionally, the participants boasted an average of 13.58 years of teaching

experience, with a standard deviation of 9.73. These statistics offer insights into the demographic and professional backgrounds of the participants.

In terms of gender distribution, a substantial 74.48% of participants identified as female, amounting to 104 individuals. Conversely, 23.0% of the participants, totaling 32 individuals, identified as male. Interestingly, a small fraction of participants, precisely 2.2%, chose not to disclose their gender.

The educational backgrounds of the participants were quite diverse, with Table 1 listing the universities from which they graduated. This diversity emphasizes the varied academic origins and affiliations of the participants, providing a comprehensive view of their educational backgrounds.

Table 3.1. The Universities Where the Participants Graduated

Universities	**f**	**%**
Hacettepe University	33	23,74
Gazi University	26	18,71
Middle East Technical University	20	14,39
Ankara University	11	7,91
Bilkent University	8	5,76
Atılım University	6	4,32
Bogaziçi University	5	3,60
Anadolu University	3	2,16
Bilkent University	3	2,16
Cankaya University	3	2,16
Cukurova University	2	1,44
Izmir University of Economics	2	1,44
Mersin University	1	0,72
Ahvaz University	1	0,72
Akdeniz University	1	0,72
Balıkesir University	1	0,72
Bilgi University	1	0,72
Chishinev State University	1	0,72

Table 3.1. *Continued*

Cyprus International University	1	0,72
Canakkale Onsekiz Mart University	1	0,72
Erciyes University	1	0,72
Istanbul University	1	0,72
Kocaeli University	1	0,72
Razi University	1	0,72
Selcuk University	1	0,72
Suleyman Demirel University	1	0,72
University of London	1	0,72
University of Maryland	1	0,72
Uremia University, Iran	1	0,72

Note. N = 139, and One person did not state the university

Within the participant cohort, a notable representation emerged from various universities, shedding light on their diverse educational origins. Hacettepe University boasted the highest attendance, with 33 individuals, comprising a significant 23.74% of the total participant pool. Following closely, Middle East Technical University (METU) accounted for 20 participants, constituting 13.99% of the total, while Gazi University was represented by 26 participants, making up 18.18% of the sample. These statistics indicates the broad spectrum of educational backgrounds and affiliations among the participants.

Moreover, for a more comprehensive view of participants' academic qualifications and their distribution across the sample. The academic backgrounds of the participants reveal that a significant majority held a master's degree. More specifically, 60 individuals, which corresponds to 43.17% of the total sample, reported having attained this level of education. In contrast, participants with a Ph.D. constituted the smallest group, with only six individuals, accounting for a modest 4.32% of the total. This discrepancy in academic levels indicates the diversity of educational backgrounds among the participants.

A follow-up question sought to determine the departments or fields in which participants had earned their degrees. Based on the results, it becomes evident that a significant majority of the participants who actively engaged in this research held a degree

in English Language Teaching. More specifically, 69 individuals, making up a substantial 49.64% of the participant pool, reported English Language Teaching as their primary field of study. The second most frequently chosen field of study among the participants was English Language and Literature, with 11 individuals (7.91%) attesting to this academic background. However, the diversity within the remaining departments is noteworthy, as they encompass a wide range of academic disciplines. Participants indicated a rich variety of fields, including educational science, psychology, cultural studies, visual design, and management, among others. This diversity in academic backgrounds shows the multidisciplinary nature of the study and the broad spectrum of experiences and expertise brought to the research by the participants.

The participants' primary field of study was English Language Teaching (n = 81, 58.27%), making up the majority of the study's participants. The next densely populated category was those who studied English Language and Literature (n = 30, 21.58%).

As part of the survey, participants were specifically asked to provide information about their academic background and whether they had pursued any courses related to language testing and assessment during their degree programs in questions 8 and 9. A significant portion of the participants, precisely 93 individuals, which accounts for 66.9% of the total sample, confirmed their engagement with at least one such course in this academic area. When the data was examined further, it was found that the average number of courses taken by the participants was 2.60, with a standard deviation of 8.69. This variation in the number of courses reflects the diverse academic backgrounds and training experiences among the participants. The maximum number of courses reported was surprisingly high at 80, whereas the minimum was just one, emphasizing the wide range of responses from the participants. Interestingly, it was observed that seven participants, despite responding 'yes' to the question regarding courses related to language testing and assessment, further indicated that they had not taken any such courses. In addition, participants were inquired about their engagement in technology-enhanced language assessment training. Out of the 85 participants surveyed (constituting 61.2% of the total sample), the majority confirmed that they had received at least one form of such training. From the provided data, several key insights emerge:

Engagement with Language Testing and Assessment Courses:

- A substantial majority confirmed their involvement in language testing and assessment courses during their academic studies.
- Participants' reported engagement varied widely, indicating diverse academic backgrounds and training experiences.
- Seven participants provided conflicting responses, indicating they had taken courses while also stating they hadn't pursued any, potentially reflecting different interpretations or understandings among respondents.

Technology-Enhanced Language Assessment Training:

- A majority reported receiving some form of technology-enhanced language assessment training.
- Specific details about the nature or extent of this training are not explicitly mentioned in the provided information.

Overall, the data highlights varying levels of engagement and experiences among participants concerning language testing and assessment courses, as well as technology-enhanced language assessment training.

The current duty of the participants is illustrated in table 4.3.

Table 3.2. The distribution of the duty of the participants

Major	**f**	**%**
Language Instructors	95	68,35
Teacher Trainer	21	15,11
Testing Unit Member	14	10,07
Administrator	9	6,47

Upon examining the participant groups, it became apparent that the predominant category consisted of language instructors. Specifically, a substantial number of 95 individuals, which accounts for a significant 68.35% of the total participants, identified themselves as language instructors.

Conversely, the category with the fewest members was the group of administrators. A number of 9 participants, equivalent to just 6.47% of the entire sample, held administrative positions. This variation in the distribution of roles within the participant

group reflects the diverse backgrounds and roles present in the study, offering a multifaceted perspective on language testing and assessment practices within the educational context.

3.4. Data Collection Instrument

The data collection process involved administering a comprehensive survey comprising 3 parts which can be seen in Appendix 1. The survey was sent to the participants through Google Forms.

Part A includes a section dedicated to gathering demographic information from participants. This deliberate inclusion aims to acquire a comprehensive understanding of the diverse backgrounds of stakeholders within the Turkish educational context. The gathered details encompass respondents' age, educational history, teaching experience, and their specific roles within the educational sphere.

Second part of the survey, namely Part B, was designed to supplement the primary research questions by delving deeper into stakeholders' attitudes, practices, and perceptions regarding the integration of technology in language assessment, thus providing a more comprehensive view. While not explicitly aligned with the primary research questions, these supplementary questions were strategically included to gather contextual insights that enrich the understanding of TELAL. This part focused on various aspects, such as stakeholders' beliefs in technology effectiveness for language assessment, their frequency of using online resources, perceived training needs in web-based technologies, specific tool preferences, and intended language skills assessment through online tools.

For Part C, after examining various studies, including the Technology Acceptance Model (TAM), Technological Pedagogical Content Knowledge (TPACK-EFL SURVEY), Technological Competencies Scale (TCAS), Computer Literacy Surveys (Son, Robb, and Charismiadji, 2011), and Digital Literacy Surveys, this questionnaire was adapted from Kremmel and Harding's Language Assessment Literacy Survey (2019). This section of the survey presents a Likert scale-based assessment of respondents' perceived levels across various dimensions related to technology-enhanced language assessment. Respondents are prompted to evaluate their familiarity and expertise on a range of aspects. The scale, ranging from "0 Not knowledgeable at all" to "4 Extremely knowledgeable," offers

participants the opportunity to self-assess their literacy levels regarding each dimension. These questions were strategically designed to explore respondents' self-perceived competence in diverse areas. The aim is to acquire an understanding of stakeholders' perceived literacy levels and areas where they may feel more or less confident.

The selection of Kremmel and Harding's Language Assessment Literacy Survey (2019) as a foundational framework for research instrument stems from its alignment with the specific objectives of this stud. This survey offers a comprehensive examination of essential dimensions within LAL, providing a solid groundwork for evaluating the integration of technology into language assessment practices. Moreover, the original survey has undergone rigorous validation processes, ensuring its validity and reliability in measuring pertinent aspects of language assessment literacy. Benefiting from this validated instrument allows to build upon a proven framework. However, it is also important that the original survey is adapted to fit the unique context of the Turkish educational context. The survey can be seen in its original form in Appendix 2. Modifications have been made to ensure cultural relevance, linguistic clarity, and alignment with the technological aspects prevalent in Turkish schools, thereby enhancing the survey's suitability for this research's objectives. Furthermore, the utilization of a similar instrument enables opportunities for comparative analysis with existing literature. By examining similar dimensions across different contexts, this study aims to contribute to the broader understanding of technology-enhanced language assessment literacy, expanding upon the existing body of knowledge in the field.

While adapting the survey, modifications were made, including the addition or removal of specific inquiries, to align with the study's precise aims and objectives. This meticulous refinement process was guided by insights obtained from multiple expert opinions stemming from diverse backgrounds within the realm of language teaching and assessment. Their collective expertise ensured the survey's accuracy and relevance, establishing a more robust connection between the survey's content and the study's overarching goals. Especially, in the second stage of questionnaire development, opinion of an assistant professor who is an expert in the field was taken. The guidance and insights provided by the expert on the field of language assessment literacy development within English Language Teacher Education Programs in Turkey have been instrumental in shaping the framework and direction of this research initiative. This expertise significantly enriched the conceptualization and methodology of this study focused on technology-

enhanced language assessment literacy. Moreover, through multiple constructive feedback sessions on the survey instrument used in this research, invaluable insights were gained that refined the questionnaire and ensured its alignment with the research objectives. Their valuable feedback was guided in making specific changes to the questionnaire's format based on their comments and suggestions. These alterations were aimed at improving the questionnaire's clarity and ease of understanding.

Consistency in data collection, as emphasized by Graham and Cleary (1992), required clear operational definitions to be established before data collection. Therefore, an operational definition was included in the questionnaire, providing a detailed description of the term TELA to enhance validity and minimize potential confusion. In the second part of the survey, researchers inquired about instructors' perceptions of TELAL.

3.5. Pilot Study

According to Dörnyei (2007), piloting is a crucial step in quantitative research, as any attempt to cut corners during the piloting stage can jeopardize the psychometric quality of the study. Following this advice, the data collection instrument was adjusted before the main research based on feedback from a small sample of participants or individuals who evaluated the tool (Creswell, 2012). The questionnaires were piloted to identify and address any potential issues before distributing them to gather real data. This process enabled the researcher to identify ambiguous or confusing sections of the data gathering tools and make necessary revisions. Consequently, the questionnaire was provided to ten individuals to serve as pilots, including four language instructors, one administrator, a member of the testing unit, and a teacher trainer. This was done to ensure that the questions were understandable and comprehensive while identifying any errors that needed correction. Based on the feedback received from the pilot study involving these ten individuals, it became evident that the term 'technology-enhanced' should not only be included in the main question (*How knowledgeable should a member of your stakeholder group (instructors/ administrators/ testing unit members/teacher trainers) be about each aspect of technology-enhanced language assessment?)* but should also be added to the statements within the questionnaire. This addition aimed to prevent participants from misunderstanding the questions and considering language assessment in general, rather than technology-enhanced assessments. For example, the question *comprehension of*

terminology associated with language assessment might be interpreted as assessment in general, not specific to technology-enhanced assessments. As a result, the phrase *technology-enhanced* was included in questions 1, 4, 7, 8, 11, 12, 13, 16, 17, 19, 20, 22, 23, 24, 27, 29, 34, 36, and 44 to enhance the questionnaire's reliability.

The results from the pilot study highlighted the need to revise some of the questions. This was necessary because certain questions were found to measure the same concept, some were not directly relevant to the subject matter, and others lacked the necessary clarity for this specific survey. For example, question number 1 was identified as potentially causing misunderstanding. To address this, we rephrased the sentence that initially read, how language skills develop (e.g., reading, listening, writing, and speaking) into *identifying how different language skills develop through the use of technology-enhanced language assessment instruments*, such as reading, listening, writing, and speaking.

Question 30 created confusion as it measured the same concept as another question, specifically, *'how to find information to help in interpreting test results*.' This redundancy was identified, and the question was revised accordingly. This circular measurement problem prompted the decision to include the second sentence in the questionnaire. Furthermore, to enhance clarity, we added examples of language structures to question number 3, which inquired about *the structure of language (i.e., syntactic, semantic, phonological, pragmatic, and morphological features of the target language*). Questions 9 and 18 were enhanced for reliability by including concrete examples. The primary questions now include examples of the online software plagiarism checker "Turnitin" and the learning management system "Cambridge LMS." The expert recommended adding question 43, which focuses on calibrating scales (*evaluating the values of test items in relation to a specific measurement scale, reflecting item difficulty*). It was determined that question 44 was unclear, thus the wording of the question was appropriately adjusted from "*selecting"* to *"adapting".*

3.6. Data Analysis

Using SPSS, a comprehensive analysis encompassing both descriptive and inferential statistical methods was performed on the collected data, yielding quantitative results. The

descriptive analyses included measures of central tendency (mean, standard deviation, frequency, and percentage) to assess the current state of the participants and the variables under investigation (Field, 2017).

Utilizing measures of central tendency, including mean and standard deviation, the literacy levels across pivotal variables representing TELAL dimensions were computed. For example, 'constructing language assessment' exhibited a mean literacy score of 3.8 (SD = 0.6), 'administering/scoring language assessments' scored a mean of 4.2 (SD = 0.5), and 'local practices' reflected a mean of 3.6 (SD = 0.7). Frequency and percentage distributions outlined the demographic composition of the participants. Moreover, the skewness and kurtosis values calculated, and they ranged between -2 and +2 which are also accepted as threshold for normal distribution (Tabashnick & Fidell).

In addition to these analyses, a thorough check for the normality assumption was performed for each dependent variable within groups. Utilizing visual inspection methods, such as histograms and Q-Q plots, and statistical tests such as Shapiro-Wilk tests, the data distributions were evaluated. The results indicated an approximate adherence to the normal distribution for all variables and groups ($p > 0.05$).

Visual representations played a crucial role in elucidating the findings. Therefore, for the first research question pertaining to the current state of participants and variables under investigation, *radar graphs* were employed to visually represent the TELAL dimensions. These radar graphics provided an intuitive comparative analysis of participants' expertise across various assessment aspects, aiding in the interpretation of strengths and areas necessitating further focus.

In addressing the second research question probing the relationship between participants' duties and TELAL dimensions, a Multivariate Analysis of Variance (MANOVA) was employed. In tackling the investigation into the relationship between the diverse duties of participants and the multifaceted dimensions of TELAL, the selection of MANOVA emerged as a methodological cornerstone. MANOVA was specifically chosen due to its literacy in handling multiple dependent variables simultaneously, allowing for the examination of potential differences in TELAL literacy across various instructor duties. This analytical approach was instrumental in unveiling statistically significant disparities among distinct duty categories, providing a comprehensive understanding of how different

roles within language education may impact TELAL dimensions. Drawing from acclaimed works in the field by Field (2017) and Tabachnick & Fidell (2007), the utilization of MANOVA was strategically justified to discover the relationships and variations that might exist among instructors' roles and their expertise in technology-enhanced language assessment literacy.

CHAPTER IV

FINDINGS & DISCUSSIONS

The main objective of this chapter is to present and discuss the results that have been obtained through an extensive analysis of the collected data from the stakeholders. The subsequent findings of this investigation will be methodically addressed and discussed, with each research question being systematically examined.

4.1. Findings of Research Question 1

Research Question 1. *What is the localized conceptualization of Technology-enhanced Language Assessment Literacy (TELAL) in the Turkish educational context?*

Conceptualization of TELAL Dimensions

As part of the research study, participants were asked to express their beliefs regarding the effectiveness of technology use in language testing (see App.1). The section is created by the researcher to collect precise information about the beliefs, practices, and preferences of stakeholders regarding the use of technology. These questions are intended to complement and enhance the overall findings in order to provide a more profound comprehension. Examining the results reveals that a vast majority, around 96.5% of the participants, responded positively, demonstrating a strong belief in the efficacy of technology in the field of language testing. In addition to assessing their beliefs, participants were also asked about the frequency of their use of online resources for language testing purposes. The details and breakdown of their responses are presented in Table 4, shedding light on the extent to which participants integrate online resources into their language testing practices. This data provides valuable insights into the role of technology in language assessment and the adoption of online tools in this context.

Table 4.1. The frequency of using online resources for language testing

Frequency of using online resources for language testing	**f**	**%**
Never	9	6,47
Rarely	20	14,39
Sometimes	53	38,13
Often	40	28,78
Always	17	12,23

Table 4.1 presents the frequency of utilizing online resources for language testing among the participants. The data showcases varying degrees of engagement with online resources for language assessment. A notable proportion, 6.47%, indicated never using online resources for language testing. Additionally, 14.39% reported rare utilization, while 38.13% used online resources sometimes. Moreover, 28.78% stated an often usage frequency, whereas 12.23% indicated always relying on online resources for language testing purposes. Out of the total of 53 participants, a significant portion, constituting approximately 38.13%, reported that they use online resources for language testing on an occasional basis. This suggests a moderate level of adoption and integration of online resources into their language testing practices. Conversely, a smaller group of participants, specifically nine individuals, which corresponds to only 6.47% of the sample, declared that they never utilize online resources for language testing. This minority within the participant group presents a unique perspective, indicating a lack of reliance on online tools in their language assessment practices.

As part of the study, participants were questioned about their perceived need for training in using web-based technologies for language testing. The majority of the participants, specifically 82.0% of the 114 individuals surveyed, expressed their interest and need for such training, indicating a significant demand for educational support in this area. In a follow-up question, participants were asked to specify the purposes for which they would require web-based technologies in the context of language testing. The detailed responses and categorization of these purposes are provided in Table 5, offering insights into the specific areas where participants believe web-based technologies can be valuable in language testing. This data provides a comprehensive view of the potential applications of web-based tools in language assessment.

Table 4.2. The frequency of the purposes of web-based technologies for language testing training

The purposes of web-based technologies for language testing training		
Increase student motivation and engagement	7	2,59
Track student progress	5	3,96
Improve feedback	6	4,68
Identify knowledge gaps	9	9,64
Create reports	7	6,62

Note. N = 139. Each purpose was responded with a check all that apply question.

Table 4.2 outlines the frequency distribution of various purposes associated with web-based technologies in language testing training, as reported by the participants. Among the purposes identified, 62.59% indicated using web-based technologies to increase student motivation and engagement, highlighting its significance in fostering a positive learning environment. Tracking student progress was another prevalent objective, cited by 53.96% of the respondents, emphasizing the role of technology in monitoring and assessing learners' advancements. Additionally, 54.68% highlighted the use of web-based technologies to enhance feedback mechanisms, underscoring its importance in facilitating constructive and informative assessments. Identifying knowledge gaps was also a notable purpose, with 49.64% acknowledging its relevance in leveraging technology for effective language testing. Finally, 26.62% reported using these tools to create reports, indicating a less common yet existing use for web-based technologies in language testing training among the participants.

Upon closer examination, among the various purposes for which participants expressed a need for training in web-based technologies for language testing, the most highly preferred purpose was “to increase student motivation and engagement.” A substantial number of 87 participants, constituting 62.59% of the total sample of 143 individuals, considered this as a significant area of interest and potential improvement.

Following closely, the second-highest stated purposes were twofold: “to track students” progress” and “to improve feedback.” Both purposes were endorsed by 75 participants, representing 53.96% of the sample, highlighting the importance of continuous assessment and effective feedback in language teaching and learning. Conversely, the least

preferred purpose was 'to create reports,' with only 26.62% of the participants (n = 37) expressing an interest in this area.

Additionally, in the open-ended section, three participants independently mentioned distinct purposes for which they needed web-based technology training. These purposes included “keeping up with new assessment methods,” “providing self-assessment opportunities for students,” and “finding, downloading, or creating content.” These unique perspectives demonstrate the diverse needs and interests of participants in utilizing web-based technologies in language testing and assessment.

As part of the survey, participants were also asked to specify the online assessment tools they employed for teaching and evaluation purposes in their courses. When it comes to the choice of online assessment tools, participants displayed a clear preference for Kahoot, with a significant number of 98 individuals, making up approximately 70.50% of the surveyed participants, indicating their use of this platform. Following closely, Quizlet emerged as the second most favored tool among participants, with 92 individuals, or 66.19%, confirming their utilization of this resource for language assessment and teaching purposes. Moreover, an online version of coursebooks was a popular choice among participants, with 85 individuals, accounting for 61.15% of the sample, relying on this platform to support their educational endeavors.

In contrast, some tools garnered less interest among participants. For instance, BlackCat was reported by 38 individuals, representing 27.34%, while Socrative was used by 21 participants, amounting to 15.11% of the total participants. These differences in tool preference highlight the diverse options available to educators in the field of language assessment. The “Other” category included a variety of tools mentioned by individual participants, including Baamboozle, Hypersay, Nearpod, Poll Everywhere, Quiziz, Wordwall, Liveworksheet, Moodle, and Quizlet, further underscoring the varied choices available to educators for online assessment. Interestingly, only one person, representing a mere 0.72%, reported not using any online technologies for teaching and assessment purposes. This highlights the widespread adoption of online tools among participants in this study.

The distribution of language skills that participants aimed to measure through the use of online assessment tools is outlined in Table 6. This table provides an in-depth analysis

of the specific language skills that participants found most suitable for assessment using online tools, shedding light on their priorities and objectives in language testing and evaluation.

Table 4.3. The frequency of the online assessment tools the participants employed for teaching and evaluation purposes in their courses

The language skills the participants intended to measure through the use of online assessment tools	**F**	**%**
Grammar	122	87,77
Vocabulary	116	83,45
Reading	97	69,78
Writing	98	70,50
Listening	84	60,43
Speaking	47	33,81

Table 4.3 illustrates the frequency distribution of online assessment tools employed by participants for teaching and evaluation purposes across various language skills. The majority of participants indicated a high utilization rate of online assessment tools for evaluating grammar skills, with 87.77% employing such tools for this purpose. Vocabulary assessment closely followed, with 83.45% of participants using online tools to assess vocabulary skills in their courses. The evaluation of reading and writing skills was also prevalent, with 69.78% and 70.50% of respondents, respectively, incorporating online assessment tools for these language domains. Evaluating listening skills was slightly less frequent but still notable, with 60.43% utilizing online tools for this purpose. However, speaking assessment emerged as the least prioritized area, with only 33.81% of participants employing online assessment tools to evaluate speaking skills in their courses.

When the frequency distribution of the language skills was examined, it can be seen that participants aimed to measure through online assessment tools, two skills stood out as dominant choices. The clear dominance of grammar and vocabulary assessment through online tools, followed by relatively equitable attention to reading and writing skills, alongside the lower preference for assessing speaking skills, delineates the distinct emphasis participants place on different language competencies in the context of online assessment within language education. In other words, the majority of participants, specifically 122 individuals, which corresponds to a significant 87.77% of the surveyed

participants, expressed their interest in assessing “Grammar” through these tools. Following closely, “Vocabulary” emerged as another highly preferred skill, with 116 individuals (83.45%) acknowledging its significance in language assessment.

Additionally, 'Reading' and 'Writing' skills garnered similar interest among participants, with approximately 69.78% and 70.50%, respectively, indicating their intent to assess these language competencies using online assessment tools. These closely aligned percentages highlight the parallel emphasis placed on these foundational language skills, reflecting their intrinsic value in language education and assessment practices. To be more specific, the preference for 'Reading' and 'Writing' skills was nearly equivalent, with 69.78% and 70.50% of participants, respectively, expressing their interest in assessing these language skills using online tools.

In contrast, 'Speaking' received the lowest preference among participants, with 47 individuals (33.81%) indicating their interest in assessing this skill through online tools. This discrepancy in preferences highlights the varying emphasis placed on different language skills, offering insights into the unique needs and goals of participants regarding feasibility or effectiveness of online assessment tools compared to other language competencies.

Research Question 1.1. *What is the required level of knowledge across TELAL dimensions for Turkish EFL language instructors?*

In order to address the research question on the present condition of participants and variables being studied, following graphs were utilized to depict the TELAL dimensions. The radar graphs facilitated a clear and direct comparison of participants' literacy in different evaluation areas, helping to evaluate their strengths and areas that require more attention.

Figure 4.1. Language instructors’ TELAL profile

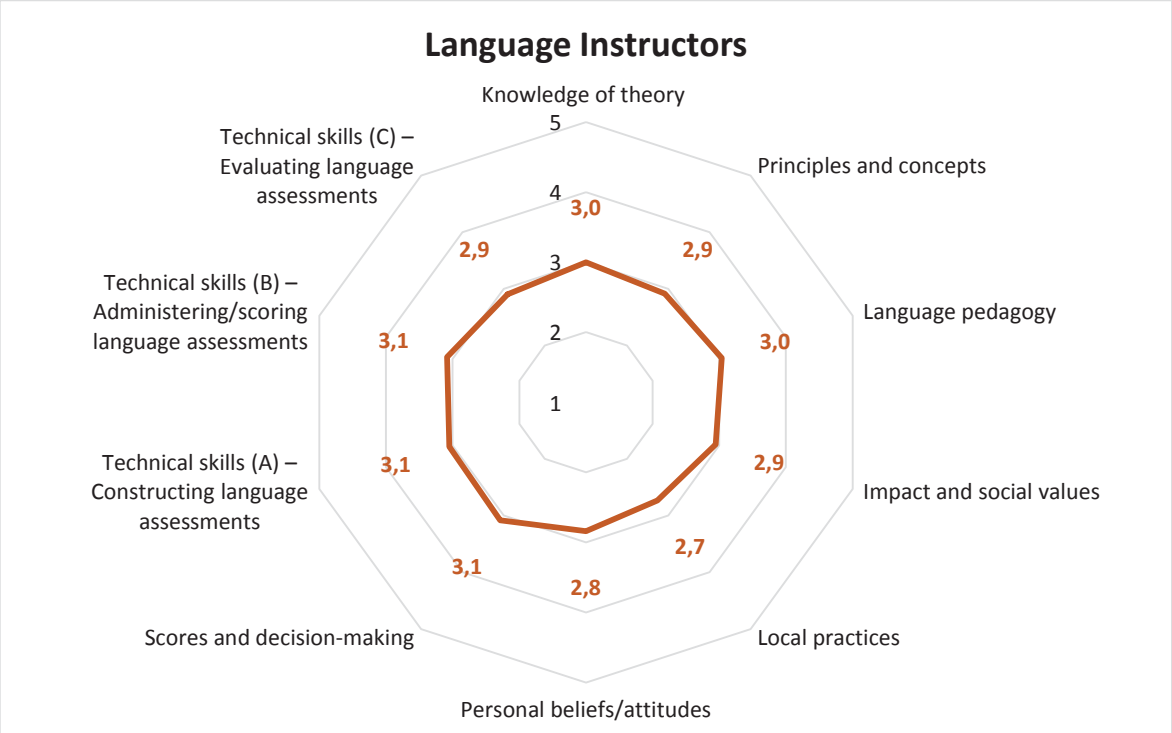


Figure 1 offers a visual depiction of language instructors' TELAL profiles through a radar chart. This type of chart, characterized by multiple axes radiating from a central point, serves to illustrate various dimensions of Language Assessment Literacy.

In this representation, each axis on the chart corresponds to a specific dimension of Language Assessment Literacy, encapsulating diverse aspects such as 'local practices,' 'scores and decision-making,' and technical skills like 'constructing language assessment' and 'administering/scoring language assessments.' The distance of data points from the center along each axis reflects the literacy level of instructors in each dimension, with higher distances indicating greater literacy.

Furthermore, the levels on the chart, exemplified by Level 3 denoting 'very knowledgeable/skilled,' delineate the literacy levels observed among language instructors. For instance, the majority of instructors fall within Level 3, indicating a high level of expertise across the assessed dimensions.

When average ratings for all TELAL aspects are examined more closely, differences in perceived needs and skill become apparent. 'Local practices' was the category with the lowest average score; on the other hand, ‘scores and decision-making' and technical skill categories such as 'constructing language assessment' and 'administering/scoring language

assessments' registered the highest averages. These results confirm how highly instructors value competence in these particular domains.

Overall, an analysis of instructors' literacy levels across TELAL dimensions suggests a balanced distribution. While no significant differences emerged among dimensions, indicating consistent literacy levels, additional quantitative details and the methodology used for assessing this balance would enhance the depth of this observation.

Furthermore, this collective literacy echoes the evolving landscape of language education, wherein instructors play a pivotal role in addressing the diverse needs of learners. Their high literacy levels underline the significance of ongoing professional development and collaborative efforts to foster a comprehensive TELAL among language educators.

1.2. What is the required level of knowledge across TELAL dimensions for administrators at universities?

Figure 4.2. Administrators' TELAL profile

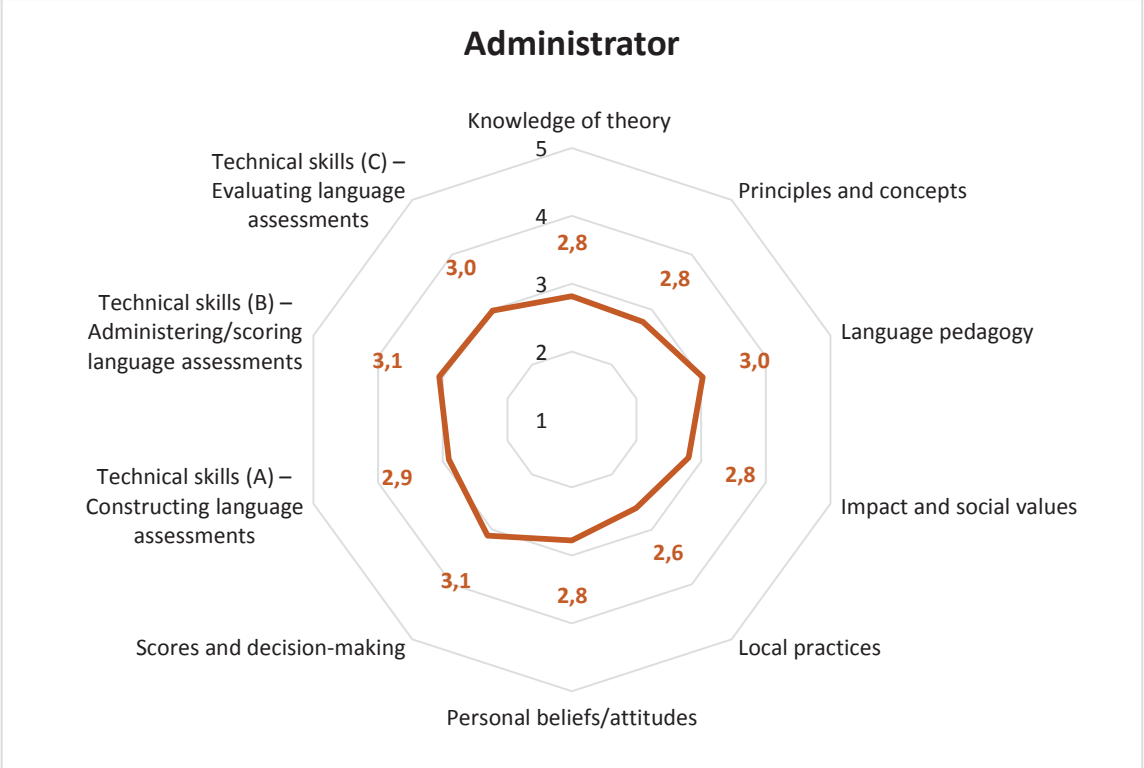


Figure 2 provides a visual representation of administrators' TELAL profiles through a radar chart, aiming to illustrate their literacy across diverse aspects of language assessment. Similar to the radar chart for instructors, this visualization employs multiple axes radiating from a central point, each representing specific dimensions of Language Assessment Literacy.

Upon examining the average scores across different TELAL dimensions, variations in perceived needs and required literacy levels among administrators become apparent. 'Local practices' scored the lowest on average, while dimensions such as 'scores and decision-making,' 'technical skills,' and '(B) administering/scoring language assessments' obtained the highest average scores. This highlights administrators' emphasis on possessing extensive knowledge and expertise in these specific areas of language assessment. Furthermore, in alignment with the radar chart analysis for instructors, an analysis of administrators' required literacy levels across different dimensions suggests a consistent required literacy level without significant differences. This collective expertise across varied dimensions implies a well-rounded literacy in TELAL among administrators.

The radar chart analysis of administrators' TELAL profiles unveils a multifaceted required expertise across various dimensions of language assessment. The variations in the dimensions provide valuable insights into areas of strength and potential focal points for professional development initiatives. Strengthening administrators' grasp of 'Local practices' could bridge contextual gaps in assessment strategies, aligning them more closely with educational needs. Simultaneously, prioritizing continuous skill enhancement in 'scores and decision-making,' 'technical skills,' and '(B) administering/scoring language assessments' ensures administrators remain adept at navigating critical aspects of language assessment. This holistic required literacy underlines the necessity for a comprehensive approach to TELAL, ensuring administrators possess a diverse skill set crucial for steering effective language assessment practices within educational contexts.

1.3. What is the required level of knowledge across TELAL dimensions for testing unit members?

Figure 4.3. Testing unit members' TELAL profile

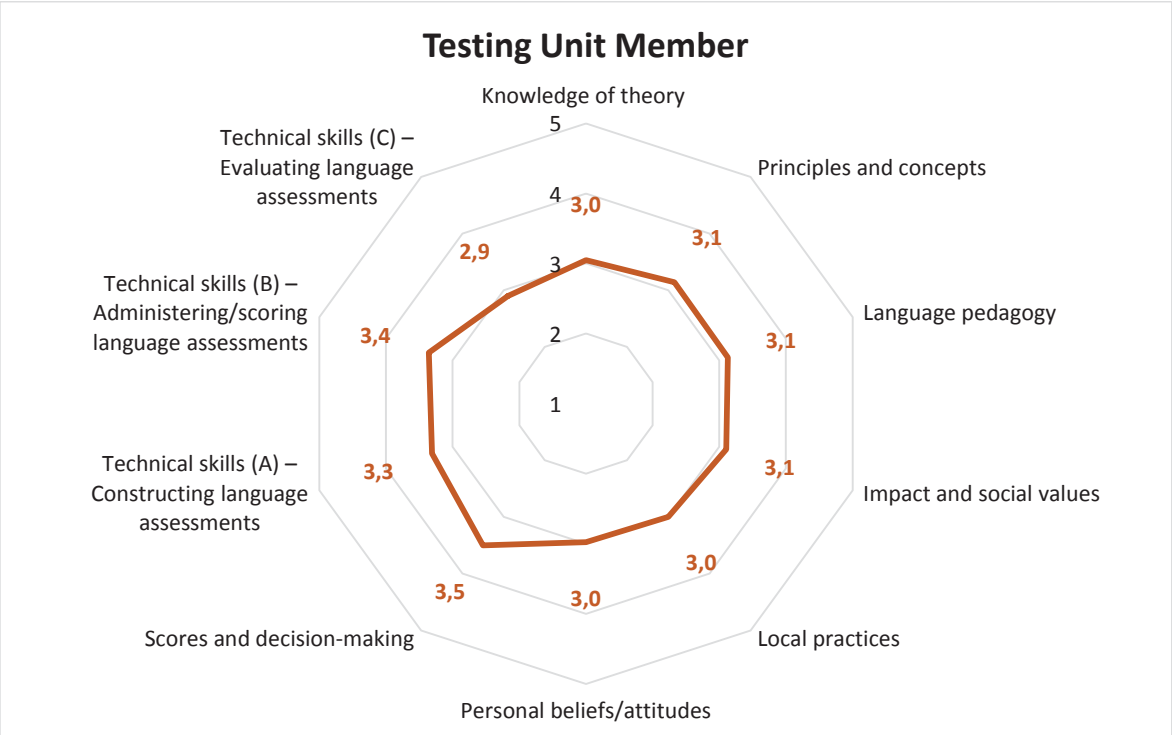


Figure 3 provides an informative representation of the TELAL profile of testing unit members. The required literacy level of testing unit members is closely aligned with Level 3, indicating that they are considered to be 'very knowledgeable/skilled' in various aspects of language assessment.

Upon a more detailed analysis of the average scores across different LAL dimensions, it becomes evident that there are variations in their perceived needs and areas of expertise. The lowest average score was associated with "technical skills (C) evaluating language assessment," while the highest average score was achieved in the "scores and decision-making" dimension. These observations suggest that testing unit members place a significant emphasis on the importance of having a high level of knowledge and expertise in scores and decision-making, as well as the technical aspects of language assessment, particularly "administering/scoring language assessments" (B).

Overall, the examination of testing unit members' required literacy levels across various TELAL dimensions reveals a consistent level of expertise among them. This implies that members of the testing unit share a balanced literacy across the different dimensions of TELAL, reflecting a similar level of language assessment literacy. In

addition, fostering competency in "scores and decision-making" highlights the important part testing unit members play in shaping assessment methods and results.

1.4. What is the required level of knowledge across TELAL dimensions for EFL teacher trainers?

Figure 4.4. Teacher trainers' LAL profile

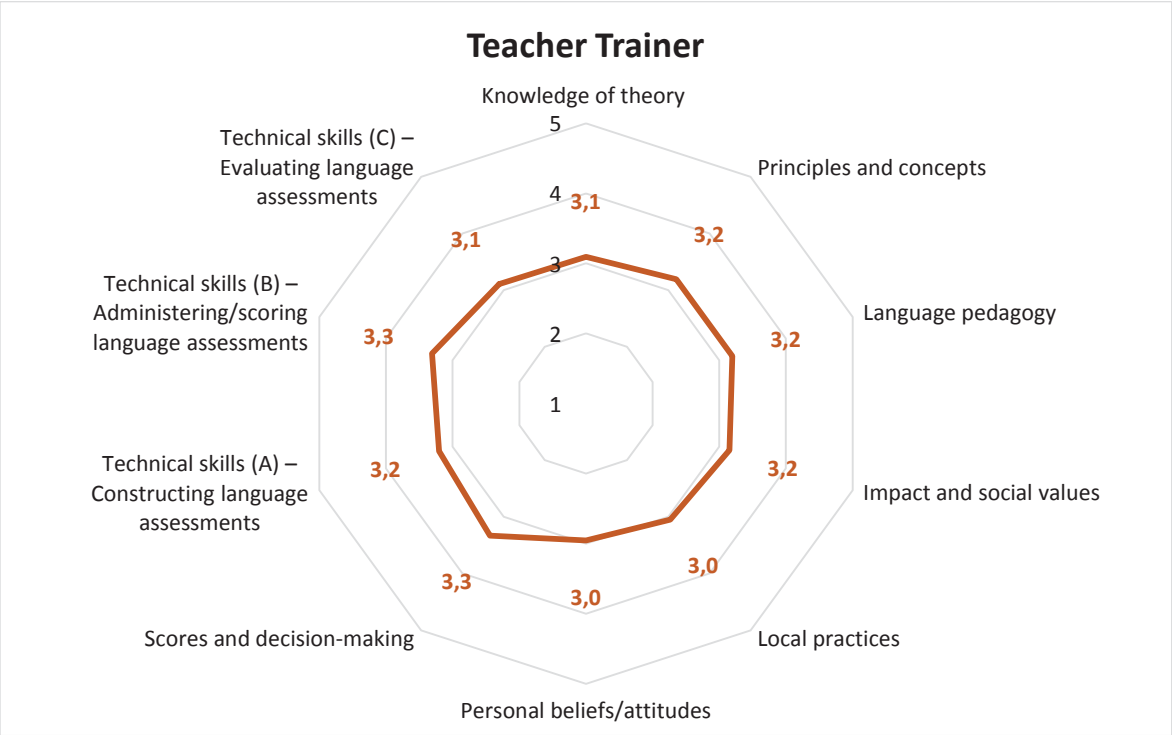


Figure 4 utilizes a radar chart to visually illustrate the TELAL profiles of teacher trainers. The placement of data points on these axes indicates the competency of teacher trainers across these aspects, with greater distance from the center denoting heightened literacy. This visual representation allows for an evaluation of teacher trainers' skills in different language assessment areas, uncovering specific strengths and areas with potential for growth. In this case, teacher trainers' literacy level slightly exceeded Level 3, indicating that they are more than 'very knowledgeable/skilled' in various aspects of language assessment.

A closer analysis of the average scores across different TELAL dimensions highlights variations in perceived needs and areas of expertise among teacher trainers. Notably, 'local practice' and 'personal beliefs/attitudes' received the lowest average scores, while the 'scores and decision-making' dimension attained the highest.

Furthermore, similar to other stakeholder groups, the comprehensive analysis of teacher trainers' required literacy levels across diverse TELAL dimensions showcases a consistent and well-balanced expertise. This suggests a cohesive TELAL literacy shared among teacher trainers, indicating a collective strength across multiple dimensions. It is essential for effective language assessment practices within the domain of teacher training.

In summary, while teacher trainers exhibit a high level of required needs, the examination of their TELAL profiles reveals specific areas where targeted skill development initiatives can further enhance their effectiveness in designing, implementing, and interpreting language assessments within the context of teacher training.

4.1.1. Discussions on the Findings of Research Questions 1

The research conducted on TELAL in the Turkish educational context offers insightful revelations about the integration of technology into language testing practices. The overwhelming positive response from participants, with 96.5% acknowledging the efficacy of technology, reflects a strong belief in its potential effectiveness. Nevertheless, the research findings also indicate that a small proportion (6.47%) does not employ online tools altogether, while 38.13% utilize them on an occasional basis. Moreover, the demand for training in web-based technologies is considerable, with 82% expressing a need for educational support in this domain. The participants' primary objectives for this type of training—increasing student engagement, monitoring progress, and enhancing feedback—emphasize the importance of these domains in language instruction. The preference for specific online assessment tools indicates a diverse array of choices among educators, suggesting flexibility in their approaches to language assessment. While grammar and vocabulary assessment receive substantial attention, speaking assessment emerges as a less prioritized area.

The research questions sought to investigate the required levels of literacy among different stakeholder groups including language instructors, administrators, testing unit members and EFL teacher trainers, across multiple dimensions of LAL. Across all stakeholder groups, the need of a balanced literacy in TELAL dimensions was evident. Language instructors, administrators, testing unit members, and teacher trainers showcased a strong grasp of essential aspects such as 'constructing language assessment' and

'administering/scoring language assessments. While overall required literacy was well-rounded, nuances emerged in specific dimensions. For instance, 'local practices' consistently appeared as an area with room for improvement across stakeholders. This indicates a potential area where targeted training or development initiatives could enhance the alignment of assessment strategies with educational needs. The consistently high literacy need in 'scores and decision-making' across stakeholders emphasizes the critical role these groups play in shaping assessment outcomes. This strong emphasis aligns with the significance of informed decision-making in language assessment within the Turkish educational contexts.

This study analyzes the competency levels of TELAL effectively corresponds with recognized frameworks, such as Pill and Harding's (2013) components of language assessment literacy and Taylor's (2013) profiles of stakeholders. This confirms that this study aligns with established structures. The findings highlight strengths in crucial dimensions such as 'constructing language assessment' and 'administering/scoring language assessments,' mirroring the emphasis these frameworks place on these areas within the Turkish educational context. This direct correlation confirms the study's harmonization with established structures outlined in these influential frameworks. Moreover, the conclusions drawn from the study's findings are fortified by supporting studies such as Ashrafzadeh & Sayadian (2015) and Tsagari & Vogt (2017), which echo concerns about technology integration and the varying degrees of language assessment literacy among educators. These findings align with the study's identified observations, thereby emphasizing the global relevance and shared educational requirements surrounding language assessment literacy. Additionally, the study aligns with various international studies, including Yang & Chen (2007), Trace, Brown & Rodriguez (2018), and Kremmel & Harding (2020), which emphasize the crucial necessity for tailored training programs and professional development initiatives. This alignment emphasizes the persistent need, as highlighted in prior research, to address specific challenges in assessing language proficiency and advocates for continued exploration and advancement in this field.

In contrast to previous discussions which frequently emphasized the lack of knowledge and skills of educators regarding assessment, recent studies have adopted a more optimistic perspective, placing greater emphasis on the realistic potential of teachers, and taking into account the impact of various elements on their assessment practices (Malone, 2013; Taylor, 2013). In examining the results of this research, the localized

conceptualization of language assessment literacy becomes evident through the varied proficiency levels observed among distinct stakeholders within the Turkish educational domain. Across roles such as language instructors, administrators, testing unit members, and teacher trainers, notable differences emerged in their grasp of required language assessment dimensions. A balanced required literacy level was evident across groups, particularly in areas like understanding local practices and employing technology. These differences emphasize the need for tailored training initiatives that address specific needs of these stakeholders within the Turkish educational context. Furthermore, the alignment of findings with established frameworks by Pill and Harding (2013), Taylor (2013), among others, validates the relevance of these frameworks while emphasizing the importance of adapting them to suit the unique landscape of language assessment literacy in Türkiye. This contextualized understanding not only illuminates the differing perceptions and competencies among stakeholders but also highlights the necessity for customized approaches in professional development to enhance language assessment practices effectively.

In considering this study's findings, it is noteworthy to highlight the alignment with Yan, Zhang and Fan's (2018) research in the realm of LAL. Both research emphasize the profound influence of contextual and experiential factors on language assessment practices within distinct educational settings. While this study scrutinizes the integration of technology into language testing practices and unveils specific literacy levels among stakeholders in the Turkish educational context, Yan and Fan's work focuses on the development of LAL among EFL teachers in China. Despite these differing focal points, the convergence lies in recognizing how local sociocultural values, institutional policies, and prior experiences significantly shape language assessment practices. This shared emphasis emphasizes the importance of tailored training initiatives and the necessity to consider localized aspects when studying and enhancing language assessment literacy across diverse educational landscapes.

The current findings are consistent with the insights obtained from Şahin's (2019) study, highlighting potential deficiencies in the training provided to future EFL instructors concerning essential LAL aspects. The study examined ELTEC instructors' perspectives, revealing four core dimensions crucial to shaping LAL for EFL educators. These instructors stressed the significance of foundational knowledge in subject content and pedagogical content as a basis for LAL. Moreover, they emphasized the need for a solid

grasp of theoretical testing and assessment principles, including validity, reliability, and basic statistical concepts. Additionally, they promoted the effective implementation of assessment skills, including the creation of valid tests, adapting assessments for varying learner levels, and designing diverse assessment questions. While recognizing the impact of societal and cultural factors on assessment, these instructors acknowledged essential components like test types, ethical considerations in testing, and adeptness in utilizing alternative assessment tools, scoring methods, rubric application, test result interpretation, and test evaluation – elements extensively discussed in previous LAL literature. This alignment with Şahin's (2019) insights suggests a potential insufficiency in equipping EFL language instructors with these critical LAL competencies

4.2. Findings of Research Question 2.

Research Question 2. *Are there any significant differences in the required level of knowledge across TELAL dimensions among different stakeholders?*

A survey adapted from Kremmel and Harding's Language Assessment Literacy Survey (2019) was employed for the second research question. This section of the survey employs a Likert scale to see the respondents' perceived literacies across different dimensions of technology-enhanced language assessment. The goal is to examine stakeholders' perceived levels of literacy and identify areas where they may feel more or less confident. The results are instrumental in understanding whether the participants' roles or duties, such as language instructors, administrators, testing unit members, or teacher trainers, have a significant impact on their TELAL dimensions. By analyzing these statistics, researchers can determine whether any specific group of participants exhibits distinct patterns or needs in terms of TELAL dimensions. The MANOVA analysis allows for a comprehensive assessment of how participants' duties relate to their TELAL levels, providing valuable insights into the role-specific requirements for technology-enhanced language assessment literacy.

The descriptive statistics for TELAL dimensions by the participants' duty are illustrated in Table 4.4.

Table 4.4. *The descriptive statistics for TELAL dimensions across participants' roles*

TELAL Dimensions	**Duty**	**M**	**SD**
	Administrator	2,81	0,97
Knowledge of theory	Language Instructors	3,00	0,67
	Teacher Trainer	3,10	0,58
	Testing Unit Member	3,05	0,57
	Total	3,00	0,67
	Administrator	2,78	0,63
Principles and concepts	Language Instructors	2,92	0,69
	Teacher Trainer	3,19	0,58
	Testing Unit Member	3,14	0,72
	Total	2,97	0,68
	Administrator	3,02	0,73
Language pedagogy	Language Instructors	3,04	0,71
	Teacher Trainer	3,20	0,59
	Testing Unit Member	3,13	0,79
	Total	3,07	0,70
	Administrator	2,81	0,80
Impact and social values	Language Instructors	2,95	0,71
	Teacher Trainer	3,15	0,61
	Testing Unit Member	3,11	0,78
	Total	2,99	0,71
	Administrator	2,61	1,03
Local practices	Language Instructors	2,73	0,80
	Teacher Trainer	3,05	0,80
	Testing Unit Member	3,00	0,78
	Total	2,80	0,81
	Administrator	2,78	1,25
Personal beliefs	Language Instructors	2,84	0,80
attitudes	Teacher Trainer	2,95	0,78
	Testing Unit Member	2,98	0,78
	Total	2,87	0,80

Table 4.4. *Continued*

Scores and decision making	Language Instructors	3,08	0,92
	Teacher Trainer	3,33	0,73
	Testing Unit Member	3,50	0,65
	Total	3,17	0,86
Technical skills A – Constructing language assessments	Administrator	2,91	0,79
	Language Instructors	3,05	0,75
	Teacher Trainer	3,21	0,65
	Testing Unit Member	3,31	0,58
	Total	3,09	0,72
Technical skills B – Administering scoring language assessments	Administrator	3,06	0,81
	Language Instructors	3,08	0,85
	Teacher Trainer	3,31	0,70
	Testing Unit Member	3,36	0,57
	Total	3,14	0,80
Technical skills C – Evaluating language assessments	Administrator	2,98	0,57
	Language Instructors	2,90	0,82
	Teacher Trainer	3,11	0,86
	Testing Unit Member	2,90	1,03
	Total	2,94	0,83

Note. Administrators n = 9, Language instructors n = 95, Teacher trainer n = 21, Testing unit member n = 14, Total N = 139.

The table 4.4. shows the perceived level of AL requirements of different stakeholder groups (instructors, administrators, testing unit members, and teacher trainers) regarding various aspects of technology-enhanced language assessment. The overall MANOVA test indicated significant differences among the groups concerning the combined perceived knowledge needed across the dependent variables (TELAL dimensions). Wilks' Lambda test statistic revealed a significant difference ($p < 0.05$) across stakeholder groups, suggesting varying perceptions regarding the necessary knowledge in technology-enhanced language assessment dimensions. Further examination of effect size measures, such as partial eta-squared or Pillai's Trace, indicated the magnitude of the relationship between

stakeholder groups and their perceived level of knowledge requirements. These metrics help in understanding the extent to which the perceptions of different stakeholder groups vary across the technology-enhanced language assessment dimensions. Important insights can be gained from the table that shows how various stakeholder groups' perceived level of knowledge that is necessary for different parts of technology-enhanced language assessment. It demonstrates how various groups view the minimal level of expertise required for each area.

The descriptive statistics outlined in Table 4.4 present an insightful overview of the TELAL dimensions across various educational roles. The mean scores (M) and standard deviations (SD) depict disparities in TELAL comprehension among distinct educational duties. Across different dimensions of TELAL, discernible variations are evident among the participants' roles. Notably, Teacher Trainers demonstrate a consistently higher level of understanding across multiple dimensions compared to other roles. For instance, in the dimension of "Knowledge of theory," Teacher Trainers exhibit a notably higher mean score (M = 3.10), surpassing scores of Administrators (M = 2.81), Language Instructors (M = 3.00), and Testing Unit Members (M = 3.05). Similarly, in the dimension of "Principles and concepts," Teacher Trainers (M = 3.19) and Testing Unit Members (M = 3.14) exhibit elevated mean scores, contrasting with Administrators (M = 2.78) and Language Instructors (M = 2.92). The aforementioned persistent pattern shows subtle discrepancies in comprehension of TELAL among various educational roles. In general, Teacher Trainers exhibit a more comprehensive understanding of multiple TELAL dimensions in comparison to Administrators and Language Instructors, whose mean scores on several dimensions are comparatively lower. It's crucial to acknowledge the impact of varying sample sizes within each duty group: Administrators (n = 9), Language Instructors (n = 95), Teacher Trainers (n = 21), and Testing Unit Members (n = 14), contributing to a total sample of 139 participants. Such variations in sample sizes may potentially influence the generalizability and depth of the findings, necessitating caution in the interpretation of these outcomes within the broader educational landscape.

Across a variety of characteristics, teacher trainers consistently reported a greater perceived need for knowledge than administrators, language instructors, and testing unit members. Teacher trainers evaluated the requirement for knowledge higher across dimensions such 'Principles and Concepts,' 'Language Pedagogy,' 'Scores and Decision Making,' and 'Technical Skills A, B, and C.' This suggests that they view these aspects as

more important within technology-enhanced language assessment. When compared to teacher trainers, administrators and language instructors, on the other hand, tended to have lower perceived knowledge demands across multiple dimensions. Administrators and language instructors evaluated certain dimensions—like "Knowledge of Theory," "Local Practices," "Personal Beliefs Attitudes," and "Technical Skills C"—with lower perceived knowledge needs. For administrators, language teachers, and testing unit members, the average perceived level of knowledge across all TELAL aspects is approximately 3.00. But teacher trainers constantly felt they needed to be knowledgeable a little bit more—an average of 3.07—indicating that they thought it was more important to comprehend different TELAL components.

In conclusion, the table illustrates how different stakeholder groups view the level of knowledge required for various TELAL components. Compared to administrators and language instructors, teacher trainers consistently see a greater demand for knowledge, highlighting potential disparities in perceived needs or priorities within technology-enhanced language assessment.

Table 4.5. *MANOVA results for TELAL dimensions by the participants' duty.*

Effect		**Value**	**F**	**Hypothesis df**	**Error df**	**Sig.**	**Partial Eta Squared**
Intercept	Pillai's Trace	,935	180,254	10,000	126,000	,000	,935
	Wilks' Lambda	,065	180,254	10,000	126,000	,000	,935
	Hotelling's Trace	14,306	180,254	10,000	126,000	,000	,935
	Roy's Largest Root	14,306	180,254	10,000	126,000	,000	,935
Duty	*Pillai's Trace*	*,125*	*,556*	*30,000*	*384,000*	*,973*	*,042*
	Wilks' Lambda	*,879*	*,556*	*30,000*	*370,511*	*,974*	*,042*
	Hotelling's Trace	*,134*	*,556*	*30,000*	*374,000*	*,974*	*,043*
	Roy's Largest Root	*,093*	*1,187*	*10,000*	*128,000*	*,306*	*,085*

The MANOVA results presented in Table 4.5 provide insights into the influence of participants' roles on TELAL dimensions. The statistical measures employed, including Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root, collectively assess the relationship between participants' duties and their perceived knowledge across various dimensions of technology-enhanced language assessment.

The overall MANOVA test reveals statistically significant differences among participant groups concerning the collective perceived knowledge needed across the TELAL dimensions ($p < 0.05$). This indicates that participants' roles have some impact on their perceived knowledge levels in technology-enhanced language assessment. Examining the descriptive statistics across TELAL dimensions by different roles (administrators, language instructors, teacher trainers, testing unit members) highlights variations in mean scores, signifying differences in perceived knowledge requirements across dimensions. These differences suggest potential disparities in perceived needs or priorities within technology-enhanced language assessment among various educational roles.

While the statistical significance is established, delving deeper into the effect sizes (e.g., partial eta-squared or Pillai's Trace) and their practical implications could enhance the interpretation. Understanding the magnitude of these differences and their relevance in educational settings would offer valuable insights into tailoring training or support strategies based on specific role-related TELAL needs.

Moreover, the absence of statistically significant differences among duties in any TELAL dimension implies that specific roles may not substantially impact literacy across the TELAL aspects examined. However, exploring the implications of these findings in refining educational practices or designing targeted training programs would augment the interpretation's depth and practical relevance for educators and stakeholders in language assessment.

4.2.1. Discussion on the Findings of Research Question 2

The findings from the descriptive statistics of TELAL dimensions among various stakeholders offer a complex view of the diverse levels of literacy within TELAL. Notably, teacher trainers consistently demonstrated the highest average scores across all dimensions, indicating a profound required level of TELAL aspects. Conversely, administrators and

language instructors tended to exhibit lower average scores across multiple dimensions, particularly in areas related to 'Local practices,' 'Personal beliefs attitudes,' 'Knowledge of theory,' and 'Principles and concepts.' This discrepancy emphasizes potential areas for improvement, underlines the need for targeted educational interventions tailored to address specific issues observed among different roles.

These findings find resonance in existing literature, notably in Taylor's (2013) exploration of diverse profiles in assessment literacy across educational constituents. The varying TELAL dimensions among stakeholders affirm the intricate nature of literacy within language assessment contexts, emphasizing the necessity for specialized educational programs. This supports the case for developing modular courses or focused training initiatives catering to the unique needs of each stakeholder group.

The findings underline the urgent need for a more comprehensive approach to TELAL. By recognizing distinct perceived level of requirements among stakeholders, educational institutions can design nuanced and effective training programs. The disparities in literacy across dimensions highlight the necessity for a standardized approach to TELAL, ensuring a universally competent level of literacy across all facets of language assessment practices.

These observations align with previous studies focusing on digital literacy and technology integration within Turkish educational contexts. Studies exploring attitudes toward technology among various stakeholders (Akbulut, 2008; Karakaya, 2010; Öz, 2014) parallel the varied perceived levels of knowledge observed in TELAL dimensions among administrators, language instructors, and teacher trainers. Additionally, research addressing digital literacy improvement among teachers (Cirit, 2015; Ruştıoğlu et al., 2021; Yılmaz Ergül & Taşar, 2022) highlights the importance of enhancing competencies in technology integration, echoing the need for specialized training initiatives to bridge TELAL gaps. Studies examining pre-service teachers' perceptions toward technology (Ata & Yıldırım, 2019; Şengül & Demirel, 2022; Yıldırım and Kılıç, 2021) resonate with the findings, emphasizing the significance of tailored educational interventions to uplift TELAL across different stakeholder categories.

In comparing the findings of the present study with Tufan's (2022) research on digital assessment literacy among English instructors, notable insights emerge. Both

studies illuminate the digital assessment landscape, revealing a high level of required literacy among participating instructors. However, divergences in the impact of demographic factors, such as years of teaching experience and educational background, prompt further investigation. While Tufan's study suggests a potential influence of instructors' experience, this research's findings indicate that years of teaching experience did not significantly affect digital assessment literacy levels. Moreover, institutional support emerges as a crucial factor in both studies, with instructors expressing the need for financial and technical assistance. Tufan's insights into ethical considerations also align with the findings of this research, emphasizing the urgency of addressing issues related to academic integrity. When two studies are compared, it sheds light on the interplay between contextual factors and instructors' digital assessment literacy, offering valuable implications for educational institutions aiming to enhance their digital assessment practices for different stakeholders.

CHAPTER V

CONCLUSION

This chapter presents the conclusion to the research study. It begins with a summary of the study, offering a brief overview of the key findings and their significance. Subsequently, the implications of the findings for relevant stakeholders, and offers suggestions for further research are presented.

5.1. Summary of the study

Language assessment encompasses a range of unique tasks, each with its distinctive characteristics. Historically, there was less emphasis on the expectation for language teachers to possess a high level of assessment and digital literacy. However, the evolving nature of society and educational circumstances has heightened the demand for not only improved language literacy but also increased digital literacy among educators. Consequently, the expertise in language testing and assessment held by language instructors, test makers, researchers, and other stakeholders has become essential to meet these evolving requirements in language education. The diverse roles that stakeholders play in the field of language assessment may result in varying requirements for the knowledge and theory necessary for technology-based assessment. This research aims to analyze the localized conceptualizations of TELAL among various stakeholders within the educational system in Türkiye. The specific selection of participants is noteworthy, as the chosen university began implementing tablets as a teaching tool in 2017. Therefore, all participants are well-acquainted with technology-enhanced language instruction and assessment.

In the initial stage of data collection, demographic information questions were included to investigate the general characteristics of the participants, such as gender, age, job title, years of experience, and assessment training. The second section of the survey focused on gathering insights into teachers' perceptions of TELAL. The third section utilized closed-ended questions to determine the specific TELAL needs of the various stakeholder groups, helping to understand the localized conceptualizations of TELAL

within the Turkish educational context. This comprehensive framework guided the data collection and analysis process, contributing to a thorough exploration of TELAL among diverse educational stakeholders in Türkiye.

The study utilized SPSS software to conduct a thorough analysis that included both descriptive and inferential statistical techniques on the gathered data, resulting in quantifiable findings. Literacy levels across important variables defining aspects of TELAL were assessed using central tendency measures, such as mean and standard deviation. Radar graphs provided a visual representation of the TELAL dimensions, facilitating the identification of participant strengths and areas requiring work. In addition, a Multivariate Analysis of Variance (MANOVA) was conducted to examine changes in TELAL competency based on various teacher roles. The goal was to find any significant differences among duty categories.

Regarding the first research question, in order to provide a clearer understanding of the results, radar graphs were used as visual representations. When examining the TELAL profiles of language teachers, it becomes apparent that language instructors place a strong emphasis on the need for a high level of knowledge and expertise in scores and decision-making. Additionally, they recognize the vital importance of possessing the technical skills essential for constructing language assessments and effectively administering and scoring language assessments. These dimensions received the highest average marks among language teachers, underscoring their focus on these core aspects of technology-enhanced language assessment literacy. For administrators, a similar trend is observed, with the dimensions of decision-making, technical skills, and administering/scoring language assessments receiving the highest average scores. These administrators also prioritize these aspects, demonstrating the recognition of their significance in their roles. Testing unit members, like their counterparts in other stakeholder groups, exhibit a strong emphasis on scores and decision-making, which garnered the highest average marks in their TELAL profiles. This aligns with the overarching recognition of the pivotal role played by these dimensions in the context of technology-enhanced language assessment. Teacher trainers share a similar pattern, with scores and decision-making receiving the highest average score among the various dimensions. This finding reaffirms the universal emphasis on these aspects across different stakeholder categories.

Conversely, the lowest average scores were attributed to local practice and individual beliefs/attitudes across all stakeholder categories. This suggests that, regardless of their specific roles, stakeholders generally accord less importance to these dimensions in the context of technology-enhanced language assessment. The convergence in the prioritization of certain dimensions, such as scores and decision-making, underscores the common recognition of their significance among stakeholders. It also highlights the shared understanding of the critical role played by these dimensions in technology-enhanced language assessment literacy.

When compared with the findings of prior research conducted by Taylor (2013) and Kremmel & Harding (2019), the results of this study reveal a noteworthy commonality: all participants, irrespective of their stakeholder group, express a belief in the necessity of acquiring knowledge of TELA dimensions. This shared perspective transcends their roles within the educational ecosystem. This alignment with previous research and the consensus across stakeholder groups further emphasizes the overarching significance attached to TELAL dimensions in the context of technology-enhanced language assessment. It underscores the universal recognition that a standardized level of TELAL is essential for all parties engaged in the assessment process, mirroring a common understanding across the educational landscape.

For the second research question, the aim is to examine stakeholders' perceived levels of literacy. There was no statistically significant variation in the participants' duties concerning the individual TELAL dimensions, according to the findings of the univariate analysis of variance performed on these dimensions. Teacher trainers exhibited the highest average scores across all TELAL dimensions, indicating a strong emphasis on the need for knowledge and expertise in these areas. Conversely, administrators and language teachers demonstrated the lowest average scores, suggesting that they may prioritize these dimensions to a lesser extent.

One striking revelation is that the participants' duties did not significantly vary from one another in any of the TELAL aspects. In other words, the nature of their roles within the language assessment process did not appear to exert a substantial influence on their TELAL literacy. This finding aligns with the initial assumptions set forth in this study, which anticipated that all individuals involved in the language assessment process, not

limited to EFL teachers or language instructors, would possess a comprehensive understanding of all dimensions of technology-enhanced language evaluation.

In light of these findings, it is evident that issues related to technology in language assessment may necessitate a reinterpretation of the constructs being assessed, as noted by Bachman (2000). The study's results underscore the need for a holistic approach to TELAL that encompasses all stakeholder groups, acknowledging the evolving landscape of language assessment and the shared responsibility for technological literacy in this context.

5.2. Pedagogical Implications

The comprehensive findings of this study emphasize the foundational nature of TELAL within the broader framework of LAL. They state that the essential principles, knowledge, and skills spanning the eight TELAL dimensions are integral for all stakeholders engaged in language assessment. Since TELAL is an emerging area of study, this research sheds light on the varying TELAL needs among different stakeholders, focusing specifically on the Turkish educational setting.

Turkish EFL Language Instructors

Language instructors play a pivotal role in integrating technology into language assessment practices. Studies such as Taylor (2013), Kremmel & Harding (2019) and (Şahin & Hatipoğlu, 2023) state the importance of these instructors possessing a high level of expertise in 'Scores and Decision-making' and 'Technical Skills'. Pedagogically, providing targeted professional development programs focusing on these aspects can enhance instructors' capabilities and confidence in employing technology for language assessment.

EFL instructors in Türkiye can benefit from workshops focused on using web-based technologies and digital tools like Turnitin and Moodle for language assessment. Sharing experiences among instructors and exploring real-life examples during workshops can help them feel more confident using these tools in their teaching. Furthermore, workshops and courses aimed at enhancing their skills in constructing language assessments and administering/scoring language assessments digitally (Akbulut, 2008; Ruştıoğlu et al.,

2021) are recommended. These initiatives should align with the localized requirements and technological infrastructure prevalent in Turkish educational contexts.

Administrators at Universities

Administrators hold significant influence over educational policies and resource allocation. Studies like Öz (2014) and Cirit (2015) highlight the importance of administrators possessing proficiency within TELAL. Pedagogically, there's a need for specialized training programs catering to administrators, focusing on understanding the implications of technology in language assessment practices (Karakaya, 2010). Tailored workshops and seminars can empower administrators to make informed decisions regarding technology integration in language assessment. Emphasizing these aspects in professional development initiatives aligns with enhancing their roles in shaping educational strategies and infrastructure.

The implications derived from this study can influence educational policies. Administrators can utilize these insights to craft frameworks that encourage the integration of technology-enhanced assessment tools in language education. By doing so, they promote standardized and high-quality learning experiences. A key component in actualizing this integration involves the establishment of tailored and targeted professional development programs. These programs should be adaptable, catering to varying levels of technological literacy among language instructors. Integral to this strategy is the continuous provision of guidance and assistance to educators, facilitating a smooth transition from theoretical comprehension to practical implementation. Additionally, the development and dissemination of user-friendly instructional materials for diverse technological tools are crucial. These resources, while focusing on technical aspects, should equally emphasize the pedagogical implications, ensuring instructors gain a comprehensive understanding and thereby effectively utilize technology in assessment practices.

Testing Unit Members

Testing unit members, as pivotal contributors to assessment practices, require comprehensive TELAL understanding. Research by Tsagari & Vogt (2017) and Yan, Zhang, and Fan (2018) emphasizes the significance of 'Scores and Decision-making' among these members. Pedagogically, specialized training focusing on refining skills

related to item development, test administration, and result interpretation should be designed. Workshops and courses emphasizing these TELAL dimensions, in alignment with the specific demands of technology-enhanced language assessment, are vital. This targeted training will fortify their roles in ensuring the reliability and validity of language assessments.

For testing unit members, advanced workshops focusing on designing digital assessments, item analysis, and result interpretation are essential to advance their proficiency in technology-enhanced language assessment. Simulated sessions mimicking real-world testing scenarios can also enhance their skills in administering digital assessments effectively. Instituting certification programs that acknowledge proficiency in technology-integrated assessment methodologies would substantiate their expertise. Moreover, establishing regular workshops, seminars, and online resources dedicated to assessment literacy is crucial. These initiatives should focus on different facets of technology-enhanced language assessment. Practical demonstrations, case studies, and collaborative sessions can significantly elevate instructors' literacy, fostering a deeper understanding of assessment strategies, online tools, formative and summative assessment, and effective feedback mechanisms within technological frameworks.

EFL Teacher Trainers

EFL teacher trainers, recognized for their expertise in language education, need to exhibit exemplary TELAL proficiency (Malone, 2013; Yang & Chen, 2007). Studies such as Şengül & Demirel (2022) highlight the importance of 'Scores and Decision-making' for teacher trainers. Pedagogically, developing advanced courses focusing on technology integration in language assessment (Ata & Yıldırım, 2019) and fostering critical thinking about technology use in assessment practices are recommended. Providing these trainers with tools and methodologies aligning with contemporary TELAL dimensions will enhance their role in preparing future educators for technology-enhanced language assessment scenarios.

A key strategy involves the development and implementation of specialized training modules or workshops dedicated to integrating technology into language assessment methodologies. These initiatives should meet the diverse needs and varying levels of technological literacy among instructors. Hands-on sessions, coupled with comprehensive

guides and continuous support, play a significant role in empowering educators to utilize technology purposefully in language assessment practices.

Customizing training strategies to the specific needs of each stakeholder group is vital for the successful integration of TELAL in the Turkish educational context. For Turkish EFL language instructors, hands-on workshops focusing on tools like Turnitin and Moodle, case study analyses, and the formation of peer learning communities can enhance their confidence and proficiency in technology integration. Administrators can benefit from scenario-based training, guest speakers, and policy development workshops to equip them with the knowledge needed to make informed decisions regarding technology integration. Testing unit members should undergo intensive bootcamps on digital assessment design, simulated testing environments, and certification programs to fortify their roles in ensuring assessment reliability. EFL teacher trainers require advanced courses on technology integration, critical thinking workshops, and hands-on exploration of various technology tools to prepare them for training future educators effectively. General strategies include continuous mentorship programs, regular update sessions, and online resource hubs to foster a culture of ongoing learning and collaboration among all stakeholders. These customized approaches aim to empower educators, administrators, testing unit members, and teacher trainers to harness the benefits of TELAL, ultimately improving student learning outcomes.

Overall, the implications drawn from this research delineate actionable strategies and targeted recommendations aimed at fortifying TELAL among language instructors in the Turkish educational context. These strategies, when implemented, hold the potential to revolutionize teaching and assessment practices, ultimately benefiting student learning outcomes. By directly addressing the identified challenges and inadequacies through comprehensive and tailored professional development initiatives, educators can significantly enhance their pedagogical approaches, promoting more effective teaching and evaluation of language literacy. This progress, in turn, fosters an enriched learning environment that optimizes students' language learning experiences and achievements.

5.3. Limitations and Suggestions for Further Research

In this specific study, a total of 139 participants participated, comprising nine administrators, fourteen testing unit members, and twenty-one teacher trainers. While this sample size allowed for a valuable examination of TELAL within the chosen stakeholder groups, considerations for enhancing external validity should be acknowledged. Expanding the participant pool to encompass a more extensive representation of stakeholder groups could contribute to increased generalizability. Such inclusion may involve incorporating additional categories of stakeholders within the educational context, thereby enriching the study's potential for broader applicability.

The current research relied solely on quantitative statistical methods to analyze its findings. Future studies may explore a more comprehensive approach by integrating mixed methods designs. Combining both quantitative and qualitative data collection and analysis methods can offer a more holistic perspective on the research topic. This approach allows for a richer understanding of the dynamics behind the phenomenon under investigation. In this context, additional interviews and qualitative research components may be incorporated to delve deeper into the complexities of TELAL. By adopting such a mixed-methods strategy, researchers can achieve a more nuanced comprehension of the subject, uncovering insights that quantitative analysis alone may not capture.

In view of the research's limitations, several avenues for future exploration emerge. First, expanding the dataset could be considered to achieve a more expansive representation of stakeholders, thus enhancing the robustness and generalizability of the findings. Furthermore, the nature of the study topic and its context may necessitate the inclusion of additional stakeholders. For instance, researchers actively involved in the assessment process, professional language testers, curriculum and instruction experts, and others could be incorporated into the study's framework. This inclusive approach would offer a more comprehensive understanding of TELAL's diverse dimensions and needs across various educational settings and roles.

In the same vein, future studies on TELAL may encompass different educational settings, including other higher education institutions, to understand the adaptability and effectiveness of TELAL across different institutions. Other suggestions for further research might be broadening stakeholder involvement by incorporating parents, students, and

policymakers will capture diverse perspectives on TELAL's impact. Longitudinal studies can also track the sustainability and evolving needs of TELAL over time, while regional comparative studies will shed light on cultural and socio-economic influences on TELAL outcomes. Moreover, exploring the integration of emerging technologies like virtual reality and artificial intelligence in language assessment and learning is crucial for staying at the forefront of educational advancements. Furthermore, evaluating educators' pedagogical approaches in TELAL environments and assessing specific learning outcomes, including proficiency gains and critical thinking skills, will provide an understanding of TELAL's educational benefits. Finally, collaborating with industry partners ensures research aligns with practical needs and innovations, while synthesizing international best practices can inform the development of guidelines for effective TELAL implementation globally.

In conclusion, this research was conducted within a specific foundational institution in Ankara, Türkiye, which has integrated tablet-based education. To gain deeper insights into the multifaceted dimensions of TELAL, future research endeavors might encompass other educational institutions that have adopted technology-driven educational programs and digital assessment methods. Moreover, extending the research to various regions of Türkiye would facilitate a more in-depth exploration of the localized nature of TELAL, accounting for the potential influence of regional differences and educational contexts.

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APPENDICES

Appendix 1: Survey Questions

Survey Questions

Final Version of the Technology-Enhanced Language Assessment Literacy (TELAL) Survey

The aim of this questionnaire is to identify the conceptualization of Technology-Enhanced Language Assessment Literacy (TELAL) level of language instructors in Turkish education context. Please read and answer all of the questions in the questionnaire.

Demographic Information

PART A - Please answer the questions.

1. Age ___

2. Gender Female Male Prefer not to say

3. Which university did you graduate from? ___

4. Major

English Language Teaching

English Language and Literature

American Culture and Literature

English Translation and Interpretation

English Linguistics

Other

5. Years of teaching experience ___

6. Do you have a masters or doctoral degree?

MA MA in progress PhD PhD in progress No

7. If yes, which department?

English Language Teaching

English Language and Literature

American Culture and Literature

English Translation and Interpretation

English Linguistics

Curriculum and Instruction

Other

8. Did you take any courses related to (language) testing and assessment in your BA, MA or PhD? Yes No

8.1. If yes, please write the number of the language testing course taken. ___

9. Do you have technology-enhanced language assessment trainings? (in-service, conference, workshops…etc.) Yes No

10. What is your duty in the faculty?

Instructor Teacher Trainer Administrator Testing Unit Member

Other

PART B - Please answer the questions.

1. Do you believe in the effectiveness of technology use in language testing and assessment?

Yes No

2. How frequently do you utilize online resources for language testing and evaluation?

Rarely Sometimes Often Always

3. Do you believe you need training on using web-based technologies for language assessment?

Yes No

3.1. If yes, for what purposes? (You can choose more than one)

Tracking student progress.

Identify knowledge gaps.

Improve feedback.

Other _____ (please specify)

4.Which online assessment tools do you employ for testing and evaluation purposes in your courses? (You can choose more than one)

Quizlet Cambridge LMS Online Version of Coursebooks

Kahoot

Padlet Black Cat Turnitin Google Classroom

Socrative Moodle Online Portfolios

Other

5. Which language skills do you intend to measure through the use of online assessment tools?

Grammar Reading Listening

Speaking Writing

PART C – Please answer the questions.

Technology-Enhanced Language Assessment (TELA) refers to assessment procedures and frameworks that make use of technology in their administration.

How knowledgeable should a member of your stakeholder group (instructors / administrators / testing unit members or teacher trainers) be aware of each of the aspects of technology-enhanced language assessment?

Please respond according to the following scale:	**0** Not knowledgeable at all, **1** slightly knowledgeable, **2** moderately knowledgeable, **3** very knowledgeable, **4** extremely knowledgeable				
1. identifying how different language skills develop	0	1	2	3	4

through the use of technology-enhanced language assessment instruments (e.g., reading, listening, writing, speaking)					
2. how foreign/second languages are learned	0	1	2	3	4
3. the structure of language (i.e., syntactic, semantic, phonological, pragmatic, and morphological features of the target language)	0	1	2	3	4
4. grasping terminology related to technology-enhanced language assessment	0	1	2	3	4
5. maintaining the concept of reliability (how accurate or consistent an assessment is) better	0	1	2	3	4
6. maintaining the concept of validity better (how well an assessment measures what it claims to measure) better	0	1	2	3	4
7. using technology-enhanced assessment instruments for formative assessment	0	1	2	3	4
8. using technology-enhanced assessment instruments for summative assessment	0	1	2	3	4
9. using web-based learning administration systems (i.e., Cambridge LMS)	0	1	2	3	4
10. using assessments to evaluate progress in language learning	0	1	2	3	4
11. using technology-enhanced assessments to evaluate achievement in language learning	0	1	2	3	4
12. using technology-enhanced assessments to diagnose learners' strengths and weaknesses	0	1	2	3	4
13. using technology-enhanced assessments to motivate student learning	0	1	2	3	4
14. using self-assessment	0	1	2	3	4
15. using peer-assessment	0	1	2	3	4
16. training language instructors about technology-enhanced language assessment	0	1	2	3	4
17. preparing learners to take technology-enhanced	0	1	2	3	4

language assessments					
18. giving useful feedback using online assessment tools (e.g. Turnitin)	0	1	2	3	4
19. recognizing when a technology-enhanced assessment is being used inappropriately	0	1	2	3	4
20. how social values can influence technology-enhanced language assessment design and use	0	1	2	3	4
21. when and how to use standardized tests	0	1	2	3	4
22. identifying the philosophy behind the design of a relevant technology-enhanced language assessment	0	1	2	3	4
23. determining if the content of a technology-enhanced language assessment is culturally appropriate	0	1	2	3	4
24. determining if the results from a technology-enhanced language assessment are relevant to the local context	0	1	2	3	4
25. identifying the relevant legal regulations for assessment in the local area	0	1	2	3	4
26. identifying the assessment traditions in a local context	0	1	2	3	4
27. identifying one's own beliefs/attitudes towards technology-enhanced language assessment	0	1	2	3	4
28. identifying how one's own beliefs/attitudes might influence one's assessment practices	0	1	2	3	4
29. one's own knowledge of technology-enhanced language assessment might be further developed	0	1	2	3	4
30. interpreting what a particular score says about an individual's language ability	0	1	2	3	4
31. developing test specifications (overall plans) for language assessments	0	1	2	3	4
32. selecting appropriate rating scales (rubrics)	0	1	2	3	4
33. selecting appropriate items or tasks for a particular assessment purpose	0	1	2	3	4

34. designing scoring keys and rating scales (rubrics) for technology-enhanced assessment tasks	0	1	2	3	4
35. making decisions about what aspects of language to assess	0	1	2	3	4
36. piloting (i.e., trying-out) technology-enhanced assessments before their administration	0	1	2	3	4
37. using rating scales to score speaking or writing performances	0	1	2	3	4
38. training language instructors to use rating scales (rubrics) appropriately and accurately	0	1	2	3	4
39. using statistics to analyze the difficulty of individual items (questions) or tasks	0	1	2	3	4
40. using statistics to analyze overall scores on a particular assessment	0	1	2	3	4
41. using statistics to analyze the quality of individual items/tasks	0	1	2	3	4
42. using techniques other than statistics (e.g., questionnaires, interviews, analysis of language) to get information about the quality of a language assessment	0	1	2	3	4
43. calibrating scales (evaluating test items' values in relation to a specific measurement scale, it reflects item difficulty)	0	1	2	3	4
44. adapting appropriate ready-made technology-enhanced language assessments according to assessment contexts	0	1	2	3	4
45. using technology-enhanced tools for language testing and assessment practices	0	1	2	3	4

Appendix 2: Instrument in Original Form

INSTRUMENT IN ORIGINAL FORM

How knowledgeable do people in your chosen group/profession need to be about each aspect of language assessment below? Please respond according to the following scale:

Not knowledgeable at all/slightly knowledgeable/moderately knowledgeable/very knowledgeable/extremely knowledgeable

(1) how to use assessments to inform learning or teaching goals
(2) how to use assessments to evaluate progress in language learning
(3) how to use assessments to evaluate achievement in language learning
(4) how to use assessments to evaluate language programs
(5) how to use assessments to diagnose learners' strengths and weaknesses
(6) how to use assessments to motivate student learning
(7) how to use self-assessment
(8) how to use peer-assessment
(9) how to interpret measurement error
(10) how to interpret what a particular score says about an individual's language ability
(11) how to determine if a language assessment aligns with a local system of accreditation
(12) how to determine if a language assessment aligns with a local educational system
(13) how to determine if the content of a language assessment is culturally appropriate
(14) how to determine if the results from a language assessment are relevant to the local context
(15) how to communicate assessment results and decisions to teachers
(16) how to communicate assessment results and decisions to students or parents
(17) how to train others about language assessment
(18) how to recognize when an assessment is being used inappropriately
(19) how to prepare learners to take language assessments
(20) how to find information to help in interpreting test results
(21) how to give useful feedback on the basis of an assessment
(22) how assessments can be used to enforce social policies (e.g., immigration)
(23) how assessments can influence teaching and learning in the classroom
(24) how assessments can influence teaching and learning materials
(25) how assessments can influence the design of a language course or curriculum
(26) how language skills develop (e.g., reading, listening, writing, speaking)
(27) how foreign/second languages are learned
(28) how language is used in society
(29) how social values can influence language assessment design and use
(30) how pass-fail marks/cut-scores are set
(31) the concept of reliability (how accurate or consistent an assessment is)

(32) the concept of validity (how well an assessment measures what it claims to measure) (
(33) the structure of language
(34) the advantages and disadvantages of standardized testing
(35) the history of language assessment
(36) the philosophy behind the design of a relevant language assessment
(37) the impact language assessments can have on society
(38) the relevant legal regulations for assessment in the local area
(39) the assessment traditions in a local context
(40) the specialist terminology related to language assessment
(41)differentlanguageliteracyframeworks(e.g.,theCommonEuropeanFrameworkofReferenc e[CEFR])
(42) different stages of language literacy
(43) different types of purposes for language assessment purposes (e.g., literacy, achievement, diagnostic)
(44) different forms of alternative assessments (e.g., portfolio assessment)
(45) one's own beliefs/attitudes towards language assessment
(46) how one's own beliefs/attitudes might influence one's assessment practices
(47) how one's own beliefs/attitudes may conflict with those of other groups involved in assessment
(48) how one's own knowledge of language assessment might be further developed

How skilled do people in your chosen group/profession need to be in each aspect of language assessment below? Please respond according to the following scale:

Not skilled at all/slightly skilled/moderately skilled/very skilled/extremely skilled

(49) using statistics to analyse the difficulty of individual items (questions) or tasks
(50) using statistics to analyse overall scores on a particular assessment
(51) using statistics to analyse the quality of individual items/tasks
(52) using techniques other than statistics (e.g., questionnaires, interviews, analysis of language) to get information about the quality of a language assessment
(53) using rating scales to score speaking or writing performances
(54) using specifications to develop items and tasks
(55) scoring closed-response questions (e.g. Multiple Choice Questions)
(56) scoring open-ended questions (e.g. short answer questions)
(57) developing portfolio-based assessments
(58) developing specifications (overall plans) for language assessments
(59) selecting appropriate rating scales (rubrics)
(60) selecting appropriate items or tasks for a particular assessment purpose
(61) training others to use rating scales (rubrics) appropriately
(62) training others to write good quality items (questions) or tasks for language assessments
(63) writing good quality items (questions) or tasks for language assessments

(64) aligning tests to literacy frameworks (e.g., the Common European Framework of Reference)
(65) determining pass-fail marks/cut-scores
(66) identifying assessment bias
(67) accommodating candidates with disabilities or other learning impairments
(68) designing scoring keys and rating scales (rubrics) for assessment tasks
(69) making decisions about what aspects of language to assess
(70) piloting/trying-out assessments before their administration
(71) selecting appropriate ready-made assessments

Appendix 3: Data Collection Approval

(YUDN 7DULK YH BD\'V' □□□□□□□□□□□□□□□□□□□□

ATILIM
ÜNİVERSİTESİ

T.C.
ATILIM ÜNİVERSİTESİ REKTÖRLÜĞÜ

Sayı : E-59394181-605.01-53636 10.01.2023
Konu : Araştırma İzni (Nazlı Bulut)

BAŞKENT ÜNİVERSİTESİ REKTÖRLÜĞÜNE

İlgi : 18.11.2022 tarihli ve 179990 sayılı yazınız

Eğitim Bilimleri Enstitünüz, İngiliz Dili Öğretimi Tezli Yüksek Lisans programı öğrencisi Nazlı Bulut'un "Farklı Paydaşların, Türk-Eğitim Bağlamında Teknoloji İle Geliştirilmiş Dil Okur-Yazarlığının Yerelleştirilmiş Kavramı" başlıklı tezi kapsamında yapmayı planladığı anket çalışması ilgili birimimize iletilmiş olup çalışmaya katkı vermek isteyen personelimiz tarafından katılım sağlanabilecektir.

Saygılarımla,

Prof.Dr. Serkan ERYILMAZ
Rektör Yardımcısı

%X □E HOJH □□□□□□VD\'O'□QOHNWURQLN □□P]D□□DQXQXQXQ □□□□DGGHVL □JHUHNLQFH □ÂYH

Appendix 4: Ethics Committee Approval

Evrak Tarih ve Sayısı: 27.06.2022-139632

1993
BAŞKENT ÜNİVERSİTESİ
Akademik Değerlendirme Koordinatörlüğü

Sayı : E-62310886-605.99-139632
Konu : Etik Kurul İzni (Nazlı Bulut) 27.06.2022

EĞİTİM BİLİMLERİ ENSTİTÜSÜ MÜDÜRLÜĞÜNE

İlgi : 14.06.2022 tarih ve 136296 sayılı yazınız.

Enstitünüz İngiliz Dili Öğretimi Tezli Yüksek Lisans Programı öğrencisi Nazlı Bulut'un, Dr. Öğretim Üyesi Sevgi Şahin danışmanlığında yürütmeyi planladığı, "Türk Karma Eğitim Modelinde Farklı Paydaşların Kavramaları ve Algılanan Teknoloji İle Geliştirilmiş Dil Okuryazarlığı Düzeyi Değerlendirilmesi" adlı tezine ait tez önerisi değerlendirilmiş ve bilgilerinize ekte sunulmuştur.

Prof. Dr. M. Abdülkadir VAROĞLU
Kurul Başkanı

Ek: Değerlendirme Formu

Sayı : 17162298.600-178
Konu : Tez Önerisi

17 HAZİRAN 2022

İlgili Makama

Üniversitemiz Eğitim Bilimleri Enstitüsü İngiliz Dili Öğretimi Tezli Yüksek Lisans Programı öğrencisi Nazlı Bulut'un, Dr. Öğretim Üyesi Sevgi Şahin danışmanlığında yürütmeyi planladığı, "Türk Karma Eğitim Modelinde Farklı Paydaşların Kavramaları ve Algılanan Teknoloji İle Geliştirilmiş Dil Okuryazarlığı Düzeyi Değerlendirilmesi" adlı tezine ait tez önerisi değerlendirilmiş ve yapılmalarında bir sakınca olmadığı tespit edilmiştir.
Bilgilerinize saygılarımızla sunarız.

Başkent Üniversitesi Sosyal ve Beşeri Bilimler ve Sanat Araştırma Kurulu

Ad, Soyad	Değerlendirme	İmza
Prof. Dr. M. Abdülkadir Varoğlu	Olumlu/~~Olumsuz~~	
Prof. Dr. Kudret Güven	Olumlu/~~Olumsuz~~	
Prof. Ali Sevgi	Olumlu/Olumsuz	
Prof. Dr. Işıl Bulut	Olumlu/Olumsuz	
Prof. Dr. Sadegül Akbaba Altun	Olumlu/~~Olumsuz~~	
Prof. Dr. Can Mehmet Hersek	Olumlu/Olumsuz	
Prof. Dr. Özcan Yağcı	Olumlu/~~Olumsuz~~	

Prof. Dr. Sadegül Akbaba Altun, Üniversitemiz Eğitim Bilimleri Enstitüsü İngiliz Dili Öğretimi Tezli Yüksek Lisans Programı öğrencisi Nazlı Bulut'un, Dr. Öğretim Üyesi Sevgi Şahin danışmanlığında yürütmeyi planladığı, "Türk Karma Eğitim Modelinde Farklı Paydaşların Kavramaları ve Algılanan Teknoloji İle Geliştirilmiş Dil Okuryazarlığı Düzeyi Değerlendirilmesi" adlı tezin yapılabileceği; ancak, tezin başlığının içeriği yansıtmadığı ve tezde harmanlanmış öğretim üzerine çalışma planlanırken başlığın başka anlama gelen şekilde belirtildiği, bunun değiştirilmesi gerektiği görüşündeler.

Prof. Dr. Özcan Yağcı, Eğitim Bilimleri Enstitüsü İngiliz Dili Öğretimi Tezli Yüksek Lisans Programı öğrencisi Nazlı Bulut'un, Dr. Öğretim Üyesi Sevgi Şahin danışmanlığında yürütmeyi planladığı, "Türk Karma Eğitim Modelinde Farklı Paydaşların Kavramaları ve Algılanan Teknoloji İle Geliştirilmiş Dil Okuryazarlığı Düzeyi Değerlendirilmesi" adlı tez çalışmasının uygun olduğu düşüncelerini iletmişlerdir.

Appendix 5: Consent Form

This present study is conducted for a thesis work titled "Different Stakeholders' Localized Conceptualization of Technology-Enhanced Language Assessment Literacy in Turkish Educational Concept" by Nazlı Bulut and his thesis advisor Assist. Prof. Dr. Sevgi Şahin. For this study, the ethics committee approval from Baskent University has been received. This study aims to investigate different stakeholders' localized conceptualization of Technology-Enhanced Language Assessment Literacy in the Turkish Educational Context. Participation in the study must be on a voluntary basis. No personal identification informed is required in the questionnaire questions. Your responses will be kept strictly confidential and evaluated only by the researchers; the obtained data will be used for scientific purposes. We expect you to read the consent from carefully and put a tick to the box to participate this study. The questionnaire does not contain any questions that may cause discomfort in the participants. We would like to thank you in advance for your contribution to this study. For further information about the study, contact information of the researchers is given below:

Nazlı Bulut:

I am told what the study is about, and I am participating in this study totally on my own will and I am aware that I can quit participating at any time I want. I also know that my responses will be kept anonymous and used for only the study. Your participation in the interview, which is a continuation of this questionnaire, is important for the results of the study. I give my consent for the use of the information I provide for scientific purposes.

I agree to participate in this study.