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Perceptions of active learning among faculty in student-centered universities

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Perceptions of active learning among student-centered universities

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Article Info

Abstract

Higher education institutions face challenges integrating active learning (AL) as mandated by the Bologna Process. This requires engaging classroom experiences and support for student success in publications and projects. This study explored the perceptions of academics from engineering and arts and sciences faculties at one public and one private university in Türkiye. It examined their understanding of AL, whether they viewed it as deep AL, its necessity in higher education, and barriers to its implementation. Using a qualitative design with open-ended surveys, responses were analyzed thematically. Findings show most academics associate AL with instructor-led in-class activities, indicating a limited grasp of deep active learning. While they support broader AL adoption, they cited obstacles such as large class sizes, poor infrastructure, unequal resources, limited in-service training, and weak institutional commitment, which hinder effective AL practices despite institutional intentions.

INTRODUCTION

Higher education institutions have placed recent emphasis on enhancing educational standards and instructional methods because they form the fundamental basis of the Bologna Process (European Education Area, 2023). EUA Trends Reports (Trends 2010, Trends 2015, Trends 2018) show that current European and vocational policies concentrate their efforts on educational learning and teaching innovation alongside active learning (AL) adoption. The current situation requires the implementation of AL processes according to this framework. These processes need to prioritize the development of understanding and critical thinking over traditional knowledge transfer. The report describes teachers as facilitators who give students autonomy through responsibility sharing to empower their learning. Students gain the ability to create their own understanding by participating in independent discovery-based learning activities. (Trends, 2010). The Trends 2018 report demonstrates that 64 higher education institutions frequently used terms including "excellence in teaching," "excellent education," "top level," "outstanding," "world-class," "first-class," or "high-quality teaching." Educational institutions demonstrate their competitive ambitions in the education sector through these aspirations while facing pressure to maintain their position and they demonstrate a broader understanding of worldwide educational trends which include student-centered active learning approaches.

The current highly competitive business school environment puts faculty members under pressure to demonstrate superior teaching performance. Educational institutions have come to understand that research productivity and teaching excellence provide equal opportunities to gain a competitive advantage. (Auster & Wylie, 2006). Higher education institutions have developed a culture which promotes and supports the implementation of AL methodologies through educational approaches including problem-based learning, project-based learning and challenge-based learning.

Park and Choi (2014) assert that faculty members recognize the benefits of AL yet do not show immediate adoption of AL techniques in their teaching practices. The particular risk stands as the largest obstacle for faculty members to accept new teaching methods according to Bonwell and Eison (1991). The literature supports further research on AL by studying second-generation studies which analyze the precise elements and processes that influence its success or failure. The research field requires more investigation into how instructors experience AL environments because this topic receives less attention than student-centered studies (Phillipson et al., 2018).

In the national higher education system in which this study was conducted, some universities prioritize AL practices as part of the Bologna process. Particularly, universities with Center for Teaching and Learning centers highlight the AL implementations in their Institutional Internal Evaluation Reports (IIER). Among the total of 206 universities in the country, consisting of 129 public and 77 private universities, six universities have learning-teaching centers providing pedagogical support to academics, three of which are private. Some examples from IIER reports are as follows:

Table 1. Sample universities with teaching-learning centres promoting AL.

University	Teaching-Learning Center	IIER proof on AL
Private University	Center for teaching and learning (CTL)	At the university, faculty members use active and interactive methods. Therefore, some activities are guided by the instructor (lectures, studio work, presentations, questioning, brainstorming, seminars, etc.) as well as activities that are guided by the learners (buzz groups, jigsaw, reciprocal questioning, presentations, project teams, union groups, etc.).
Public University	Center for advancing learning and teaching	Individual counseling services are provided to faculty members on how to design their courses in a learner-centered (including AL) manner. Additionally, seminars on learner-centered approaches are organized for departments or units upon request.

The current situation presents universities with the dual challenge of implementing active learning strategies in education while they face increased pressure to enhance research output and project achievements. The research examines faculty perspectives about active learning at a period when institutional rankings receive heightened attention. The study aims to establish how academics understand active learning and deep active learning through their definitions of AL. The research questions which guide this study include:

As a result of academics' opinions:
1. How can AL be defined? What are its major qualities?
2. Are AL practices necessary in higher education? Why?
3. What are the factors that make the implementation of AL practices challenging in higher education?

Active learning: Meaning, qualities, and higher education implementations

The definition of AL by Bonwell and Eison (1991) remains one of the most recognized and used definitions in current academic literature. According to writers, AL is any form of learning where students are involved in doing something and thinking about what they are doing. Mizokami (2018) defines AL as all forms of learning that go beyond the passive reception of knowledge that is typical for lecture classes. AL requires students to be actively involved in a number of activities and goes beyond internal cognitive processes, making students express their thoughts and understanding through these activities. Matsushita (2018) in a salient study, lists the characteristics of AL and makes an addition to it calling it deep active learning. The following are the key elements of AL based on this understanding:

• Learners engage in activities beyond passive listening.
• The instructional approach moves away from basic knowledge transfer to actively develop student skills.
• The instruction promotes participants to use advanced cognitive skills which include analyzing, synthesizing and evaluating.
• The learning activities include reading, discussing and writing tasks which work together to enhance student engagement.
• The educational approach emphasizes student self-reflection and examination of their personal beliefs and values.
• The educational activities help students demonstrate their thinking processes which leads to more intense active learning experiences.

The main focus of instruction within AL environments consists of exploring essential concepts in more detail. The instructors function as facilitators who provide guidance and support to students throughout their academic progression. The educational process uses formative assessment techniques to check student learning development. These courses develop essential competencies which include teamwork abilities together with communication skills, critical thinking and presentation delivery skills (Erol & Özcan, 2016).

Educational encounters with AL experiences fall into five categories which include case-based, problem-based, inquiry-based, project-based and discovery-based learning according to Cattaneo (2017). The first research studies about AL revealed its benefits through better student results and academic achievement and analytical capability improvement (Freeman et al., 2014). Graham and Longchamps (2022) found that competency development through interactive collaborative methods leads to better results for both individual students and their groups. Hernández-de-Menéndez et al. (2019) stress that engineering students benefit from advanced technology integration with properly designed AL exercises in AL methodology-based education. The Trends 2018 survey results showed that institutions found student learning to be effective

when using small group instruction, problem-based learning, peer learning, community projects and flipped classrooms.

On the other hand, the adoption of AL faces various challenges and obstacles during its execution. AL research depends heavily on the assumption that learning activities can be properly monitored and measured through direct observation of student behaviour. The current educational trend links AL to programs that develop career-ready competencies for professional success. The emphasis on student performance and entrepreneurial voice development dominates the educational environment (Batchelor, 2008). In addition, the institutional framework creates obstacles for AL implementation acceptance by faculty staff (Eddy et al. 2017). Furthermore, the current academic promotion structure creates better rewards for faculty members to concentrate on research instead of teaching. Thus, the academic promotion structure creates an obstacle for AL strategy adoption because faculty members tend to choose research activities above new teaching approaches. (Ragus, 2020). Finally, the allocation of university resources and faculty training programs might not receive adequate attention from institutions as faculty members tend to resist adopting AL strategies when they assess that potential risks exceed potential rewards (Ragus, 2020).

Deep active learning

Matsushita (2018) recommends the implementation of a methodology known as deep active learning (DAL) which focuses on the simultaneous acquisition of knowledge and skills. The principles of DAL are based on the ideas of deep learning and a holistic educational approach as described by Matsushita (2018). The progression of AL into DAL demands careful consideration of various aspects including curriculum design, instructional materials, learning setting and assessment. The learning process needs active support from assessment which should be used strategically to strengthen it.

Matsushita (2018) explains that students who use the deep approach learn concepts independently through linking ideas to past knowledge while noticing fundamental patterns, essential concepts, evaluating evidence for conclusions and logical arguments to develop better understanding of their learning process. Students who adopt the surface approach focus on completing course requirements by treating information as separate facts which they memorize or follow instructions without thinking about purpose or methods thus creating difficulties when learning new concepts. The concept of activeness in AL exists in two dimensions which researchers can observe from inside or outside the learning environment. The two-dimensional framework which Matsushita (2018) explains through graphical representation appears in Table 2.

Table 2. Internal and external aspects of activity

		Internal aspect	
External aspect		Low	High
	Low	D	B
	High	C	A

The definition of AL which requires mental participation contrasts with the typical understanding of AL as physical engagement. The concept emphasizes an essential aspect of activity which researchers label as A or B. The term "deep engagement" precisely defines the intense inner aspect of activity.

The activity-focused teaching method delivers instruction through external student engagement without requiring internal student participation (C). The teaching approach of coverage focuses on content delivery to such an extent that it fails to activate either external or internal learning dimensions (D).

A teacher who implements DAL methods avoids using standard teaching approaches in their practice. Teachers need to develop skills which enable them to make multiple decisions during specific learning situations for student-specific teaching method adaptation. Teachers need to continuously develop and modify their educational approaches as described by Graham and Longchamps (2022).

METHODOLOGY

Research design

Phenomenology was adopted to gather academics' opinions about the implementation of AL in higher education settings. Phenomenological research centers on how individuals construct meaning, viewing this as a fundamental aspect of human existence (Patton, 2002). Its key contributions involve gaining insight into a phenomenon from the perspective of those who have directly encountered it. This methodological approach is grounded in the belief that common experiences possess a core essence or underlying structure (Patton, 2002). Broadly speaking, phenomenological studies are particularly appropriate for exploring emotional, affective, and deeply impactful dimensions of human life (Merriam, 2009). As noted by Michael Patton, the phenomenological research process is characterized by a well-defined and thorough articulation of its purpose. This approach is grounded in the premise that shared experiences contain fundamental qualities or essential structures. These foundational elements represent the central meanings collectively perceived by individuals who have lived through a common phenomenon. In this study as well, the methodological framework outlined by Patton has been employed. To do this, open-ended questions prepared by the researcher were sent to the participants, and the participants responded to these questions in written form. Thus, participants were given the opportunity to freely express their perspectives based on their own lived experiences.

Participants

Merriam and Tisdell (2016) highlight the importance of understanding from those who have direct experience so this study employed purposive sampling to explore one case in depth. Faculty members from two institutions which hosted teaching and learning centers that specialized in supporting staff to apply AL methods were targetted. Thus, academic staff who work as full-time faculty at the engineering and arts and sciences faculties of these two universities were included in the study. Although there are a total of around 300 academics working in these faculties at two universities, the research received voluntary participation from 40 academics who decided to join the study. The academic staff studied consisted of 12 professors alongside 10 associate professors and 18 assistant professors. The majority of research participants (n=16) had 11 or more years of experience in their field yet some participants (n=14) had 6-10 years of experience. The remaining participants (n=10) had acquired 1-5 years of experience. Participants at the state university comprised 15 academics from the faculty of engineering, and 10 from the faculty of arts and science, while at the foundation (private) university 10 from the faculty of engineering and 5 from the faculty of arts and science.

Data collection instruments

An online survey instrument with open-ended questions was used to collect data on the opinions of academics regarding AL implementations in higher education. When constructing this survey, a comprehensive review of the relevant literature was conducted and survey questions were developed based on the research questions. The survey questions have been revised through the incorporation of expert opinions. The final version of the survey included demographic information, including department affiliation, academic title, and professional experience, with questions related to opinions on AL implementations (What is your understanding of the concept of AL?', Do you think AL implementations are necessary for higher education? Why?', What are

the factors that make AL implementations in higher education difficult / challenging?', Can AL implementations be disseminated in other universities? Why?") Participants were invited to participate in the research via e-mail. The data was collected during the 2023 spring semester. The data collection process was based on voluntary participation, with each session involving the data collection tool taking around 30 minutes per respondent to complete.

Data collection and analysis

Ethical permission was granted from TED University's Human Subjects Ethics Committee before data collection. From the official websites of the two selected universities, a list of all academics holding a PhD. in various departments in the faculty of engineering and arts and sciences was made. In this study, thematic analysis was used to analyze the data since thematic analysis is flexible for identifying, characterizing, and interpreting in-depth patterns (themes) within a data set (Braun & Clarke, 2006). The procedures employed in the process of thematic analysis included: (1) familiarization with the data; (2) generating initial codes; (3) searching for themes; (4) reviewing themes; (5) defining and naming themes; and (6) writing reports (Braun and Clarke, 2006). In this regard, first, academics were coded, ranging from A1 to A40. The transcripts were then thoroughly reread, and all the data was coded. A large number of codes (n=96) emerged, with some containing only one sentence and others containing one or more. Subsequently, a summary of the generated codes was compiled and organized into clusters of themes. To refine the initially gathered themes and present them more systematically, the codes, sub-themes, and themes were subsequently grouped on purpose, and only codes and themes were left. Then the compiled data summaries for each theme was organized into coherent and consistent descriptions. Finally, direct quotations of the academics' opinions were reported.

Trustworthiness

According to Lincoln and Guba (1985) research trustworthiness means the procedures and activities that help establish reliability and make readers believe the results are correct. A thorough examination of the codes used in data analysis was conducted through peer debriefing with another researcher experienced in qualitative data analysis. The collected data underwent intercoder reliability testing to establish dependability. The reliability analysis used Miles and Huberman's (1994) formula (Reliability = Number of agreements / (Agreements + Disagreements) x 100) showed an intercoder agreement of 0.80. The dataset gained strength through the addition of extensive participant quotations which provided detailed explanations. Discrepancies were handled through dialogue to achieve consensus after comparing both data sets and resolving their differences.

FINDINGS

Academics' conceptions of AL

Research data shows that most academics (n = 31) primarily link AL to classroom activities and they understand it as an active student engagement during lessons. A30 along with multiple other participants explained Active Learning as "a teaching method which includes student involvement in the learning process." A17 explained AL as "an educational approach that enables students to actively participate more in classroom activities." The most prominent in-class teaching approaches, to A17 included group work activities, problem-solving together with asking questions, enforcing case studies and providing recent sensational examples in class. A small number of academics (n = 4) identified the development of discussion spaces as a key aspect of AL. According to A37 "AL functions as a teaching method which actively connects students to their course material through discussions and problem-solving activities and other educational approaches".

Three academics (n = 3) linked AL to experiential learning by emphasizing student contact with course material. A27 stated "AL seems to involve students learning through hands-on activities such as solving sample questions and discussing problems and preparing group project".

Two faculty members defined AL as a method where students take responsibility for their education by participating in developing course content and activities while working alongside instructors to build the teaching process. A33 defined AL stating "The student-centered educational approach of AL enables active classroom participation while allowing students to design lesson content".

Necessity of AL practices in higher education

95% of academics (n = 35) believe AL practices are essential for higher education. According to them, higher education students benefit from AL practices because these practices help them develop essential skills for academic success which include inquiry learning, higher-order thinking and critical thinking. A31 highlighted the importance of AL implementations saying "The purpose of higher education institutions is to develop students' analytical thinking abilities. The educational environment must teach students who will lead their future careers to develop solutions and understand problem-solving methods". In addition, A18 strongly defended the need for AL implementation through both theoretical and practical implementation by stating "Engineering education requires students to move away from rote memorization and focus on idea generation and question-asking".

The academics agreed on the need to implement AL practices stating that these approaches fill knowledge gaps that basic education system shortcomings created in students. The necessity of AL implementations was stressed by A22 as "The interest of students toward passive learning keeps decreasing because their basic education deficiencies continue to persist. The students lack focus during classes because they desire immediate problem resolutions and their learning approach centers on passing exams".

Challenges of AL practices in higher education

Challenges concerning AL practices can be examined under three main categories: institutional, academics-related, and student-related.

In terms of institutional challenges, many academics (n = 27) highlighted overcrowded classrooms, intense course syllabi, loaded theoretical course content, a lack of infrastructure and equipment, as well as the centralized authoritarian system. This is dominant in the expressions of academics working at the public university. The prominent factor is the overcrowding of classrooms. Regarding this, A15 stated that course capacity is the most important challenge in these implementations and added as follows: "In my master's courses, I can ensure that all of my 20 students adopt AL implementations, while in my undergraduate courses with 70–80 students, unfortunately, I cannot ensure that all my students are active."

Furthermore, a subset of the participants from the public university (n = 21) expressed that the insufficiency of equipment constituted a significant factor in their experiences. About this, A20 emphasized that the lack of equipment in AL implementations is a major problem, adding that "AL implementations frequently necessitate supplementary resources, such as technological tools, materials for hands-on activities, or access to collaborative software, which may not always be readily accessible.". In addition to this, A18 expressed his opinion about the lack of equipment and financial support for this as follows:"...also, designing an experimental set for AL is not easy or cheap. For example, if you want to show how wave mechanics work in a harbor, you need to scale down the harbor. It is an expensive investment and it cannot be provided for only one course."

It is observed that academics, especially those in the public university (n = 18), draw attention to the weak institutional adoption and ownership of AL implementations, which hinders the implementation of AL practices. A2 posited that institutions ought to assume accountability in this matter and articulated: "The successful implementation of AL strategies by individual academics

may encounter challenges if the overarching corporate culture fails to endorse or prioritize such implementations. The absence of endorsement from higher-level administrators, encompassing financial resources and acknowledgment, poses a formidable challenge for academics in their endeavor to embrace new approaches."

In terms of academics' related challenges, many academics in both universities (n = 26) highlighted the tendency toward traditional teaching methods, inadequacy in using information technologies, and deficiency in teaching theoretical concepts. A19 pointed out: "Many institutions and academics are accustomed to the traditional lecture format as they have been educated in that way, and this makes them resistant to change". A16, similarly highlighted the insufficiency of academics saying: "The deficiency of academics' familiarity with pedagogical approaches beyond traditional lecturing in undergraduate instruction is a serious concern."

In terms of student-related challenges, academics in both universities (n = 23) highlighted the deficiency of the basic education system by creating exam-oriented and rote memorization-seeking students. A common obstacle stated by both rests on the ineffective curriculum structure and educational system of basic national education. Concerning this matter, it has been asserted that the existing basic education system relies heavily on rote learning, exhibiting a dearth of comprehensive institutional planning and placing the entirety of the burden on academics. A30 specifically expressed this situation as follows: "Certain behavioral patterns exhibited by students, which have been shaped by the basic education system, particularly the emphasis on high-stakes tests, pose significant challenges to the effective implementation of AL."

DISCUSSION

Academics in this study define AL as activities that take place only within the classroom while they define AL as an educational method that places teaching at the forefront. Within the framework of Matsushita's 2018 theory of DAL the analysis of internal and external aspects of activity shows academics primarily focus on teaching activities that produce learning with externally active students who lack internal engagement (group C). Most faculty members in their AL definitions fail to include student self-awareness aspects such as relating ideas to prior knowledge while searching for patterns and principles alongside evidence evaluation and logical argument assessment with growing awareness of their understanding. According to the learning activity characteristics defined by Matsushita (2018) academics failed to emphasize student exploration of attitudes and values along with higher-order thinking abilities including analysis synthesis and evaluation. The internal aspect of student learning receives insufficient attention from academics based on their limited understanding of this concept. The definitions of AL by academics also demonstrate an understanding that diverges from the learner-centered framework of AL as described by Hernandez de Menendez et al (2019) which places students at the center of education to lead their learning process through self-guided reflection and student-driven learning while teachers act as mentors and progress evaluators. The lack of proper understanding about AL and its characteristics by academics raises significant doubts regarding institutions that support learning and teaching centers while encouraging their academics to implement AL because their academics demonstrate insufficient knowledge about the concept. The importance of educating academics about what AL actually is and is not before providing them with in-service training on AL methods remains vital for higher education institutions with CTLs. CTL centers at universities require dedicated budgets to support continuous professional development for faculty members. These centers should employ academic staff alongside professionals who specialize in relevant fields. In addition, AL implementation requires institutional leaders to demonstrate their commitment towards its necessity.

The majority of academics (n = 35) believe that incorporating AL methodologies is necessary within the higher education system. In the opinion of academics, first, AL implementations can enhance inquiry, higher order thinking, and critical thinking skills in students, which are very relevant for higher education, and they can compensate for the weaknesses that students bring with

them to higher education encounters. The findings obtained from the academics' responses are also supported by literature. Scholars have argued that AL enhances and develops higher level thinking using students' prior knowledge and experiences and their direct engagement with the course content (Lea et al., 2003). However, academics stated that for a faculty member to implement AL, it is crucial that the faculty member is ready to engage in AL practices and accept this philosophy.

Academics at the public university identified overcrowded classrooms together with insufficient infrastructure and uneven economic resource distribution as the main obstacles to AL implementation. The academics at the public university maintain that AL methods remain accessible only to boutique or private universities. However, the implementation of AL methods can be adapted to teach big classes through specific methods. The following strategies serve as solutions to teach large classes using AL implementations: The instructor should first explain academic expectations before implementing small low-stakes activities while using group work and encouraging students to write in class through "One-Minute Paper" or "Half-Sheet Response" exercises and keeping activities diverse and manageable while using technology and classroom polls to check for understanding and adapting methods for bigger class sizes (CTL TED University, 2023).

Academics from both universities emphasized that institutional adoption and ownership of AL implementations faced significant obstacles. Academics emphasized that organizational and management elements should not be dismissed as essential factors in this situation. The management must internalize and accept this conceptual framework to create an institutional culture. Ragus (2020) states that AL promotion succeeds when educational institutions develop innovative teaching methods and provide academic freedom to their staff. Through academic freedom instructors gain independence to choose educational approaches that best fit their individual teaching environments. Sukacke et al. (2022) discovered that challenge-based learning adoption as AL emerged from institutional and governmental programs instead of educator-identified knowledge gaps. Deveci and Nunn (2018) state that AL implementation needs extensive institutional support to properly assist both students and educators. A18 admitted this statement by saying: "The practices will stay at a boutique level until the national income reaches 20,000 dollars." The barriers include Law No. 2547 together with the centralized system, large student numbers, K-12 education system, university entrance exams, general country conditions and academic staff low motivation levels because of various factors. The adoption of AL implementations should move beyond written plans because it requires genuine institutional backing through proper support mechanisms. The transition to view teaching as a shared responsibility should be implemented according to Brte, Nesje, and Lillejord (2020) by establishing a comprehensive support system that includes databases and equipment and tools and feedback mechanisms.

The rising publication and project demand on academics during recent years may have caused them to avoid AL practices because private universities want to lead this competition according to organizations like Times Higher Education (2023) that try to establish university categories through specific evaluation criteria. The teaching-learning process time allocation of many academics has shifted toward writing articles in their offices because of this situation. The main objective of universities extends beyond project and publication outputs because they aim to deliver quality education. The approach of leaving AL practices to voluntary faculty members only would contradict the university websites which state their mission and vision as "excellence in education." The proposed strategy to enhance educational quality while expanding AL implementation involves incorporating demonstrated teaching effectiveness into academic staff recognition and incentive systems at the institutional level. Academics can use evidence from their AL practice-based teaching quality improvement efforts to receive encouragement and recognition through incentives that are similar to publication incentives. The reappointment and promotion criteria could include qualified AL applications as part of their assessment or promotion.

Both universities face similar obstacles which include the practice of traditional teaching methods and limited theoretical instruction especially in courses with detailed syllabi and substantial content. The scholarly investigations analyzed by Hernández-de-Menéndez et al. (2019) reveal that educators struggle to balance implementation of new learning methods with sufficient coverage of mandatory course topics and materials. Many academics who teach introductory courses with dense theoretical material state that AL implementation is not feasible because the course material cannot be adequately covered through this method. According to academics it is necessary to extend AL implementations across all courses instead of limiting them to particular courses. A number of academics believe that incorrect assumptions about the proper teaching methods for particular courses along with their content demonstrate an actual lack of understanding about appropriate teaching methods. The lack of AL understanding by numerous educators demonstrates that there is insufficient in-service training available. AL implementation resistance stems from academic staff who need to handle extensive content and require substantial preparation time according to Lea et al. (2003). The authors Halonen et al. (2002) introduce a different educational strategy which focuses on fewer subjects but provides detailed coverage of each subject. The exploration of learning analytics through monitoring student progress offers teachers a solution when designing AL lessons becomes time-consuming (Vivian et al. 2016). The PERUSALL platform of Eric Mazur demonstrates how automated assessment tools benefit academics who seek effective teaching methods while providing extra time for AL implementations. The PERUSALL platform enhances critical reading measurement and facilitates additional active learning opportunities through flipped learning methods and has been integrated by multiple major publishers into their digital platforms (Perusall, 2023).

Academics have noted that since students moving from primary education to universities are usually quite removed from AL practices and philosophy, it may be useful to introduce integration activities and make them familiar with AL during the one-year English language learning process in preparatory schools to better prepare them for their first-year courses. Universities without preparatory schools can also consider adding 1-2 courses to their first-year curriculum that include the philosophy and practices of AL.

CONCLUSION

The current research shows that academics with CTL centers at their institutions view AL practices mainly as classroom-based activities which instructors direct. The majority of academics recognize both the importance and advantages of AL practices yet identify multiple implementation obstacles which originate from institutional structures. The true institutional commitment to teaching-learning processes remains uncertain because institutions continue to emphasize "excellence in education" in their mission and vision documents despite this uncertainty. Institutions which focus on rankings and publication outputs need to stay committed to the educational process while prioritizing AL practices. The universities in certain countries award both academic publications and projects as well as teaching qualifications for promotion or contract renewal. In Turkey, universities who claim to have "teaching excellence" in their mission and vision documents also need to provide students with the education required to become qualified engineers architects or teachers and the way to do this is not just concentrate on research excellence. These universities need to promote the use of AL methodologies and make sure that students benefit from them.

LIMITATIONS

The study findings are limited to the opinions of 40 academics from two universities with teaching and learning centers. Thus, the results cannot apply to the entire population of university faculty. However, findings shed light on salient points on AL as academics' opinions are obtained by open-ended responses.

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A needs analysis of high school students' English speaking and writing skills

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A needs analysis of high school students' English speaking and writing skills

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Article Info

Abstract

English language teaching maintains its importance in Türkiye, as in other countries where English is taught as a foreign language. Although changes have been made to the K-12 curricula over the years, they are required either due to the need to educate individuals who are competent to adjust to the necessities of the current era or as a response to underachievement in national and international tests. In this regard, needs analysis is a pivotal step in developing courses and curricula as it provides insight into what learners need to learn. However, majority of needs analysis studies in the Turkish context are conducted at the university level, leaving the language needs of high school students in the dark. Therefore, the purpose of this study is to explore English speaking and writing needs of the ninth graders studying at different school types. Employing a quantitative design through survey methodology, a needs analysis form was developed based on the thoughts and evaluations of 12 English language teachers (Çakar et al., 2023) teaching at the schools where the student surveys would be administered. Having validated the survey form through expert opinions and pilot-tested, data were collected from the participants (*N*=543). The results revealed that the students prioritized speaking needs over their writing needs. Moreover, students felt that their teachers' instruction of English was ineffective, and class hours, and learning environment were inadequate. The students' primary motives for learning to speak and write English included traveling or finding a good job.

INTRODUCTION

From past to the present, developments in fields such as technology, commerce, tourism, and science have required using a common language to facilitate communication (Rao, 2019). In this regard, English which maintains its popularity and remains the most learned and taught language in the world (Kara et al., 2017) has been used as the world's lingua franca for many years at least for the last three decades (McKay, 2018). In Türkiye, as in many other EFL contexts, there is an increasing demand for English in both private and public sectors (Kara et al., 2017). English is predominantly employed within governmental and commercial contexts, particularly in written communication (Sönmez et al., 2022). Moreover, proficiency in English is seen as key to higher salaries, better career opportunities, and also for the social and economic development of the country (The Economic Policy Research Foundation of Turkey (TEPAV) & British Council, 2013). Therefore, these expectations are reflected in educational policies and have given rise to some permanent changes over the years (MoNE, 2018).

Being skilled in a foreign language is considered significant by many countries worldwide, and Türkiye has never been an exception (Karakaş, 2013). Even though numerous decisions have been made in English language education, new and modern language teaching approaches have been introduced over time, and textbooks and curricula used have been improved (Solak & Bayar, 2015). In addition, altering the educational system to 4+4+4 in 2013 and beginning English instruction in the second grade indicate that the importance given to English teaching in educational policies (Gel & Kuyumcu Vardar, 2021).However, the data reported by Education First (EF) in 2023 shows that the current situation of foreign language education in Türkiye is not promising. According to the EF English Proficiency Index (EF EPI) report, which ranks countries as to their English skills, Türkiye ranks 66th out of 113 countries in the 'low proficiency' category. Similarly, Türkiye's performance in 2024 EF EPI places it 65th out of 116 countries/regions (EF, 2024). For this reason, investigation into the underlying causes of the problem, examination of the students' needs for learning English, and thus how to improve the teaching programs are required.

Despite the growing interest in teaching several other important elements such as cultural competence, intercultural communication skills, critical thinking, and problem-solving skills, language education still requires comprehensive and quality teaching and practice of four basic skills: speaking, writing, listening, and reading. Furthermore, the curriculum prepared by the Ministry of National Education with regards to the principles of Common European Framework of Reference for Languages (CEFR) views the English language as a means of communication rather than a subject of study. It intends to establish a communicative, collaborative, productive, and dynamic learning environment where students are responsible for their learning (MoNE, 2018). Speaking and writing skills (i.e. productive skills) should be prioritized to establish the desired learning and teaching environment. However, studies revealed significant problems regarding these skills at various levels (e.g. university, adult, prospective teachers, high school). According to Tokoz-Goktepe (2014), language learners and educators widely regard speaking as the most challenging skill. There is also the "I understand, but I cannot speak" syndrome (Coşkun, 2016, p.1). Furthermore, Uztosun (2013) suggested that there is a major dilemma causing lack of competence in language skills. This dilemma is that while English teachers are expected to apply the communicative approach and enhance productive skills; however, their language assessment practices, at least until MoNE's (2023) new regulations on language assessment, have mostly covered language structure (grammar, vocabulary) and reading comprehension. Therefore, most pre-service and in-service ELT teachers indicate that learners have a major deficiency in productive skills as they have received an exam-oriented education focusing on testing such skills as grammar, reading, and vocabulary (Arslan, 2013). The students' lack of practice makes them feel insecure about making mistakes which can cause amotivation and reluctance to learn English. As reported by Ayaz et al. (2018), they feel incompetent in productive skills not only because of the pen-paper

tests that evaluate receptive skills but also overcrowded classrooms, inadequate class hours, and insufficient instructional materials.

In this regard, needs analysis is crucial to explore what learners perceive, need, lack, and want to learn. If needs are not addressed when designing language courses/programs, learning achievement is put at risk. Therefore, needs analysis is a must to ensure optimum levels of achievement. Considering these factors, there seems to be scant attention to the ninth-grade students' speaking and writing needs in Türkiye. Most studies are carried out with university-level learners (İlgör, 2019). Therefore, it is quite important to identify the needs of learners at high school level for these two vital and difficult-to-develop skills. To address this gap, the current study primarily examined English speaking and writing skills necessities, lacks, and wants of the ninth-grade students studying at high schools in Ortahisar district of Trabzon.

In this regard, answers to the following research questions are sought:
1. What are the English language writing and speaking needs of ninth-grade students?
2. What are the students' wants and motivations for learning English?

LITERATURE REVIEW

The need to set realistic goals when designing a language course (Haque, 2014) makes needs analysis a crucial step since it helps identify students' needs (Kayaoğlu & Akbaş, 2016), course goals, and the content (Macalister & Nation, 2020). Needs analysis, as one of the first few steps in course design, helps teachers and course designers to find out learners' needs, lacks, and also strengths which will help fill the gap in between what is already known and what needs to be known (Macalister & Nation, 2020). Thus, needs analysis (hereafter NA) facilitates the development of courses which are more likely to cater to learners' purposes (Fatihi, 2003). Thus, it ensures that course goals, content, teaching materials, teaching methods, and also assessment methods are compatible with each other (Haque, 2014). NA also includes wants analysis which attracts scholars' interest, despite an obvious lack of research yet. Studies examining students' wants regarding language learning highlight the role of instrumental and integrative motivation (Chemir & Kitila, 2022) and relatedness, competence, and autonomy (Xu & Qui, 2022).

Research on NA studies regarding the language skills of students at different educational levels from primary school to university level mostly highlights that learners have difficulty in acquiring language skills such as English speaking and writing skills. According to results of an NA survey conducted with 200 elementary school students, writing was the most challenging skill while speaking was the most desirable skill to learn (see Ahmetovic & Dubrovic, 2021). Similarly, the results of NA study of Mahbup (2018) which had a mixed-method research design and applied to the 32 vocational high school students and their teachers, showed that students basically needed to learn English to speak fluently and use grammar correctly. In line with the findings of Mahbup's study, in her review study related to the challenges and problems of learning English in Iranian secondary and high schools, Akbari (2015) reported that speaking fluently to express themselves in English was very difficult for Iranian learners. Overall, the results of the primary and secondary school NA studies, mostly via an NA questionnaire, are similar to each other; in this context it can be concluded that students are not at the adequate level in terms of their productive language skills.

Despite the scarcity of research examining high school students' English speaking needs in the Turkish context, those who did so reported that the students are not at the expected level in this skill. In this regard, Coşkun (2016) investigated why high school students understand English but cannot speak it. To discover the main reasons of this, he conducted a questionnaire about the potential reasons of this problem and open-ended questions to provide solutions to enhance high school students' speaking skills. Speaking anxiety, grammar-based education system, learning English through their mother tongue, and difficulties in finding a place to improve their speaking in Türkiye have been reported as some of the reasons (Coşkun, 2016). In addition, İlgör's (2019)

study showed that high school students agreed that their English proficiency, particularly in speaking, will affect their future professional decisions. The majority of NA studies shows that students are aware of the importance of speaking skills, especially in terms of their business lives. Apart from that, the paucity of studies in this area creates a gap that needs to be filled with new research.

At the university level, students' needs and desires in terms of speaking were also apparent. For instance, research showed that the skills that tourism students attached most importance in terms of their impact on their future careers were speaking and listening skills (see Aysu & Özcan, 2021). Similarly, Masdianti et al. (2024) reported that students prioritized speaking skills, with more than half expressing their desire to improve their language proficiency for professional advancement. Kayaoğlu and Akbaş (2016) also concluded that in the light of the results of the NA questionnaire that they applied to 169 university students, interacting with other people and getting high scores on their language tests were among the primary reasons for university students. Besides, speaking skills were accepted as the most crucial skills to acquire. In line with these studies' findings, the students studying in Health Sciences were found to want to be good at all four English language skills, focusing more on speaking and listening skills rather than reading and writing (Ayas & Kırkgöz, 2013). Thus, it is possible to say that the need for speaking skills is quite obvious at each grade.

In this regard, it is obvious that there is less research on writing skills than on speaking skills. However, it is significant to accept its value for developing all language skills. According to Jamoom (2021), students acknowledge the importance of writing skills for their academic work and future careers. Furthermore, Do (2023) examined the subjective and objective needs of undergraduate students in terms of their writing skills and reported that the students needed more teacher feedback and writing activities. After conducting his study with the help of an NA survey, writing test, and interviews, he suggested adding more writing tasks to the writing course could be beneficial for improving undergraduate students' writing abilities. Both Jamoom (2021) and Do (2023) emphasized that university students comprehended the value of writing abilities, but they suffered from inadequate writing assignments and teacher feedback. In this regard, Nusrat (2016) examined undergraduate students' writing needs and reported that their level was insufficient regarding writing practices. Similarly, Novariana et al. (2018) reported insufficient writing proficiency. The reasons for this were divided into internal and external factors. While low motivation for language learning and difficulty in forming words and sentences were mentioned as internal problems, external problems were the lack of sufficient feedback and insufficient writing practice (Novariana et al., 2018). Besides, quality, adequacy, suitability of writing activities and feedback given by the teacher also matters for writing skills (see Nusrat, 2016). Studies also report inadequate language proficiency levels. For instance, Beyhan and Aljaafil (2022) reported a distinct gap was detected between the target level and the current level of the learners studying at general English classes (Aljaafil & Beyhan, 2022).

The communicative language teaching method has raised the value placed on writing skills (Weigle, 2002). Despite the need to understand if and to what extent students are competent in their writing skills and what they need to attain certain levels of proficiency in writing, studies examining writing language needs of students are quite limited. As stated, not many studies have been found in the literature on the English writing skills of high school students. This indicates that it is necessary to conduct more research on their English writing needs to explore their weaknesses and strengths.

METHODOLOGY

3.1. Research design and purpose

This study examined the speaking and writing skills needs of ninth-grade students studying at various types of high schools (*N*=19) in the Ortahisar district of Trabzon. The NA included a

closer investigation of necessities, wants, and lacks. To fulfil the research purpose, survey methodology was employed, as it is the most effective way to reach out to a greater number of respondents in a relatively shorter time and strengthen the validity of the results. Therefore, quantitative method was used to collect self-reported data. Acknowledging the potential methodological constraints such as self-report bias, survey methodology provided a valuable means of collecting information extensively and addressing the research questions. Before the data collection phase, the necessary permissions were obtained from Trabzon University's Board of Research and Publication Ethics (Report no: 2022-12/1.11). The participation was voluntary. Random sampling technique was used to gather the data. The students were also informed about the purpose of the study in advance. Any information which could identify the participants was not collected and data kept confidential by the researchers.

3.2. Instrumentation

The data for the study were collected through an NA questionnaire form. The questionnaire was developed as a result of semi-structured interviews with 12 English teachers working in different schools (Çakar et al., 2023). A semi-structured interview consisting of seven main questions was conducted with 12 experienced English teachers instructing ninth-grade classes in eight schools. It covered the students' wants, needs, lacks, and teachers' suggestions for improving students' English speaking and writing skills. In addition to the interviews, relevant literature and expert opinions were also born in mind during the NA development.

After developing the form, it was sent for expert opinion to four experienced teachers and researchers having NA studies experience. Accordingly, the form was revised and redefined the form. It was suggested to give "*prefer not to say*" as an option for gender. Upon suggestions, a question to find out whether students use digital tools/applications to learn English was also included. In addition, some items were added, such as grammar coursebooks, online platforms, self-study, and digital/artificial intelligence tools to the sections asking the respondents how they want to learn writing, speaking, grammar, and vocabulary.

A pilot test was conducted with 10 students who were given 20 minutes to complete the test. Subsequently, they stated that the items were generally clear and understandable. However, it was observed that students were confused about the definition of *need* while answering the questions. For this reason, sample statements were added to the sections where the needs for writing and speaking skills were identified. The option *'other'* into the survey's 'wants' section, to allow participants to provide additional the answers of their own was integrated into the survey. After the form was finalized, it was administered to the students via Google Docs. In this process, assistance of teachers and administrators was received to share survey links through WhatsApp groups and remind the students to complete them. Some schools permitted us to notify the participants in person, whereas others chose to manage the process internally. To ensure anonymity, the students were informed that their responses would be kept confidential and would not be shared with anyone other than the researchers involved in this study.

3.3. Participants and context

The data was collected from the students (*N*=543) studying at inner-city high schools (*N*=19). The research sample is the ninth-grade students studying at high schools in the Ortahisar district of Trabzon. The type of high schools chosen for this study were Anatolian high schools, Multi-program high schools, Social Science high school, Anatolian Imam Hatip high schools, Vocational and Technical Anatolian high schools.

Table 1. Schools' information

School type	School	Participants
	School A	60

Vocational and Technical Anatolian High School /	School B	33
Multi-program Anatolian High School	School C	30
	School D	30
	School E	9
	School F	9
	School G	8
	School H	8
	School I	1
Anatolian High School	School J	82
	School K	74
	School L	43
	School M	22
	School N	9
	School O	7
	School P	7
	School Q	1
Social Sciences High School	School R	98
Science High School	School S	12

The great majority of the students (*n* = 98) study at social sciences high school. The number of female students (*n*= 340) is higher than that of male students (*n*= 189). The ages of the participants ranged from 14 to 17 (see Table 2).

Table 2. Participants' information

Variable	**Category**	***N***
Gender	Female	340
	Male	189
	Prefer not to say	14
Age	14	140
	15	328
	16	68
	17	4
Duration of learning English	Kindergarten	35
	First Grade	70
	Second Grade	315
	Third Grade	70
	Fourth Grade	33
	Middle School	20
Foreign language education support outside of school	Yes	50
	No	493
Use of digital tools/applications to improve foreign language	Yes	252
	No	291

Besides the aforementioned issues, to further explore who the participants are, some other questions were asked to them such as how long they have been learning English which revealed that a great majority (58%) started learning English in the second grade. Besides, almost all, except for a small portion (9.2 %), indicated that they did not receive any extra foreign language education courses outside of school. Besides, more than half reported not to use any digital tools or applications to develop their language skills.

To obtain more about who they are, some items were given on an agree-disagree likert and asked them to tell us more about their language-learning selves. Table 3 presents the details.

Table 3. Students' perceptions about learning English

		M	*SD*
1.	I can easily express my thoughts in Turkish in written form.	*4.10*	*0.91*
2.	I can easily express my thoughts orally in Turkish.	*3.97*	*1.01*
3.	I have knowledge of Turkish grammar (tenses, conjunctions, etc.).	*3.62*	*0.94*
4	I am confident in learning English.	*3.59*	*1.10*
5.	I think that what I learned in primary and secondary school benefited me.	*3.32*	*1.30*
6.	I think that the topics covered in the English classes are interesting.	*2.98*	*1.17*
7.	I think that English class hours per week are enough to improve my English writing skills.	*2.90*	*1.14*
8.	I think that English class hours per week are enough to improve my English speaking skills.	*2.83*	*1.19*
9.	I think English is a difficult language.	*2.68*	*1.12*

As learners' native language competence, in particular grammar knowledge, impacts their acquisition and proficiency in a foreign language, two items were included, regarding Turkish which revealed higher mean values. For instance, the students agreed that they easily express their thoughts using their mother tongue in written form ($M = 4.10$) and spoken form ($M = 3.97$). However, they seemed to be unsure of having knowledge of Turkish grammar. Besides, they were neutral regarding if they were interested in improving their English-speaking skills ($M = 3.64$) which was revealed to be stronger in terms of writing skills ($M = 3.48$). Additionally, the students were also neutral regarding learning English ($M = 3.59$). On the other hand, majority seemed to disagree with the idea that English is a difficult language to learn ($M = 2.68$).

Lastly, they were asked if they were interested in developing their speaking and writing skills. As for the writing skills, a great majority was either partially interested ($n = 165$) or interested ($n = 166$). As for the speaking skills, similar number of students ($n = 169$) were interested in developing their speaking skills, while a small portion ($n = 29$) stated they were not interested at all.

3.4. Data analysis

The data obtained from the NA questionnaire was analyzed using SPSS. Means, standard deviations, and frequencies were calculated for descriptive analysis. Inferential statistics were employed to see if there is any significant difference between the respondents' needs, wants, and lacks in speaking and writing skills.

FINDINGS

The ninth-grade students' English language needs of writing and speaking skills

The study aimed to examine the needs of the ninth-grade students for English speaking and writing skills. The first part of the questionnaire included 15 items to explore speaking skills needs. The Likert ranged from "I always need" to "I don't need at all". The results are presented in Table 4.

Table 4. The Students' perceptions regarding their English speaking skills needs

		M	*SD*
1.	Choosing appropriate words while speaking English…	*3.54*	*1.15*

2.	Teachers who can provide learning environments where I can acquire and improve my speaking skills…	*3.46*	*1.31*
3.	Thinking in Turkish before speaking in English…	*3.37*	*1.11*
4.	A classroom environment where I can comfortably express myself (no laughing at mistakes etc.)…	*3.35*	*1.44*
5.	Pronouncing words correctly while speaking English…	*3.30*	*1.23*
6.	Being able to talk sufficiently while travel abroad (communicating easily at the airport, asking for directions, using transportation vehicles, etc.)…	*3.29*	*1.42*
7.	Choosing the appropriate grammatical structure while speaking English.	*3.24*	*1.18*
8.	To verbally express my opinions on current issues…	*3.12*	*1.25*
9.	Doing speaking activities in English classes…	*3.12*	*1.24*
10.	Using what I learned in English class in everyday life (communicating with foreign friends or people in English)…	*3.12*	*1.33*
11.	Pronouncing English sounds (like 'w' and 'v') correctly…	*2.99*	*1.39*
12.	To participate in activities that require me to speak English…	*2.94*	*1.24*
13.	To orally explain important topics related to the local culture (describing the food, explaining about the touristic places, etc.)…	*2.85*	*1.25*
14.	Introducing myself comfortably in English…	*2.68*	*1.12*
15.	To introduce my school to a foreigner who comes to my school (with Erasmus etc. exchange programs)…	*2.53*	*1.34*
	Total	*3.13*	*79*

The overall mean value of their speaking skills indicates that they occasionally needed to speak English, but their needs were stronger with regard to choosing appropriate words ($M = 3.54$). Besides, a similarly perceived need was for encouraging teachers who could provide a classroom environment where the students acquire and improve their speaking skills ($M = 3.46$). Another reflection of that situation can be seen in item 8 which showed that the students almost equally ($M = 3.35$) needed a comfortable classroom environment. They also needed to think in Turkish before speaking English ($M = 3.37$). Similarly, the students are also occasionally required to introduce themselves confidently in English. Their speaking skills needs regarding pronouncing words correctly while speaking English ($M = 3.30$), being able to talk sufficiently while traveling abroad ($M = 3.29$), and choosing appropriate grammatical structures while speaking English ($M=3.24$) were also moderately felt.

On the other hand, the students hold relatively weaker needs perceptions regarding explaining important topics related to local culture ($M = 2.85$), pronouncing English sounds like *w* and v correctly ($M = 2.99$), or introducing their school to a foreign (exchange) visitor ($M = 2.53$**).**

Table 5. The students' wants regarding how to learn to speak in English

		f	*%*
a.	By talking with my foreign friends	258	47,5
b.	With question and answer activities	257	47,3
c.	With online games and activities	244	44,9
d.	With group speaking activities	234	43,1
e.	Studying by myself	198	36,5
f.	Making presentations on topics of my choice	175	32,2
g.	With pair work activities	169	31,1
h.	With drama activities	163	30
i.	With extracurricular activities	158	29,1
j.	Through digital/artificial intelligence tools (Chatgpt, ai voices, etc.)	141	26
k.	Online platforms (Cambly, Busuu, etc.)	130	23,9
l.	Making presentations on topics of my teacher's choice	129	23,8
m.	Using source books	129	23,8
n.	Other	17	3,1

The students' responses to the options regarding how they wanted to learn to speak revealed that almost half were interested in talking to their friends from other countries (47.5%). Moreover, they stated that they wanted to learn to speak via question-and-answer activities (47.3%). As digital natives, they desired to use online games and activities as a part of the speaking learning process (44.9%). They also considered group speaking activities as good ways to practice their speaking skills (43.1%). However, a relatively small sample perceived making presentations on topics of their teachers' choice and using sourcebooks (23.8%) less favorable for learning to speak English. In addition, digital teaching resources such as Cambly and Busuu were not preferred for learning speaking skills (23.9%). This can be due to inadequate knowledge about such platforms. The use of digital/artificial intelligence tools was also among those relatively less favorable ones. Those choosing *other* noted that they wanted to learn to speak English through TV series and mirror technique (3.1%).

Student topic selection for speaking, as presented in Table 6, showed that music, their personal lives, social media, sport, technology, and video games were most frequently preferred. History, their local culture, the culture of foreign countries, and dance were among relatively less favorable ones. Those selecting *other* preferred to speak about movies, series, books and hobbies.

Table 6. The topics students want to speak about

		f	*%*
a.	Music	291	53,6
b.	My life	264	48,6
c.	Social Media	253	46,6
d.	Sport	236	43,5
e.	Technology	197	36,3
f.	Video Games	197	36,3
g.	History	158	29,1
h.	My local culture	152	28
i.	The culture of foreign countries	150	27,6
j.	Dance	132	24,3
k.	Other	12	2,2

Additionally, their perceptions regarding writing skills were found out through a 13-item sub-section ranging from a 5-point Likert of "I always need" to "I don't need at all". The students were found to hold quite similar writing skills needs ($M = 3.14$) perceptions indicating they occasionally needed writing skills.

Table 7. The students' perceptions regarding their English writing skills needs

		M	*SD*
1.	Using appropriate words while writing in English…	*3.49*	*1.16*
2.	Teachers who can provide learning environments where I can acquire and improve my writing skills…	*3.38*	*1.31*
3.	Using appropriate grammatical structure while writing in English	*3.34*	*1.21*
4.	Writing the words accurately…	*3.31*	*1.28*
5.	To coherently connect what I express by writing…	*3.21*	*1.22*
6.	To form an English sentence accurately and fully with all its elements (SVO/Subject, verb, object)...	*3.20*	*1.22*
7.	Using my creativity while writing in English…	*3.17*	*1.22*
8.	To a sample text when writing something in English…	*3.10*	*1.22*
9.	Brainstorming before writing a text in English...	*3.08*	*1.26*
10.	To prepare a draft according to the text type I will write…	*3.02*	*1.26*
11.	To write about the important topics related to the local culture (describing the food, explaining about the touristic places, etc.)...	*2.87*	*1.22*
12.	To express my ideas on current issues (sports, art, news, etc.) in writing…	*2.87*	*1.25*
13.	Writing a paragraph to introduce myself…	*2.78*	*1.20*
	Total	*3.14*	*83*

Most of them needed to use appropriate words while writing in English ($M = 3.49$). Moreover, they need a teacher who can create learning environments where they can acquire and improve their writing skills ($M=3.38$). Using appropriate grammatical structures while writing ($M= 3.34$) was also occasionally needed. Correct use of words ($M = 3.31$) and being able to coherently connect their ideas while writing ($M = 3.31$) were almost equally perceived as a need.

However, the students held slightly weaker needs perceptions regarding writing about topics related to local culture and expressing their ideas on current issues ($M = 2.87$ for both) and writing a paragraph introducing themselves ($M = 2.78$).

Apart from their writing needs, they were also asked how they wanted to write. They were provided with various options among which they would choose as many as possible. Table 8 presents the results.

Table 8. The students' wants regarding how to learn to write in English

		f	*%*
a.	By using sample texts	298	54,9
b.	With individual writing activities	256	47,1
c.	With creative writing activities	251	46,2
d.	By receiving feedback from my teachers about my writings	232	42,7
e.	With online games and activities	226	41,6
f.	With group writing activities	226	41,6
g.	Through writing activities supported by images	218	40,1
h.	By choosing the topics I will write about	195	35.9
ı.	Studying by myself	185	34,1
i.	With pair work activities	162	29,8
j.	By writing about the topics assigned by the teachers	152	28
k.	By receiving feedback from my classmates about my writings	149	27,4
l.	By using grammar coursebooks	149	27,4
m.	Online platforms (Cambly, Busuu, etc.)	134	24,7
n.	Through digital/artificial intelligence tools (Chatgpt, ai voices, etc.)	110	20,3
o.	Other	31	5,7

As the table shows, more than half wanted to learn to write in English using sample texts (54. 9%). Individual writing activities (47.1%), creative writing activities (46.2%), receiving feedback from their teacher (42.7%) and online games and activities, and group writing activities (41.6% for both) were among the most favourable ones. These results showed that the students mostly preferred guided and modelled writing because more than half of them stated they needed a sample text to start writing in English. Moreover, it can be concluded that students wanted to write more creative articles rather than classical ones. They also attached great importance to the feedback they receive from the teacher regarding writing. On the other hand, using digital/artificial intelligence tools (20.3%) and online platforms such as Cambly and Busuu (24.7%), and grammar coursebooks (27.4%) were among the relatively less favourable ones.

As for the topics they wanted to write about, music (51.2%), writing about their own lives (47.7%), social media (42.9%) and sports (40.5%) emerged as the most prevalent choices. Moreover, they also desired to share something about their lives through writing in English. On the other hand, history (28%), dance (22.1%), and local culture (26.7%) were relatively less favored topics. Others who choose *other* stated that they wanted to write about social problems, video games, movies, TV series, motivation, discipline, etc.

Table 9. The topics students like to write about

		f	**%**
a.	Music	278	51,2
b.	My life	259	47,7
c.	Social Media	233	42,9
d.	Sport	220	40,5
e.	Video Games	201	37
f.	The culture of foreign countries	176	32,4
g.	Technology	174	32
h.	History	152	28

i.	My local culture	*145*	*26,7*
j.	Dance	*120*	*22,1*
k.	Other	*78*	*14,4*

The students' wants and motivations for learning English

The students' wants about learning English were also analyzed. Five items on a 5-point Likert of strongly agree to strongly disagree were given to them. The students agreed that they were willing to learn English (M = 3.80) despite hesitation to express themselves in English classes (M = 2.90). They did not consider that they were biased towards learning English and did not seem to consider that being judged by their friends when they made mistakes affected them negatively (see Table 10).

Table 10. The students' wants and motivations regarding learning English

		M	*SD*
1.	I am willing to learn English.	*3.80*	*1.28*
2.	I hesitate to express myself in English classes.	*2.90*	*1.34*
3.	Being judged (by my friends, etc.) for my mistakes in English class affects me negatively.	*2.85*	*1.47*
4.	I get bored in English lessons.	*2.66*	*1.27*
5.	I am biased towards learning English.	*1.96*	*1.15*

As for their reasons for learning English (see Table 11), 9-items ranging on a 5-point Likert of strongly agree to strongly disagree were given. The results showed that they agreed to use English in their professional careers (M = 4.07) and thought that they would need English in their academic lives (M = 3.97). In addition, they wanted to learn English to understand English songs and movies (M = 3.86) and to communicate with foreigners (M = 3.85). Understanding games more easily (M = 3.61) and going abroad (M = 3.75) were among some other reasons why the students wanted to learn English.

Table 11. The students' reasons for learning English

		M	*SD*
1.	To use in my professional career.	*4.07*	*1.20*
2.	As I think I will need it in my academic life (university etc.).	*3.97*	*1.22*
3.	To understand English songs and movies.	*3.86*	*1.28*
4.	To communicate with foreigners	*3.85*	*1.24*
5.	To go abroad.	*3.75*	*1.29*
6.	To understand English games more easily.	*3.61*	*1.33*
7.	To keep up with the current issues in the world	*3.50*	*1.36*
8.	To read books in English.	*3.39*	*14.1*
9.	To pass the English language exams at school.	*3.30*	*1.37*

As the two core skills for proficient and competent use of speaking and writing skills, the students were asked how they wanted to learn vocabulary and grammar.

Table 12. The students' wants regarding vocabulary learning

		f	**%**
a.	With TV series and movie clips	*402*	*74*
b.	Through social media	*354*	*65,2*
c.	With online games and activities	*311*	*57,3*
d.	By learning words with their English meanings	*260*	*47,9*
e.	Through reading texts (stories, newspaper and magazine, etc.)	*258*	*47,5*
f.	Through listening texts (songs, etc.)	*222*	*40,9*
g.	Using word lists	*212*	*39*
h.	Studying by myself	*206*	*37,9*
i.	With presentations supported by images	*190*	*35*
j.	By using word cards	*165*	*30,4*
k.	With the help of Web 2 tools (kahoot, quizizz, wordwall, etc.)	*159*	*29,3*
l.	Online platforms (Cambly, Busuu etc.)	*158*	*29,1*
m.	Through digital/artificial intelligence tools (Chatgpt, ai voices, etc.)	*149*	*27,4*
n.	By using grammar coursebooks	*132*	*24,3*
o.	With activities organized in the form of competitions	*129*	*23,8*
p.	Other: with songs, mirror technique, and video games ect.	*8*	*1,5*

As seen, a great majority of the students wanted to learn vocabulary via TV series and movie clips (74%), which is followed by social media (65.2%), online games and activities (57.3%). Results suggest that students are highly influenced by the digital age they live in and popular activities that dominate this age, such as playing online games, using social media, and watching TV series. Along with these activities, the students were also willing to learn English by learning words with their English meanings (47.9%) and with the help of the reading texts (47.5%). When it comes to the least favoured activities, competition activities (23.8%) and grammar coursebooks (24.3%) were the answers with the lowest percentages. The results also demonstrated that competition activities aiming to teach vocabulary did not attract their attention.

Table 13. The students' wants regarding grammar learning

		f	*%*
a.	With TV series and movie clips	*364*	*67*
b.	Through social media	*312*	*57,5*
c.	With presentations supported by images	*261*	*48,1*
d.	With online games and activities	*260*	*47,9*
e.	Through listening texts (songs, etc.)	*258*	*47,5*
f.	Through reading texts (stories, newspaper and magazine, etc.)	*245*	*45,1*
g.	Studying by myself	*202*	*37,2*
h.	Through worksheets	*191*	*35,2*
i.	By learning the rules directly	*184*	*33,9*
j.	By using grammar coursebooks	*154*	*28,4*
k.	Online platforms (Cambly, Busuu etc.)	*144*	*26,5*
l.	With the help of Web 2 tools (kahoot, quizizz, wordwall, etc.)	*142*	*26,2*
m.	Through digital/artificial intelligence tools (Chatgpt, ai voices, etc.)	*132*	*24,3*

n.	With activities organized in the form of competitions	127	23,4
o.	Other	35	6,4

The findings regarding how the students wanted to learn grammar showed that TV series and movie clips have the highest percentages (67%). While social media is the second most favoured option (57.5%), learning grammar through online games (47.9%) and listening texts (47.5%) are other popular answers. Thus, it can be said that the preferences of the students are similar to each other in terms of learning grammar and vocabulary. However, one of the least preferred items is the use of artificial intelligence in grammar learning (24.3%). Although artificial intelligence is quite popular nowadays, the students may not have enough knowledge about using artificial intelligence.

DISCUSSION

The current NA study aimed to identify the necessities, lacks, and wants of ninth-grade students. A further rationale for conducting the study was lack of research investigating speaking and writing skills needs of high school students within the Turkish education context. As the EF report suggests, although many changes have been made in the English course program over the years, it can be observed that the success of English courses in Türkiye is still not at the desired level. To effectively address this issue, students should be involved in the curriculum design process. Upon this, Civriz and Burakgazi's (2021) study provides valuable insights into the expectations of the ninth-grade students. Their findings suggest a significant desire for a more communicative and interactive approach to learning, with a particular emphasis on English language acquisition. Based on the findings of previous studies, it is evident that students encounter challenges in acquiring all four language skills, particularly in speaking. Despite these difficulties, it is shown that there is a strong tendency among students to improve their speaking skills. The primary objective of the present study is to examine the students' needs, wants and lacks in the context of two productive skills: speaking and writing.

The results of the current research reveal that students almost equally need both speaking and writing skills. The related body of research also has findings in the same direction. For instance, Mahbup's study (2018) with vocational high school students discovered that their main motivation for learning English was to speak fluently. Furthermore, İlgör's study (2019) with Anatolian high school students found that speaking was viewed as the most essential skill to learn. The findings align with those of previous research which consistently identified English speaking skills as the most essential competency among students (Ahmetovic & Dubravac, 2021; Aljaafil & Beyhan, 2022; Ayas & Kırkgöz, 2013; Aysu & Özcan, 2021; Kayaoğlu & Akbaş, 2016; Qui & Xu, 2022). On the other hand, students thought that English class hours in schools were insufficient. Considering the students agreed upon this point, increasing class hours may be a solution which can contribute to the development of students' language skills. Additionally, the item results regarding their native language skills indicated that students believe they can express themselves properly using their native language.

The findings also highlight the necessity for teachers to provide their students with an effective learning environment to improve their speaking skills. The problems related to the learning environments are also indicated by other studies in Türkiye and other countries (Coşkun, 2016; Göktepe-Tokoz, 2014; Qui & Xu, 2022). On the other hand, students' reported needs for correct word use in both writing and speaking skills. Similar to the results of Göktepe-Tokoz's study, students expressed a common need for guidance in word selection for speaking English. The guidance of language teachers plays a vital role in students' learning and development. For instance, a teacher should be a model and guide to develop their language skills. Creating a

supportive classroom climate and addressing individual needs can be a solution for previously discussed problems.

The results of the study are also compatible with some other studies in the literature concerning students' writing skills. Similar to the study conducted by Novarian et al. (2018), the students have difficulty in forming words and sentences correctly. Therefore, the importance of teacher feedback and making writing practices organized and systematic were also pointed out in the research of Novarian et al. (2018). Besides, the students expressed a need to choose proper grammatical structures. Another factor that can be noted is that the majority of students were willing to learn English and had great motivation. Students were also aware that they needed English for their professional and academic careers. This case can be the reason behind their motivation to learn English. Furthermore, it is possible to say that students wanted to learn English especially to understand movies and songs, to communicate with foreigners, and to go abroad. This may be attributed to the influence of popular culture and social media. It appears that they are intrinsically motivated to engage in language learning, which facilitates the development of self-directed learners.

The present study reveals that the students' principal motive for learning English, when their wants and motivations are taken into account, is for future career and professional purposes. While some prior studies emphasized test scores and social interaction with foreigners as primary motivators for language learning, the current study shows their willingness to become competent in English for their future academic pursuits rather than just passing tests at school. Similarly, research previously mentioned showed that students from different school levels thought English as a cornerstone for their professional lives and career paths (İlgör, 2019; Jamoom, 2021; Kayaoğlu & Akbaş, 2016). It was emphasized that they were aware of the importance of being proficient in productive skills. Moreover, majority of the students stated that they were eager to learn English without any prejudices against it. Additionally, they also had self-confidence as most of them were not hesitant to express themselves during English classes. However, research reports that high school students lack confidence in their writing skills and are unwilling to improve their English proficiency (see Öztürk, 2010). Furthermore, another significant finding was the students' desire to interact with people from diverse cultures worldwide by using both speaking and writing skills, primarily motivated to go abroad. They were also eager to learn English to understand songs, movies, and games without subtitles.

In the current study, the students were asked to share their thoughts on what they would like to learn in terms of grammar, vocabulary, speaking, and writing. Most students expressed their desire to acquire vocabulary and grammar via TV shows, movie clips, social media, online games and activities. This data suggests that the students favor informal and technology-based learning more. Therefore, teachers must incorporate these media into their lessons and design the materials according to students' preferences. Additionally, they prefer to learn English vocabulary by their English meanings rather than Turkish explanations. It can be said that there might be a shift away from translation-related methods. For that reason, various techniques that foster conceptual understanding through authentic, visualized materials and real-life scenarios should be integrated into the lessons. Reading texts such as stories, newspapers and magazines were considered an effective way to receive vocabulary knowledge by the majority. On the contrary, listening texts (e.g. songs) were preferable to reading texts for improving English grammar proficiency. On the other hand, they were not keen to participate in competitive activities to enhance their grammar and vocabulary skills. Besides, the use of digital/artificial intelligence (AI) tools, online platforms, and grammar coursebooks was not favoured to learn and study English. This situation might be attributed to their limited knowledge of these tools.

When the students were asked how they wanted to learn to write in English, they liked guided activities such as using sample texts rather than free writing activities. In addition, they preferred to work individually. As for speaking skills, interacting with other people from foreign countries was chosen by nearly half of the students which motivated them to learn English. Furthermore, the majority demonstrated a preference for question & answer sessions over drama activities where they could be creative and interact with their classmates. The results of students' wants regarding speaking and writing showed that they valued being autonomous during the topic selection process instead of following the teacher's suggested topics. Moreover, their topic selection for speaking and writing revealed a preference for sports, social media, music, and personal experiences.

CONCLUSION AND IMPLICATIONS

The main purpose of the present study was to find out the speaking and writing skills needs of the ninth graders. In this regard, a 55-item questionnaire was developed via interviews conducted with the teachers in eight different schools. 543 students from 19 high schools responded to the questionnaire. The results revealed that although speaking and writing skills are addressed in language teaching, the students are not able to fully learn and develop them. The English instruction provided by their teachers, as well as class hours and learning environment, are deemed inadequate by the students. The reasons for this situation may be that teachers did not give the necessary importance to speaking and writing skills, and the course materials used were insufficient to improve these skills. It is evident from the students' responses that they have difficulty in finding out the correct word and using grammar correctly while speaking and writing in English. The primary cause of this might be that the students do not have the opportunity to practice their English outside of the classroom and enhance these skills within the current classroom setting.

Besides, the students need both skills almost equally, indicating the close link between oral and written communication. Furthermore, their primary reasons for acquiring English are to use the language for academic and professional purposes, besides traveling and communicating with foreigners. This situation shows that students are motivated to learn English and aware that they need English in every aspect of their lives. When students were asked how they wanted to learn English, they mostly preferred music, TV series and movie clips, social media, online games, and activities. In this respect, teachers should integrate these types of activities more into their lessons. It can both motivate them and enhance their participation. Apart from this, instead of using old teaching methods such as the grammar-translation method in lessons, teachers should include teaching methods that serve the students' needs, wants and motivations, such as the task-based teaching method. As can be seen from the results of the current research students do not prefer to learn grammar through coursebooks. It is also critical to note that the curriculum does not address the fact that students' needs differ as to their school types. Using the same curriculum for science high schools and vocational high schools can also be seen as another factor for inadequate achievement in these two skills. Lastly, implementing different curricula in schools with substantial level differences can positively affect this process.

The present study has some limitations. It mainly focuses on the ninth-grade students attending various types of high schools. Due to the limited geographic and demographic scope, it may not apply to other regions, educational levels and school types. Considering this specific district, demographic information of targeted participants and their families might be crucial factors affecting their language learning needs. Therefore, the unique socio-economic characteristics of Ortahisar may contribute to the study outcomes. Considering the data, few participants began English learning at an early age as kindergarten, and most did not get any support outside of the classroom. Additionally, restricted access to resources can potentially have a substantial impact on

the educational process. This can be attributed to socio-economic status of that community. For further research, it is recommended to address these factors and their influence on English learners' language needs. The current study mainly focuses on productive skills of the ninth-grade students. While it provides valuable insights into productive skills, it is necessary to acknowledge that excluding receptive skills (i.e. listening and reading) restricts a comprehensive view of the participants' language needs. Therefore, future studies should concentrate on receptive skills to investigate the interplay between the language skills, exploring how speaking and writing skills may affect the improvement of reading and listening abilities. As all four language skills complement one another, it is significant to consider them as a whole for effective language acquisition. Moreover, it is possible to recommend that there should be more participants and an equally distributed sample size to compare the differences between school types. Other than that, the impact of teachers' perspectives and the quality of instructional materials on students' speaking and writing skills have not been extensively investigated. It is crucial to mention these factors for more valid results. Last, but not least, it is possible to say that there is a need for more empirical studies with ninth-grade students to fully capture their actual needs, lacks, and motives. Even if employing surveys is a user-friendly technique for many researchers, interviews or focus group discussions should also be done for further studies to support quantitative data. This can enhance the reliability and validity of their research. All in all, the present study might guide policymakers, educators, and other educational stakeholders to create successful teaching environments by including the students in their learning process. Getting informed about the needs of a specific group before planning a course or a program can be vital to shape the design and reach the specific goals.

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Information literacy as a strand of research literacy: Challenges and competence among graduate students in English language teaching programs

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Information literacy as a strand of research literacy: Challenges and competence among graduate students in English language teaching programs

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Article Info	Abstract
	In an era defined by immediate access to vast amounts of information, the capacity to effectively locate, evaluate, and apply credible sources has become an essential competency for academic success. Given its critical role in scholarly work, this study examines how graduate students in an English Language Teaching program comprehend and apply information literacy as novice researchers. Adopting Wilson's (1999) framework on Human Information Behavior, this study primarily aimed to elucidate three key areas: (1) challenges in accessing and evaluating sources, (2) the role of structured guidance in developing information literacy, and (3) student strategies for overcoming barriers. A basic qualitative research design was employed, with data collected through semi-structured interviews. The analysis involved the transcription and systematic coding of the data through inductive thematic analysis. The findings revealed that graduate students perceive themselves as lacking in several critical domains of information literacy and that they developed certain strategies to overcome the difficulties they encountered. Furthermore, the findings highlight the need for more structured and standardized training programs to address these deficiencies effectively.

INTRODUCTION

Conducting academic research is a complex and demanding endeavor that requires a broad spectrum of knowledge and skills. Along this journey, many novice researchers face significant difficulties, which can sometimes prove so daunting that they abandon their efforts entirely. Among the essential competencies for successful research, information literacy stands out as particularly crucial (Chen et al., 2022; Selvi & Ganesan, 2022; Todd, 2017) as a strand of research literacy. Recognized as one of the essential 21st-century skills for individuals to thrive as effective members of society (Ananiadou & Claro, 2009), information literacy (IL) plays a significant role in the success of researchers. As initially conceptualized by Zurkowski (1974), the construct of information literacy comprises the capacity to adapt information resources to effectively fulfill specific operational requirements. According to the American Library Association's (ALA) comprehensive definition, IL is an ability to learn "how to learn" (1989). This capacity is rooted in understanding how knowledge is organized, the skills to locate relevant information, and the ability to apply that information in ways that enable others to learn. Individuals who are information literate are thereby prepared to undertake a lifetime of learning, for they can more regularly locate and use the information that they will need for whatever purpose or decision at hand (ALA, 1989).

This basic competence aligns closely with the definition of research literacy (RL) given by Groß-Ophoff et al. (2017), as it emphasizes the skills of articulating existing knowledge and research needs, structuring and interpreting the problem of research, critically evaluating the credibility and expertise of sources, and synthesizing efficiently. As Beaudry and Miller (2016) suggested, literacy in research involves the ability to identify, interpret, analyze, and engage with research, communicate the findings clearly, and use them within an educational and professional context. Moreover, the ability to identify a range of research tools and to track existing studies as well as assessing their contribution to the existing body of literature are also prominent competencies in this area (Beaudry & Miller, 2016). In this respect, individuals with research literacy are expected to proficiently employ strategies for obtaining information, starting from recognizing the need for it, while overseeing all facets of the research process within their area of expertise. The interaction between IL and RL emphasizes the robust connectivity of these competencies for a total impact: each independently contributes to the goal of producing informed, flexible researchers capable of navigating information ecologies with subtlety, ultimately allowing them to extend knowledge within their discipline of concern. To this end, novice researchers rely heavily on the training they receive during their postgraduate education. However, the content of the courses provided in master's programs is mostly shaped around research methods, techniques and theoretical facades of research. As a skill that is usually taken for granted and yet, not necessarily focused on as an ability that requires training or guidance, development of IL mostly remains overlooked. This oversight sets a serious challenge for novice researchers, frequently resulting in feelings of incompetence, frustration and demotivation among researchers that are at the early stages of their academic journey and hindering their progress and engagement in scholarly work.

Within this scope, this study aims to examine the difficulties that master's students encounter in locating and evaluating information, which is considered a major component of research literacy. Specifically, the study investigates their competency in assessing the credibility and value of information sources, recognizing information literacy as an essential subset of broader research literacy skills. Additionally, the study explores the strategies students develop to navigate these challenges, shedding light on the ways in which they adapt to the demands of academic research.

Research questions

(1) What challenges do graduate students face in accessing and evaluating academic sources?

(2) To what extent does structured guidance play a role in increasing information literacy among graduate students?

(3) What strategies do graduate students adopt to overcome the challenges in accessing and utilizing information?

Theoretical framework

Human information behavior

Information behavior represents the totality of activities that people engage in seeking, evaluating, and using information; it demonstrates their cognitive, social, and contextual interaction with systems and resources (Wilson, 1999). Wilson's (1999) framework on Human Information Behavior (HIB) provides a vigorous theoretical foundation for analyzing how individuals interact with information across various contexts, including information seeking, searching, and use. This framework is particularly relevant to the present study, which investigates graduate students' information literacy levels and the challenges they face.

Wilson's model conceptualizes information seeking behavior as a purposive activity driven by a need to fulfill specific goals, which aligns with the study's focus on the challenges students encounter while navigating academic resources such as databases and journals. Additionally, Wilson identifies barriers to information access—psychological, environmental, and systemic obstacles—that impede effective information retrieval. These barriers resonate with the findings of this study, which highlight students' self-perceived deficiencies in information literacy, often resulting from insufficient training or unfamiliarity with credible sources. Furthermore, Wilson's model of information use behavior, which involves integrating newly acquired information into an individual's knowledge base, parallels the study's exploration of how students evaluate and utilize the credibility and reliability of information. By situating these challenges within the broader framework of HIB, the study not only emphasizes the multidimensional nature of information literacy but also identifies critical areas for intervention, such as enhanced training programs and systemic support to bridge the identified gaps.

Conceptual framework

Research literacy

Beyond the mere ability of reading and writing, literacy is defined as the concept that deals with defining, researching and questioning problems that support people to organize their lives and solving problems. According to UNESCO's Literacy Assessment and Monitoring Programme (LAMP), literacy "involves a continuum of learning enabling an individual to achieve his or her goals, develop his or her knowledge or potentials, and to participate fully in the community and wider society" (2005). To provide a comprehensive and satisfactory definition, it is crucial to understand the multifaceted nature of research literacy. It is, in fact, a combination of various literacies such as information/technology literacy (the ability to find, access and use resources) verbal literacy (the ability to comprehend, discuss and critique written and oral body of work), visual literacy (the ability to read, construct and use non-verbal representations such as tables, charts, etc.) and numeracy (the ability to comprehend and practice statistical reasoning and mathematical calculations) (Beaudry & Miller, 2016), blended into one pivotal competency that in some way, each researcher may find themselves in need of. Beaudry and Miller (2016) provided the definition of research literacy as "the ability to locate, understand, discuss, and evaluate different types of research; to communicate accurately about them; and to use findings for academic and professional purposes". Similarly, Solomon, Wilson, and Taylor (2012) explain that these competencies are organized around central stages such as recognizing the need for information, using appropriate techniques to locate information, critically comparing and evaluating information, and linking with other or prior knowledge. In this respect, research literacy is not only important for those teachers who plan to continue their career in academia but also for those who intend to enhance their professional skills (Eriksen & Brevik, 2023). It helps them be aware of the latest developments within their field and to use this knowledge in practice with success.

As research literacy comprises a diverse set of competencies essential for engaging with academic and professional knowledge, information literacy emerges as one of its most fundamental

components. The ability to systematically locate, critically evaluate, and effectively apply information is integral to conducting rigorous research and making well-informed decisions (Shenton, 2009). Consequently, a comprehensive exploration of information literacy is crucial for understanding how researchers navigate the increasingly complex and dynamic information landscape of the digital age.

Information literacy

Building on the foundational concept of research literacy, it is crucial to examine information literacy as a core competency that researchers must cultivate. As an essential 21st-century skill, information literacy extends beyond the mere ability to locate information; it encompasses a complex interplay of knowledge, analytical skills, and technological fluency that allows individuals to navigate an increasingly information-saturated world (Trilling & Fadel, 2009). In an era characterized by rapid advancements in digital technologies and the exponential growth of information, the ability to critically engage with diverse sources is indispensable for researchers striving to contribute meaningfully to their fields. These competencies are particularly essential for managing the evolving demands of society, academic institutions, and professional environments, where the ability to synthesize, assess, and apply information effectively is key to informed decision-making and innovation (Scott, 2015).

The concept of information literacy has been explored across multiple disciplines, particularly in education, where it is recognized as a foundation for independent learning and scholarly inquiry. The American Library Association (2000) defines information literacy as the capacity to identify an information need and effectively locate, assess, and utilize relevant sources. Similarly, the Society of College, National, and University Libraries (1999) conceptualizes information literacy as an understanding of how information is created, structured, and disseminated within academic and professional contexts. Beyond these definitional frameworks, information literacy entails more than just information-handling skills; it involves cultivating critical thinking abilities, fostering a mindset of inquiry, and developing the capacity to engage in reflective learning. Within this perspective, learning is understood as an ongoing process of meaning-making, achieved through knowledge acquisition, analytical reflection, engagement with diverse perspectives, and practical application in real-world contexts (Keeling & Dungy, 2004).

In addition to its cognitive and analytical dimensions, information literacy also requires the ability to assess the credibility, relevance, and appropriateness of sources within specific academic or professional contexts (Berutu et al., 2019). As the digital landscape continues to expand, researchers must navigate an overwhelming volume of information, much of which varies in accuracy and scholarly rigor. The ability to critically evaluate sources is therefore integral to ensuring that research is grounded in reliable and high-quality evidence. Furthermore, information literacy is not a static skill but a dynamic and evolving competency that must be continually refined in response to emerging technological tools and shifting knowledge paradigms. By strengthening their information literacy skills, researchers not only enhance their academic and professional capabilities but also contribute to the broader dissemination of knowledge, fostering a culture of inquiry, intellectual rigor, and lifelong learning.

METHODOLOGY

Research design

With the aim of producing sound knowledge about human experience (Sandelowski, 2004), qualitative research enables researchers to provide a systematic, rigorous and detailed portrayal of a phenomenon. In this context, the study followed a basic qualitative design to gain insight into the participants' perspectives on their own information literacy skills and abilities. To explore the IL challenges faced by novice researchers, semi-structured interviews were chosen specifically for their effectiveness in capturing nuanced perspectives directly from participants, thereby facilitating the collection of detailed and meaningful data. The interviews were transcribed verbatim and

analyzed using the MAXQDA software for systematic scrutiny and identification of overarching themes. Given its widely acknowledgment as one of the most rigorous methods for systematizing the identification, analysis, and interpretation of patterns in qualitative data, inductive thematic analysis procedure was considered fitting for this study because of the potential for nuanced insights into a complex phenomenon (Boyatzis, 1998; Braun & Clarke, 2006). Such an integrated approach allowed the researchers to study the research issue comprehensively and, consequently, to explore the complexity and diversity of participants' experiences effectively.

Participants and Sampling

The selection criteria ensured that all participants had completed the same undergraduate program within the same academic period, despite graduating from different institutions—Middle East Technical University and Hacettepe University. Additionally, they were all enrolled in the Master's program in English Language Teaching (MA) at Gazi University. Beyond their academic commitments, all participants were actively employed as English instructors at both state and foundation universities in Türkiye. Their professional responsibilities extended beyond teaching, encompassing tasks such as preparing instructional materials, designing and grading assessments, and providing detailed feedback on student papers on a weekly basis. The demands of their dual roles as both educators and graduate students posed significant challenges, particularly in terms of time management and workload balance, further complicating their ability to engage fully in their research and academic development.

During the first two semesters of their master's program, the participants engaged in coursework that covered essential aspects of academic research and pedagogy. This included modules on research methods, research ethics, and academic writing, as well as specialized subjects related to English language teaching and learning. These courses aimed to equip them with the theoretical and methodological foundations necessary for conducting research in the field while simultaneously enhancing their instructional practices. However, despite this formal training, participants continued to face difficulties in integrating research into their professional and academic lives, highlighting the complexities of navigating concurrent roles as both educators and researchers.

Table 1. The participants' demographic information

Participant	Year of Graduation (BA)	Undergraduate Degree	Current Master's Program	Weekly Teaching Hours	Total Teaching Experience (Years)
Participant1	2017	Hacettepe	Gazi	20	4 years
Participant2	2016	METU	Gazi	28	5 years
Participant3	2016	METU	Gazi	20	5 years
Participant4	2017	METU	Gazi	24	5 years
Participant5	2016	Hacettepe	Gazi	21	5 years

There are several sampling methods, each corresponding to different objectives and cases. For this study, which aims to explore the experiences of master's level students in the initial stages of their academic undertaking, the purposive sampling method (Patton, 2002) was deemed appropriate. Enabling the researcher to limit the research work to only those individuals whose experiences are most in line with the purpose of the study, the participants are selected purposefully by the researchers to serve the aim of the research, even though the sample may not be statistically representative of the wider population. In this regard, typical case sampling, a form of purposive sampling, is particularly useful for identifying cases that exemplify the norm within a given context, often with input from key informants or statistical data to establish consensus on what constitutes a "typical" case (Suri, 2011). This approach allows researchers to select participants whose experiences and backgrounds align with common patterns observed in the field, ensuring that the findings offer insights into broader trends while maintaining relevance to the study's focus.

Data collection and analysis

This study employs a qualitative research approach, utilizing semi-structured interviews as the primary method of data collection. As described by Dörnyei (2007, p.136), a semi-structured interview represents a "compromise" between structured and open-ended interviews, integrating the strengths of both methods. According to Heigham and Croker (2009), this approach allows the interviewer to guide the conversation in predetermined directions to ensure key topics are addressed while maintaining flexibility for participants to steer the discussion toward new, potentially unexpected insights. Considering its ability to balance structured inquiry with exploratory depth, the semi-structured interview format was deemed the most suitable method for this study, allowing for a comprehensive exploration of participants' experiences and perspectives.

The authors designed the semi-structured interview to encompass ten key items, each carefully formulated to address potential challenges encountered by graduate students. The initial development of these categories was informed by the authors' observations and prior experiences with the issue, serving as a foundational framework before data collection commenced. As the study progressed, these categories underwent systematic refinement and validation, ensuring greater accuracy, relevance, and comprehensiveness in capturing the participants' experiences. The final set of interview questions covered the following key areas:

- Difficulties in accessing information (e.g., Struggles with using databases and search engines effectively)
- Financial issues (e.g., Inability to afford expensive books, articles, and other academic resources)
- Time management challenges (e.g., Difficulties in balancing academic workload with time constraints
- Language barriers (e.g., understanding technical terms, the demanding language of research articles, or specialized jargon)
- Perceived competence in information searching
- Challenges in identifying the correct terms or keywords for research
- Guidance received on information literacy skills
- Knowledge of evaluating the trustworthiness of sources
- Awareness of and strategies for avoiding "predatory journals"
- Understanding the credibility of academic journals

The interviews were conducted online due to the busy schedules of the participants and recorded in audio format, transcribed, and analyzed utilizing MAXQDA software. To explore the research questions, thematic analysis was carried out to uncover patterns and draw meaningful insights from the participants' stories and experiences. Participants willingly chose to take part in the study on a voluntary basis, ensuring that their involvement was based on informed consent and free from any external pressure or coercion. At the outset of the interviews, they were once again asked to provide verbal consent, reaffirming their voluntary participation in the study. This process ensured that they fully understood the purpose of the research and their right to withdraw at any stage without any consequences. On average, the duration of the interviews was 28 minutes. Once transcribed, each interview contained approximately 3,400 words. This word count reflects the depth and detail of the participants' responses, contributing to a comprehensive and rich dataset for analysis.

In qualitative research, the researcher serves as the primary instrument of analysis, making key decisions in coding and theme identification while ensuring credibility, trustworthiness, and validity through systematic documentation such as field notes, transcripts, and reflective journals (Starks & Trinidad, 2007; Nowell et al., 2017). To enhance the credibility and trustworthiness of the study, multiple strategies were employed, including peer debriefing, expert validation, and participant confirmation, in line with best practices in qualitative research (Creswell & Poth, 2018;

Lincoln & Guba, 1985). A field expert actively participated in the coding process by reviewing the initial codes and themes, contributing to their sorting, grouping, and naming. The final version of these codes was further examined by another field expert, ensuring a systematic and rigorous refinement process. Based on their evaluations, thematic groupings were finalized, and consensus was reached regarding the placement of certain codes within the most relevant thematic categories.

To minimize interpretative bias and enhance confirmability, the researchers also engaged in participant verification during the data collection process. Specifically, during and after the interviews, the researchers double-checked key statements with participants to ensure accuracy and to clarify any potential ambiguities. This process aligns with the principle of triangulation, which enhances validity by incorporating multiple perspectives in data analysis (Patton, 2002). This methodological framework was employed to uphold analytical rigor and enhance the trustworthiness of the findings.

FINDINGS

Analysis of the semi-structured interviews conducted with five participants identified three overarching themes, each corresponding to one of the research questions. The first two themes—challenges in information literacy and resource management—addressed the first and second research questions, respectively. The third research question, which explored the strategies employed by graduate students to navigate and overcome these challenges, also revealed distinct themes related to self-directed coping mechanisms. These themes emerged from a comprehensive analysis of participants' reported methods, which were identified both explicitly, through direct statements, and implicitly, through their descriptions of problem-solving approaches and adaptive behaviors. Figures 1 and 2 illustrate these findings, presenting a structured overview of the challenges in information literacy and resource management as subcomponents of research literacy, and key strategies adopted by participants in response to these challenges.

RQ1: What challenges do graduate students face in accessing and evaluating academic sources?

RQ2: To what extent does structured guidance play a role in increasing information literacy among graduate students?

The first research question explores the challenges that novice researchers face during the early stages of their academic and professional development. The second research question investigates the extent to which structural guidance influences participants' information literacy levels, shaping their ability to navigate and engage with scholarly resources effectively. In this context, structural guidance refers to the formal coursework that participants completed as part of their undergraduate (BA) and postgraduate (MA) studies. This includes structured academic instruction, curriculum design, and pedagogical frameworks that provided foundational knowledge and methodological training to support their research and learning processes. The themes identified in response to these research questions are presented in Figure 1 below, providing a structured overview of the key findings.

Figure 1. Core components and subdimensions of research literacy challenges
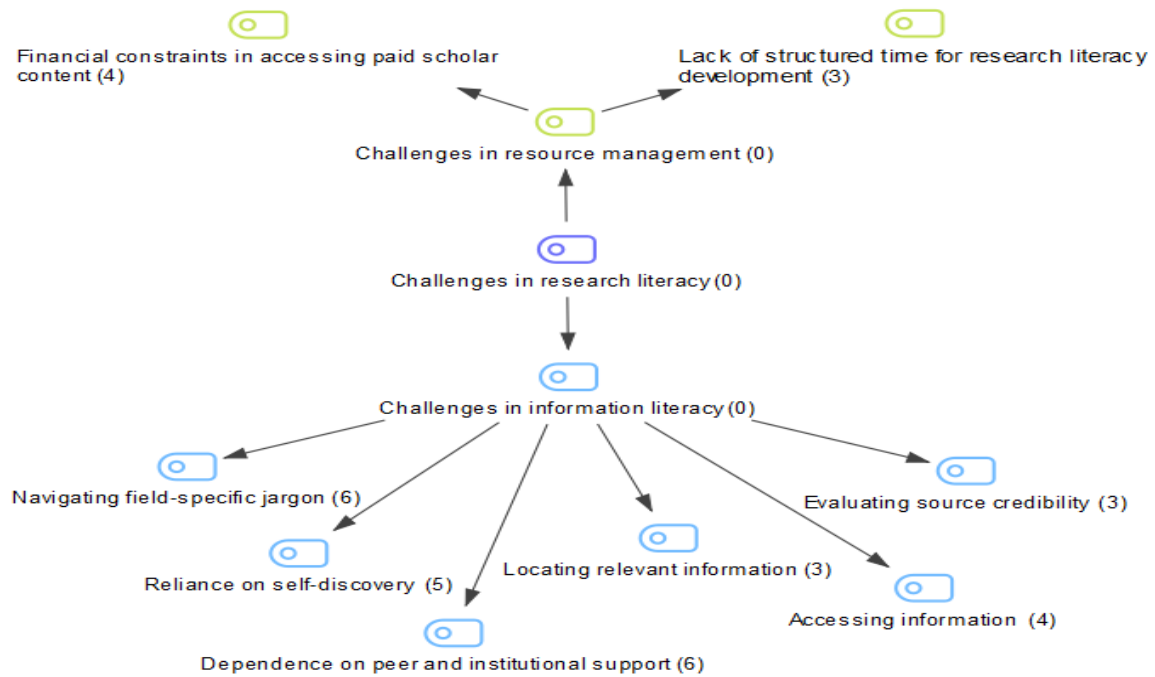
As illustrated in Figure 1, a comprehensive analysis of the interview data identified two predominant themes encapsulating the research literacy challenges faced by graduate students. The lower section of the figure highlights that a significant portion of these challenges is rooted in information literacy deficiencies, particularly in areas such as locating, evaluating, and effectively utilizing academic sources. This finding emphasizes the critical role of information literacy as a foundational component of research competency. Additionally, the analysis revealed that time and financial resource management constitutes another salient theme. The compounding pressures of balancing academic obligations with the professional demands of their dual roles as both teachers and researchers, combined with financial constraints that restrict access to essential research materials, create substantial challenges for graduate students in their research endeavors. The necessity to navigate these competing responsibilities while managing limited financial resources not only intensifies their workload but also impedes their ability to engage fully with scholarly research, ultimately affecting their academic progress and research productivity. These findings emphasize the interconnected nature of research literacy challenges, demonstrating that both cognitive (i.e., information literacy) and logistical (i.e., time and financial constraints) factors play a significant role in shaping graduate students' research experiences.

A closer examination of these challenges reveals that the lack of formal training in information literacy is a key factor contributing to students' struggles with academic research. Participants were asked whether they had taken a course related to information literacy skills during their BA or MA programs and, if so, whether they found the course content satisfactory. All participants reported insufficient instruction on locating academic sources and evaluating their credibility. While each had completed a research methods course during their MA studies, and some had encountered similar coursework at the undergraduate level, none of these courses provided explicit guidance on assessing the quality and reliability of academic information. Consequently, they had to develop these skills independently, often through trial and error, yet many still felt inadequately prepared in this area.

Moreover, at the onset of their research journeys, participants were largely unaware of the full range of academic resources available for information retrieval, such as journal articles, books, and theses. While they were familiar with widely used platforms like YÖKTEZ and Google Scholar, they lacked awareness and proficiency in navigating other key academic databases,

including ProQuest and EBSCO, which offer access to a more extensive collection of scholarly literature. These experiences highlight a broader deficiency in formal training related to information literacy, leaving students to navigate the complexities of academic research with minimal institutional guidance. Their struggles were articulated as follows:

> At the beginning, I didn't know how to use YÖKTEZ and Google Scholar effectively, you know, searching with quotation marks and all. And even when I find an article or a book, they were usually not open-access and I didn't know what to do. I didn't know I had an institutional account and how to use Proxy settings to access those articles, so I would simply give up and look for other sources. (P1)

Similar to P1, P2 emphasized that, although they were aware of other databases, they lacked the knowledge to navigate the technical aspects effectively:

> At first, I only used Google Scholar, yeah, that was pretty much it. Then, in one of the courses, a professor showed us some other databases but not exactly how to use them. Somehow, I figured out how to use Proxy and institutional access but before I found out about those settings, I could not use ProQuest or EBSCO properly. (P2)

At the outset, the participants faced challenges in locating reliable online sources and often relied on assistance from peers to navigate these difficulties. As depicted in Figure 1, they reported that language posed significant challenges as they often felt uncertain about their mastery of the terms used or academic terminology. They noted that the variations in terminology across different subjects and authorial styles further complicated their comprehension and use of scholarly language.

> I think when you start MA, the professors just assume you know how to search for information. We had a course in BA about research but we briefly talked about research methods and picked a topic and just proceeded to write a proposal. So I didn't really know much about searching for information. (P2)

> I mean there are times that I use Google Translate to understand some sections, some wording, some phrases are difficult to grasp, there are some examples of sentences that are two paragraphs long. I cannot follow that information easily. Yeah, every day I learn new terminology. But I cannot say that I'm still 100% comfortable with academic discourse. It's like, another language. (P3)

In addition, the development of the skills related to assessing the validity of sources—identifying, for instance, predatory journals—is recognized as crucial yet admitted limited awareness about this subject. The participants were asked whether they possessed the skills to evaluate the trustworthiness of various sources, including journals, articles, and reviews. All participants indicated that they attempt to assess the trustworthiness of sources; however, none had a clear or systematic approach for ensuring reliability when they were unfamiliar with the author, journal, or publisher.

> I'm not really sure. Maybe if the language seems professional... or there are some famous publishers like Oxford, Cambridge, Pegem for Turkey, etc. If I'm familiar with the name of the publisher or the journal, I say it's fine. But that doesn't happen a lot, obviously. So no. I don't know how to make sure. (P1)

> I don't really have a system. Usually I check the references. I look for sources that seem legit, or, like, trustworthy. I mean, if I see names of well-known researchers, journals, publishers, it feels okay, I can trust this source. (P3)

> I check the number of citations, or where the journal comes from. There are some journals that you can 100% trust but that doesn't always work, of course. Then I check if the writer have any connection between other writers I know, I check for their other works. (P2)

> If the language and the layout seem a bit off, that's a red flag for me. But this is hardly a strategy, so no. I'm not sure how to check for trustworthiness. (P5)

Surprisingly, none of the participants were able to provide an adequate definition of what constitutes a predatory journal or how to independently assess a journal's credibility. While some recognized the term, they remained uncertain about its precise meaning and the specific characteristics that differentiate predatory journals from legitimate academic publications. This lack of clarity suggests a fundamental gap in their research literacy training, leaving them vulnerable to unreliable or deceptive sources. Following an explanation from the researcher, participants acknowledged their lack of a clear strategy for evaluating journal credibility. They expressed

uncertainty about key indicators of reputable academic publishing, such as journal volume, issue numbers, indexing status, and impact factors. Furthermore, they lacked awareness of common evaluation methods, including checking a journal's presence in recognized indexing databases or assessing the editorial board's credentials. Similarly, they were unfamiliar with how to systematically browse, compare, and verify academic journals, relying instead on informal or surface-level assessments. These findings underscore a critical deficiency in research training, emphasizing the need for explicit instruction on academic publishing standards, predatory journal identification, and source evaluation techniques.

The participants highlighted the need for explicit training and support, emphasizing the importance of structured courses or direct guidance from professors to help students develop essential research skills. They noted that these skills were often inconsistently developed before graduate school, making the transition to advanced academic research particularly challenging. This highlights the necessity of equipping students with both the knowledge and practical tools required to navigate the research landscape effectively and engage in complex academic work. The lack of adequate preparation not only creates feelings of uncertainty but also demands significant time and effort, especially for students from diverse educational backgrounds who may not have had prior exposure to systematic research training. These challenges are particularly evident in students' difficulties in assessing the credibility and quality of academic journals, especially when encountering unfamiliar or potentially predatory publications. In the absence of formal instruction on information literacy, participants relied heavily on peer support, supplemented by limited guidance from professors and self-directed learning through online resources. However, this informal approach often proved insufficient, leading to ongoing struggles in efficiently accessing and evaluating academic information. The heavy dependence on informal learning mechanisms highlights the pressing need for structured, accessible training programs to bridge these gaps in information literacy and research competencies. Strengthening institutional support in these areas would not only improve students' ability to navigate academic databases effectively but also enhance their overall confidence and proficiency in conducting rigorous scholarly research.

As reflected in Figure 1, the participants outlined the challenges they faced in managing their time to balance the demands of a master's degree against full-time employment. Having to teach 20 to 30 hours a week, coupled with the demanding nature of MA studies that included multiple courses, made it very difficult to maintain a balance and discharge their responsibilities effectively. For participants working as part-time teachers, the challenge was even greater, as they were required to teach additional hours to earn a sufficient income, further limiting their availability for academic pursuits. All participants emphasized the struggle of finding enough time for research, often feeling overwhelmed by the need to juggle teaching, coursework, and professional obligations. As a result, they were unable to dedicate sufficient time to developing their information literacy skills, which required consistent practice and engagement with academic databases, source evaluation techniques, and research tools. The lack of structured time for focused learning in this area contributed to their reliance on trial-and-error methods and informal support networks, ultimately slowing their progress in mastering essential research competencies:

> In prep school it is not unusual to have a really busy program. We have to prepare extracurricular activities for students. We have quizzes and portfolio tasks, which means we have to assess, like, let's say 100 papers in two weeks. And I have 28 hours of teaching. It feels like playing Second Life. (P2)

> [working and studying at the same time] is hard because I have to commit to my job and also I have assignments to complete, papers to write all the time. Although I managed later, I changed my job frequently but had at least 20 hours a week. And in one term I had to take four courses and it was the most challenging time for me. I felt like I was torn between two full-time jobs and always failing one of them. (P4)

> It was so exhausting in the beginning, but in time, I kind of found a balance. I started studying for my MA studies routinely in the same part of the week. Like sundays. And I tried to never change it. Still, it is so difficult to stick to my plans and keep everything in order. (P5)

The high cost of academic resources—such as books and journal articles—was a major barrier, at times leading individuals to resort to unethical or unauthorized means to acquire the materials they needed. All participants stated that if they could not access a book or an article as they were not open access, they would go for alternative options such as pirating sites or groups in social media that people share scholarly documents. If none of these options work out, they would give up and look for alternatives to those articles or books:

> If I can't find an article or a book anywhere, in groups or through illegal ways, you know, I look for a substitute. I can't afford those prices. Maybe if they were in Turkish liras, I would buy some of them from time to time. Because it is both time and energy consuming. You search for something, you find it, then there's a paywall and it's so expensive. I don't have that kind of money. (P1)

> There are times when I needed an article or a book, but I just couldn't afford it. I try to check if my university has access or look for a free version online. Sometimes, I find discussions in forums where people share resources, and that helps. But honestly, if I can't find it after searching, I just give up and look for a different source. (P3)

> I didn't even try to buy any books or articles because I knew I couldn't afford them. I know it's not the right thing to do but I had to look for online options. (P4)

In brief, the participants identified resource management and information literacy as the areas in which they perceived deficiencies in their competencies, encountered difficulties, and sought solutions. Building on these insights, the third research question investigated the strategies developed by the participants in dealing with the aforementioned problems, with a view to sharing the solutions they had expressed in this regard.

RQ3: What strategies do novice researchers adopt to overcome the challenges in accessing and utilizing information?

The participants were asked to provide insights into the coping strategies they employed as novice researchers who simultaneously managed full-time teaching responsibilities while addressing both the technical and methodological challenges of conducting research. The findings revealed that as they navigated the demands of these dual roles, they gradually developed various adaptive mechanisms to overcome the difficulties they encountered. These strategies evolved over time, shaped by both individual efforts and the availability - or lack of, institutional support. Figure 2 presents an overview of these self-directed coping strategies, highlighting both the explicit methods participants reported and the implicit approaches they adopted in response to their research challenges.

Figure 2. Coping strategies for challenges of research and information literacy
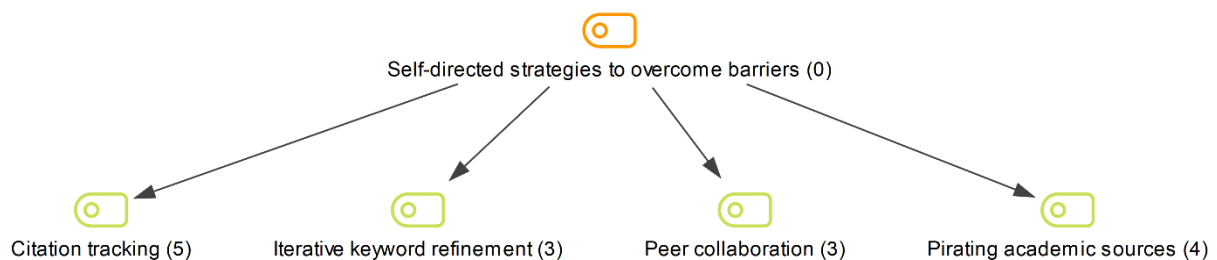
In the initial stages of their research journeys, most participants relied heavily on Google Scholar as their primary source of information, viewing it as both easily accessible and a convenient starting point for academic inquiries. However, they soon recognized that not all sources retrieved through this platform met the necessary standards of scientific rigor or relevance. This realization highlighted the need for greater guidance in critically assessing the credibility and applicability of retrieved materials. Without formal instruction on evaluating academic sources, participants often found themselves uncertain about distinguishing high-quality research from less reliable publications, highlighting a crucial gap in their information literacy skills. To bridge this gap, participants frequently turned to peer support and instruction from master's-level research courses

to enhance their research competencies, as presented in Figure 2. While these courses provided a solid foundation in research methodologies, they were perceived as insufficient in addressing the practical aspects of information literacy. Specifically, participants noted a lack of structured training on how to effectively locate, assess, and utilize institutional resources for academic research. Many expressed frustration at the absence of clear strategies for identifying high-quality, relevant information, which often left them feeling ill-equipped to navigate the vast array of available academic literature. In response to these challenges, novice researchers devised their own strategies for evaluating and refining their research processes. Figure 2 presents that some participants relied on the number of citations as an indicator of an article's credibility, assuming that highly cited works carried greater academic authority. Others adopted a more systematic approach by identifying key studies within their field and analyzing the keywords used in those publications. This method allowed them to refine their search terms and align their inquiries with established research, thereby improving the precision and relevance of their literature searches. Despite these self-developed strategies, participants continued to face persistent barriers, particularly financial constraints in accessing scholarly resources. Many acknowledged resorting to unauthorized methods to obtain academic materials, citing the prohibitive costs associated with subscription-based journals and paywalled research. Their experiences highlight the broader issue of accessibility in academic research, where financial limitations can significantly hinder knowledge acquisition and scholarly advancement.

Overall, these findings emphasize the critical need for more comprehensive training in information literacy, particularly in evaluating academic sources and effectively utilizing institutional resources. Additionally, they point to the necessity of greater institutional support in providing access to high-quality research materials and fostering an environment where novice researchers are equipped with the skills and tools necessary to navigate the complexities of academic inquiry. Addressing these challenges through targeted training programs and improved resource accessibility would not only enhance research competency but also empower early-career researchers to engage more confidently in scholarly work.

DISCUSSION

The findings reveal substantial gaps in novice researchers' information literacy, a fundamental skill set for academic success (Chen et al., 2022; Selvi & Ganesan, 2022). Despite completing research methods courses, participants reported a lack of explicit instruction on evaluating source credibility and effectively navigating academic databases. This aligns with Beaudry and Miller's (2016) argument that research literacy should include structured training in source assessment; however, these competencies are often underdeveloped in formal education settings. Wilson's (1999) Human Information Behavior (HIB) framework provides a useful lens for understanding these challenges. His model identifies various barriers to information access, including psychological obstacles (e.g., self-doubt in assessing source credibility), environmental factors (e.g., insufficient institutional support), and systemic constraints (e.g., paywalls and restricted database access). These barriers were evident in participants' experiences, reinforcing the need for institutional interventions to address these gaps and provide targeted support for developing research literacy. Another particularly noteworthy finding was participants' reliance on trial-and-error strategies and peer support to navigate their research challenges. While collaborative learning has been shown to enhance research literacy (Shenton, 2009), the absence of structured guidance left many struggling unnecessarily, often leading to frustration and self-doubt—an issue similarly observed in prior studies (Eriksen & Brevik, 2023). This emphasizes the importance of integrating explicit instruction in academic research skills within postgraduate curricula. Without systematic training, students risk developing inefficient research habits, potentially undermining both their confidence and their ability to carry out rigorous academic work.

The study also highlights the crucial role of structured coursework in shaping information literacy development. However, participants reported that their formal education lacked a

systematic focus on practical research skills, particularly in assessing journal credibility and managing restricted-access content. This finding is consistent with Adendorff and Parkinson's (2001) conceptualization of research literacy, which emphasizes the necessity of explicit instruction in locating, evaluating, and incorporating scholarly sources. Further, research by the American Library Association (ALA, 2000) suggests that students who receive structured training in information literacy demonstrate greater academic confidence and efficiency in navigating research databases. The fact that participants struggled with basic search techniques, such as Boolean operators and institutional access mechanisms, points to a significant oversight in academic training programs. Their limited familiarity with databases beyond Google Scholar suggests a disconnect between theoretical research instruction and practical skill application, reinforcing the need for curriculum revisions that incorporate digital research training.

A particularly striking issue identified in the findings was participants' difficulty in distinguishing reputable academic sources from predatory journals. Their lack of awareness regarding journal indexing, impact factors, and other credibility indicators suggests that novice researchers may unknowingly rely on low-quality or deceptive sources (Beall, 2016). Addressing this gap through structured training on research ethics and publication standards would significantly enhance graduate students' ability to critically evaluate scholarly sources. Without formal instruction in these areas, students remain vulnerable to misinformation and may unintentionally compromise the integrity of their research.

Despite these challenges, participants demonstrated resilience by developing their own coping strategies. Citation tracking, keyword refinement, and peer collaboration emerged as key mechanisms for overcoming research obstacles, aligning with previous findings on adaptive research behaviors (Scott, 2015). However, the fact that these strategies were largely self-taught indicates a reactive rather than proactive approach to research literacy acquisition. One of the most concerning findings was participants' reliance on unauthorized methods, such as pirating academic resources, due to financial constraints. This issue reflects broader systemic challenges in knowledge accessibility, where economic barriers limit equitable engagement in academic research. The findings emphasize the need for universities to expand access to digital repositories and promote open-access publishing initiatives (Piwowar et al., 2018). Wilson's (1999) model of information use behavior is particularly relevant here, as it highlights how individuals adapt to constraints within their research environments. While participants exhibited resourcefulness in overcoming barriers, their struggle to assess journal credibility and access scholarly materials suggests that self-directed strategies alone are insufficient. Instead of relying on informal learning mechanisms, universities should institutionalize comprehensive information literacy education within postgraduate programs. Equipping students with essential research competencies early in their academic careers would not only enhance their ability to conduct rigorous research but also reduce their reliance on inefficient and, in some cases, ethically questionable coping strategies. Addressing these gaps through formalized training and improved institutional support is crucial for fostering a research culture that prioritizes both accessibility and academic integrity.

CONCLUSION

With the advancement of technology, the sources of information and the means of accessing them have changed drastically. While search for information used to have only one dimension, such as physical libraries and documents that are in reach, the practice of "searching" bears various meanings now, including "googling" keywords, using proxy and online databases, finding books to borrow online, and even pirating options that allows illegal gateways to information. As much as this change eased the process of information seeking, it brought its limitations as well. Having the information right there in front of the screen does not necessarily mean it is easy to access. This study's findings, interpreted through Wilson's (1999) Human Information Behavior (HIB) framework, reveal significant gaps in graduate students' information literacy (IL) skills. Despite being digital natives (Prensky, 2001), participants showed limited ability to perform scholarly

information-seeking tasks, particularly at the beginning of their master's programs. While they felt confident operating everyday digital tools, they struggled with academic resources, underscoring a disconnect between general technological know-how and the specialized skills required for academic IL.

Wilson's framework offers a useful perspective on these issues, presenting information-seeking as a goal-oriented process often obstructed by psychological barriers (such as self-doubt), environmental challenges (like insufficient training), and systemic obstacles (including inadequate institutional support). These challenges were evident in the participants' experiences, with many feeling unprepared to critically assess the credibility and reliability of academic sources or effectively navigate institutional databases. This gap between perceived readiness and actual competence highlights the urgency of addressing the barriers outlined by Wilson and stresses the need for systemic interventions. Additionally, Wilson's emphasis on integrating new information into existing knowledge frameworks resonates with this study's findings on how students process and apply scholarly information. While participants frequently devised their own strategies to overcome obstacles, they expressed doubts about their effectiveness, reflecting the fragmented and improvised nature of their information behavior.

To address the previously identified shortcomings, this study underscores the necessity of structured and targeted training programs implemented early in master's education. These programs should focus on cultivating essential academic information literacy skills, including the proficient navigation of institutional databases, the critical evaluation of sources, and reliable methods for assessing the credibility of articles and journals. By integrating such training into graduate curricula, institutions can mitigate unnecessary obstacles for novice researchers, providing them with the necessary tools to engage in academic work with greater confidence and competence.

Grounded in the Human Information Behavior (HIB) framework, this study highlights the multidimensional and contextual nature of both information literacy and research literacy, emphasizing the practical steps institutions can take to enhance students' overall research capabilities. A well-structured approach to information literacy training would not only improve students' ability to locate and assess academic resources effectively but also strengthen their broader research literacy skills, such as formulating research questions, synthesizing existing literature, and applying appropriate methodologies. Additionally, reducing the time and cognitive burden associated with independent trial-and-error learning can lead to more efficient and productive research engagement. By introducing tailored interventions at the outset of graduate programs, institutions can significantly alleviate the challenges of navigating unfamiliar academic landscapes, fostering a more inclusive and empowering research environment that equips graduate students with the skills necessary for scholarly success.

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Exploring the impact of EFL learners' perceptions of AI usage in language learning on their perceived writing anxiety: A correlational study

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Exploring the impact of EFL learners' perceptions of AI usage in language learning on their perceived writing anxiety: A correlational study

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Article Info	Abstract
	As in many fields, the use of Artificial Intelligence (AI) in education is increasing exponentially. In English Language Teaching and Learning, in particular, there is an accumulating body of research exploring this phenomenon. Given the potential benefits of AI, understanding language learners' perspectives on its use in language education has become crucial. Informed by the Technology Acceptance Model (TAM), which provides a framework for understanding users' perceptions in the adoption of new technologies, this study investigated the perceptions of 135 students at a Turkish state university. Additionally, it explored the learners' levels of foreign language writing anxiety and examined the relationship between their perceptions of AI use and their writing anxiety. The study adopted a correlational research design, and data were collected through Perceptions of AI Usage Scale (PAS) developed by Aydın (2024), and the Second Language Writing Anxiety Inventory (SLWAI) developed by Cheng (2004). PAS results indicated that learners generally held moderate perceptions of AI in language learning, while concerns about the production of inappropriate language content by AI tools were also noted. SLWAI results revealed that learners experienced moderate levels of writing anxiety across its three subscales. Additionally, the study found a weak positive relationship between learners' perceptions of AI use and their writing anxiety, suggesting no significant correlation. These findings contribute to the growing body of literature by offering insights into learners' perceptions of AI use in language education and highlighting the complex interplay between AI use and foreign language writing anxiety.

INTRODUCTION

With the rapid developments in digital technologies, there is a growing interest among educators in integrating these tools into educational contexts (Dogan et al., 2023). Although Artificial Intelligence (AI) has been used for many decades, recent advancements have attracted significant attention in the field of language learning and teaching due to AI's potential to offer "personalized, flexible, inclusive, and engaging" learning experiences (Luckin et al., 2016, p. 11). Given these opportunities, AI is increasingly regarded as a pivotal tool in language education as it can enhance learning outcomes "by adapting to the individual features (talent and background) and expectations (aims and objectives) of each student" (Kushmar et al., 2022, p. 271).

Given the importance of English proficiency in today's globalized world, educators are turning to AI to improve language instruction. While the integration of AI into education dates back to the 1980s (e.g. Bailin, 1988), its application in language learning has gained prominence in recent years. Studies highlight several benefits of AI in this context, including personalized learning and improved learner autonomy (Rawas, 2024; Rusmiyanto et al., 2023). Despite these advantages, research on AI's influence on writing anxiety remains inconclusive. While some studies suggest that AI can reduce anxiety by providing instant feedback (Hawanti & Zubaydulloevna, 2023), others report that increased reliance on AI tools may heighten writing anxiety (Yu, 2024).

Research gap and focus of the current study

While prior research has examined the impact of AI usage on writing anxiety (e.g. Yu, 2024; Wang, 2024; Shen & Tao, 2025), limited attention has been paid to how learners' perceptions of AI tools relate to their experiences of foreign language writing anxiety. Although the role of AI in enhancing writing skills and reducing anxiety has been studied independently, few studies have focused on the relationship between learners' attitudes toward AI tools and their emotional responses to writing tasks. This study seeks to address this gap by examining how learners' perceptions of AI usage in language learning relate to their levels of writing anxiety. In doing so, it aims to contribute to the growing body of research on AI in language education by investigating learners' perceptions of AI tools, their writing anxiety levels, and the relationship between these two variables.

In sum, the integration of AI in language learning presents significant opportunities for enhancing language skills, particularly in writing. While learners often report positive perceptions of AI tools, concerns about overreliance and other ethical issues persist. Guided by The Technology Acceptance Model (TAM), which offers a well-established framework for understanding learners' willingness to adopt educational technologies, this study aims to deepen the understanding of how learners' perceptions of AI influence their writing-related emotional experiences.

LITERATURE REVIEW

Introduction

First coined by John McCarthy in 1956 (Russell & Norvig, 2010; Zawacki-Richter et al., 2019), AI encompasses various technologies, including data mining, machine learning, neural networks, and natural language processing (Baker et al., 2019; Almelhes, 2023), which aim to simulate human-like intelligent behaviours such as carrying out tasks involving cognitive dimensions such as learning, decision-making, and adjusting to different situations (Chen et al., 2020).

The integration of AI into education, known as AIEd, has gained significant attention over the past three decades (Luckin et al., 2016; Zawacki-Richter et al., 2019; Zhao et al., 2024) since it has revolutionized many aspects of the learning experience. AI offers numerous opportunities to enhance educational practices and learner outcomes and address challenges which traditional education is incapable of tackling (Ahmad et al., 2021).

AI tools are being increasingly implemented to support learning, providing personalized learning experiences (Luckin et al., 2016; Baker et al., 2019; Afzaal et al., 2024). Additionally, through interactive AI tools, AIEd can make the learning process more engaging for learners (Luckin et al., 2016), as well as being more flexible due to the ubiquitous nature of these applications. AI tools can also alleviate stress (Ahmad et al., 2021), which is often a barrier to learning.

This literature review explores the intersection of AI and language learning, with a focus on learners' perceptions of AI, their perceived levels of foreign language writing anxiety and the relationship between these two constructs. Additionally, the Technology Acceptance Model (TAM), which helps explain how learners adopt new technologies, will be discussed as a theoretical framework guiding this study.

AI in language learning

AI has increasingly been integrated into language education in various ways, providing support across multiple skills. The use of AI tools in language learning can assist learners in improving their skills in the target language and offer them a more personalized learning experience considering their needs and pacing (De la Vall & Araya, 2023). For instance, Kim (2019) found that AI-powered tools support learners in enhancing their linguistic skills by offering personalized learning experiences.

AI-powered tools such as Grammarly, QuillBot, and the latest chatbots such as ChatGPT have transformed the ways learners interact with language tasks, providing real-time feedback, error correction, and suggestions for improvements in written texts, which fosters autonomy in L2 writers. Nobles & Paganucci (2015) suggest that other than offering immediate feedback, AI tools also provide interaction with real-world audiences, and multimodal writing opportunities. A growing body of research suggests that AI tools like Automated Writing Evaluation (AWE) systems help learners improve their writing proficiency through diagnosing writing problems and offering areas for improvement (Godwin-Jones, 2022). Being also time-saving for teachers, AWE systems as well as ITSs, which use Natural Language Processing (NLP), are among the most utilised AI tools in language classrooms (Huang et al., 2023).

Along with these affordances, research by Nazari et al. (2021) showed that the use of Grammarly helped learners improve engagement, self-efficacy, and emotional responses to writing. Similarly, Zhao (2023) found that Wordtune positively affected learners' writing quality.

Recent studies have focused on ChatGPT as a tool for writing support. For example, Imran & Almusharraf (2023) explored the use of ChatGPT as a co-author and writing assistant, highlighting its potential to assist in "generating text, initial drafts, brainstorming ideas, and summaries of the literature" (p. 10). Similarly, Barrot (2023) emphasizes ChatGPT's capacity to provide "timely and adaptive feedback" (p. 1), contributing to improved writing outcomes for language learners.

Given all the affordances of AI-powered digital tools, learners are increasingly turning to these tools. For instance, Zhao et al. (2024) found that students used various digital tools during their writing process such as Grammarly, Quillbot, Wordtune, translation tools as well as ChatGPT.

Learners' perceptions of AI in language learning

Understanding learners' perceptions of AI tools is crucial for the successful implementation of these technologies in language education (Uppal & Hajian, 2024). Research suggests that learners generally have positive attitudes towards AI integration (Belda-Medina & Calvo-Ferrer, 2022; Yatri et al., 2023; Lee et al., 2024; Persulessy et al., 2024), appreciating the personalized feedback (Alqaed, 2024), personalized learning experiences (Aydin & Zeinolabedini, 2024; Korkmaz & Akbıyık, 2024) error correction features and facilitating language skills (Chen et al., 2023; Korkmaz & Akbıyık, 2024), increased engagement, interaction and autonomy that AI tools provide (Alqaed, 2024; Korkmaz & Akbıyık, 2024). For instance, a study by Alqaed (2024) found that EFL learners viewed

AI tools as highly effective for improving their English across multiple skills, many learners noting the significance of immediate feedback features. Aydin & Zeinolabedini (2024) also noted that AI tools improve motivation while reducing anxiety. Another study yielding a positive attitude towards AI was by Syahnaz and Fithriani (2023). They found that learners responded positively to an AI-based tool, especially valuing its support in improving content, language use, and reducing linguistic errors in academic writing.

However, there are also concerns about the use of AI in language learning, including issues such as overreliance on AI (Chen et al., 2023; Yatri et al., 2023; Alqaed, 2024; Lee et al., 2024), the risk of plagiarism **(**Yatri et al., 2023), privacy concerns (Aydin & Zeinolabedini, 2024), reliability and inaccuracies (e.g. Kushmar et al., 2022; Glaser, 2023), and interference with creativity (Yatri et al., 2023; Aydin & Zeinolabedini, 2024). Learners worry that excessive use of AI might reduce their ability to think critically or develop original ideas.

Despite these concerns, many studies indicate that learners are generally optimistic about AI's role in enhancing their language learning experience, especially in providing personalized learning experiences and real-time feedback. Specifically, through non-judgmental personalized feedback, AI tools can reduce anxiety and foster a stress-free environment for language learners.

Theoretical framework: Technology Acceptance Model (TAM)

To better understand how learners accept and adopt AI tools, this study draws on the Technology Acceptance Model (TAM) (Davis, 1989). TAM posits that users' acceptance of new technology is influenced by two key constructs: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). In the context of language learning, PU refers to learners' beliefs regarding the effectiveness of AI tools in enhancing their language learning experience. PEOU, on the other hand, reflects learners' perceptions of how easy it is to use these tools.

TAM also includes constructs such as Attitude Toward Using (ATU), Behavioural Intention to Use (BIU), and Actual System Use (ASU); however, these variables are beyond the scope of this study since the scale PAS (Perceptions of AI Usage Scale) mainly involves items regarding PU. Research on TAM has shown that PU is the most significant factor influencing the intention to use new educational technologies (Venkatesh & Davis, 2000; Granić & Marangunić, 2019) while PEOU plays a significant secondary factor (Venkatesh & Davis, 2000).

In this study, the AI perceptions scale (PAS) is utilized to assess language learners' general attitudes and perceptions towards AI tools in language learning, with a focus on PU, including learners' perceived benefits of AI tools such as enhancing language proficiency, autonomy, personalized learning, reducing anxiety as well as some items which involve concerns regarding AI use. Therefore, rather than rigidly separating the constructs of TAM, the study focuses on language learners' general perspectives.

Second/foreign language writing anxiety

Foreign language writing anxiety is a specific type of anxiety that affects language learners, particularly when writing in a second or foreign language (Cheng, 2002). Foreign language writing anxiety is a "language-skill-specific" anxiety (Cheng et al., 1999, p. 417), distinct from general language anxiety and first language writing anxiety and is strongly linked to writing performance (Atay & Kurt, 2006; Cheng et al., 1999; Badrasawi et al., 2016; Cantina, 2016).

Learners often experience anxiety due to a variety of factors, such as fear of negative evaluation (Cheng,2004; Rezaei & Jafari, 2014; Kirmizi & Kirmizi, 2015; Cantina, 2016), inadequate language proficiency (Zhang, 2011; Rezaei & Jafari, 2014; Erdel, 2024), and low self-confidence or self-efficacy (Cheng et al., 1999; Zhang, 2011; Choi, 2013; Rezaei & Jafari, 2014; Erdel, 2024), to name a few.

The relationship between writing anxiety and writing performance is well-documented in the literature. Research has shown that high levels of writing anxiety can significantly hinder learners' ability to produce high-quality written work (Atay & Kurt, 2006; Cheng et al., 1999; Badrasawi et

al., 2016). To mitigate this anxiety, strategies such as free-writing, peer feedback, process writing, positive feedback and encouragement (Atay & Kurt, 2006) and collaborative writing (Choi, 2013; Cantina, 2016) have been proposed. However, the integration of AI tools in language learning offers a promising approach to reducing writing anxiety by providing learners with personalized feedback and a low-pressure environment to practice writing.

In sum, the reviewed literature provides an overview of how AI tools are being used in language learning, the ways learners perceive these technologies, and the impact of writing anxiety on performance. While existing research addresses each of these areas individually, there is limited empirical work exploring how they interact. To address this, the present study focuses on the relationship between learners' perceptions of AI tools and their writing anxiety, adopting a TAM-informed perspective.

In the light of the reviewed literature, the present study aims to address the following research questions:

RQ1: What are learners' perceptions of AI usage in language learning?
RQ2: What are learners' perceived levels of foreign language writing anxiety?
RQ3: What is the relationship between learners' perceptions of AI usage in language learning and their perceived levels of foreign language writing anxiety?

The hypotheses guiding this study are as follows:
H_0: There is no significant correlation between learners' overall attitude towards AI use in language learning and their perceived writing anxiety levels.
H_1: There is a significant correlation between learners' overall attitude towards AI use in language learning and their perceived writing anxiety levels.

METHODOLOGY
Research design
This study adopts a correlational research design to explore the relationship between language learners' perceptions of artificial intelligence (AI) usage in language learning and their perceived levels of foreign language writing anxiety. Correlational designs, which are among the nonexperimental quantitative research (Creswell, 2011; Johnson & Christensen, 2024), are suitable for investigating the relationship between two or more variables (Creswell, 2011). Unlike an experiment, correlational design does not involve the control or manipulation of the variables (Creswell, 2011; Roni et al., 2020; Johnson & Christensen, 2024). Correlational designs have two main types, which are explanatory design and prediction design (Creswell, 2011, p. 340). Among the two types, this study falls within the explanatory correlational research design since it aspires to investigate how two variables, namely, learners' perceptions of AI usage in language learning and their perceived levels of writing anxiety, are related to one another. This type of research does not seek to look for any causal relationships (Creswell, 2011; Johnson & Christensen, 2024). It rather allows the researcher to investigate potential relationships between the two variables, which could inform future educational strategies to promote the adoption of AI by language learners.

Participants
The study was conducted with the participation of the undergraduate students enrolled in the Department of English Language Teaching, Faculty of Education at Muğla Sıtkı Koçman University in the spring term of the 2024-2025 academic year. For the better representation of the population, all the grades from 1st to 4th year students were included in the study, thus the population included various language levels and demographics. The data were collected from a total of 135 students, consisting of 86 females, and 49 males. Their ages ranged from 18 to 49 (M= 1.64, SD=.483).

Participants were recruited through convenience sampling, which is among the non-probability sampling methods. Convenience sampling involves choosing the nearest and easily reachable participants (Tavakoli, 2012) based on an "inclusion criteria" (Golzar et al., 2022). To be included in the current study, participants needed to meet three criteria: (1) being enrolled in the Department of English Language Learning at Muğla Sıtkı Koçman University, (2) being at the age of 18 or above, and (3) being willing to participate in the study. Demographic information of the participants is summarized in Table 1.

Table 1. Demographic information of the participants

Demographic Variable	Category	Frequency (N)	Percentage (%)
Gender	Male	49	36.3
	Female	86	63.7
Age Group	18-19	32	23.7
	20-21	44	32.6
	22-23	47	34.8
	24-25	10	7.4
	26-27	1	0.7
	28-50	1	0.7
Academic Level	Freshman	42	31.1
	Sophomore	25	18.5
	Junior	31	23.0
	Senior	37	27.4
Total		135	100.0

Data collection instruments

To reach the objectives of this study, data were collected through two data collection instruments.

The first data collection instrument was PAS (Perceptions of AI Usage Scale) developed by Aydın (2024), which comprises 17 items. The items are rated on a 5-point Likert scale (1=Completely Disagree, 5=Completely Agree). The PAS probes the perceptions of foreign language learners regarding the use of AI in language learning. The scale has two sub-dimensions which are "Contributions to Foreign Language Learning" (14 items), and "Concerns" (3 items). Items include statements like "I believe that AI-supported learning is more effective than traditional methods", and "The integration of AI tools into language classes contributes to autonomous learning". The total Cronbach's coefficient α was calculated as .88 by Aydın (2024), which shows a high internal consistency since .70 and above is generally considered acceptable for demonstrating reliability (Tavakol & Dennick, 2011). As for the current study, the reliability was calculated as.89.

The second data collection instrument was SLWAI (Second Language Writing Anxiety Inventory) developed by Cheng (2004), consisting of 22 items which are also rated on a 5-point Likert scale (1=Strongly Disagree, 5=Strongly Agree). The SLWAI is a scale which measures writing anxiety levels of foreign or second language learners. It has three sub-dimensions which are

"Somatic Anxiety" (7 items), "Avoidance Behaviour" (7 items), and "Cognitive Anxiety" (8 items). The total Cronbach's coefficient α was calculated as .91 by Cheng (2004). Regarding the current study, a Cronbach's alpha of .92 was found, indicating strong internal consistency and reliability.

Data collection

Prior to the implementation of the scales, piloting was conducted with the participation of 20 students who were not included in the study. These students were also enrolled in the same department to ensure accurate representation of the target population. They were selected for the piloting using convenience sampling and based on their consent to participate. The piloting was administered through Google forms, an online survey platform, in a classroom setting in their faculty. The participants were encouraged to give feedback regarding the clarity of the items to get rid of any ambiguous or difficult to understand wording (Cohen et al., 2018). The two scales took 15 minutes to complete. Since the feedback from the participants did not demonstrate any difficulties or ambiguities, no changes were made in the scale items. After the piloting was completed, the Cronbach's alpha was calculated to check internal consistency for both scales. The Cronbach's alpha for the PAS was assessed as .85 while it was calculated as .72 for the SLWAI, both of which indicated acceptable reliability.

Following the piloting, the participants were visited in their department, and they were informed about the details of the study as well as the two data collection instruments. Their participation was completely voluntary, and they were assured that their responses would be kept confidential. They were also informed that they could withdraw from the study any time they wished and were also given an informed consent form within the Google Forms. When they were fully informed about the study, they were asked whether they would like to participate in the study. 42 participants from the Freshman, 25 from the Sophomore, 31 from the Junior, and 37 from the Senior levels volunteered to take part in the study, with a total number of 135. Demographic information of the participants is given in Table 1 above.

As Creswell (2011) suggests, in this type of research, the data are collected "in one sitting", which means the scales should be administered to the participants "at one point in time" (p. 340). Thus, the PAS and SLWAI were administered to the participants at the same time within their lecture schedules through Google forms between 3rd-13th March, 2025 in the Department of English Language Teaching at Muğla Sıtkı Koçman University.

Data analysis

The data gathered through two instruments were analysed using IBM SPSS Statistics (Version 30.0). Once the data were collected, a Cronbach's coefficient test was run to verify the internal consistency of the scales. As mentioned earlier in the instruments section, it was calculated as .89 for the PAS, and as .92 for the SLWAI. Since the results of the test ensured a high reliability, the descriptive statistics (mean, standard deviation, minimum, and maximum values) were calculated to summarize participants' responses to both scales. Following this, the Kolmogorov-Smirnov and Shapiro-Wilk tests were conducted on the total scores of both scales to examine whether the data followed a normal distribution. The results revealed that the Kolmogorov-Smirnov test was significant for both PAS_Total ($p < .001$) and SLWAI_Total ($p < .001$), suggesting a deviation from normality. Similarly, the Shapiro-Wilk test yielded significant results for PAS_Total ($p = .001$) and SLWAI_Total ($p = .028$), further indicating that the data was not normally distributed. Since the normality test indicated that the data was not normally distributed, a Spearman's Rank-Order Correlation analysis was conducted to examine the relationship between learners' perceptions of AI in language learning and their writing anxiety. This non-parametric test was chosen as it does not assume normality and is suitable for assessing monotonic relationships between variables.

All statistical tests were conducted at a 95% confidence level ($\alpha = .05$). Findings were interpreted based on conventional effect size guidelines and presented in the next section.

FINDINGS

Descriptive analysis of PAS Scale

Table 2. Descriptive statistics for total scores of PAS

Variable	N	Mean	Std. Deviation	Min.	Max.
PAS_Total	135	59.27	11.885	27	84
Valid N (listwise)	135				

As shown in Table 2, the mean score of PAS_Total was 59.27 (SD = 11.89), indicating that participants generally had a moderately positive perception of AI in language learning. The minimum and maximum scores ranged from 27 to 84, suggesting a relatively wide distribution of responses, which means that while some participants had lower perceptions of AI, others viewed it more positively. The standard deviation (SD = 11.89) shows that there was some variability in participants' responses, though the spread is not extreme. This variation indicates the presence of diverse experiences and perceptions among the participants in the sample.

Following this, to further understand participants' perceptions of AI, the descriptive statistics for the two subscales were analysed separately. Table 3 illustrates the descriptive statistics for the Contributions Subscale.

Table 3. Descriptive statistics for PAS - Contributions Subscale

Item	N	Min	Max	M	STD
1- [I believe that AI-supported learning is more effective than traditional methods.]	135	1	5	3.67	1.085
2- [AI tools can enhance my communicative skills.]	135	1	5	3.76	1.141
3- [The integration of AI tools into language classes contributes to autonomous learning.]	135	1	5	3.84	1.038
4- [The integration of AI tools in language classes contributes to personalized learning.]	135	1	5	3.89	1.063
5- [The integration of AI tools in language classes contributes to adaptive learning.]	135	1	5	3.80	1.071
6- [AI tools provide emotional support in language learning.]	135	1	5	2.86	1.192
7- [AI tools help to reduce my anxiety level.]	135	1	5	3.43	1.243
8- [I find AI tools helpful in practicing my pronunciation skills.]	135	1	5	3.50	1.275
9- [AI tools enhance my listening comprehension.]	135	1	5	3.47	1.257
10- [I think that AI tools positively impact my reading comprehension.]	135	1	5	3.73	1.204
11- [I find that AI tools enhance my speaking performance.]	135	1	5	3.39	1.240
12- [I believe that AI tools can positively influence my writing skills.]	135	1	5	3.93	1.073
13- [I believe that AI tools positively influence writing quality.]	135	1	5	3.93	1.111
14- [My participation in classroom activities has increased after I started using AI tools.]	135	1	5	3.22	1.291

Valid N (listwise)	135

The descriptive analysis of the PAS items within the Contributions Subscale reveals that learners generally have moderate perceptions of AI in language learning, with mean scores ranging from 2.55 (PAS15) to 3.93 (PAS12, PAS13) on a 5-point Likert scale, indicating that most items fall between the neutral to moderately agree range (around 3.00 to 4.00). This suggests that participants' responses were generally concentrated around the middle of the Likert scale (1 = Completely Disagree to 5 = Completely Agree), indicating moderate levels of agreement regarding the use of AI in language learning, although there was variability across different items. Some items showed a stronger tendency towards agreement, while others had a more balanced distribution of responses, indicating moderate variations in participants' perceptions. For instance, items such as PAS12 (I believe that AI tools can positively influence my writing skills), and PAS13 (I believe that AI tools positively influence writing quality) had the highest mean scores (3.93) with lower SD values, indicating that participants generally agree that AI positively impacts their writing skills and writing quality. In addition, their responses to PAS4 (The integration of AI tools in language classes contributes to personalized learning), PAS3 (The integration of AI tools into language classes contributes to autonomous learning), and PAS5 (The integration of AI tools in language classes contributes to adaptive learning) also yielded relatively higher mean scores with lower SD values. This finding suggests that participants perceive the use of AI in language learning as useful in terms of providing personalized, autonomous, and adaptive learning opportunities.

The standard deviations varied between 1.038 to 1.291, indicating a relatively consistent spread of responses across the items, with some variation in the extent of response variability. For instance, PAS3 had a lower standard deviation (1.038), which suggests a greater agreement among participants on that item, while PAS14 (My participation in classroom activities has increased after I started using AI tools) had a higher standard deviation value (1.291), reflecting a more diverse range of opinions.

Table 4. Descriptive statistics for PAS - Concerns Subscale

Item	N	Min	Max	M	STD
15- [I believe that overreliance on writing with AI tools debilitates my critical thinking skills.]	135	1	5	2.55	1.280
16- [I think the use of AI debilitates my problem-solving abilities.]	135	1	5	2.65	1.186
17- [AI tools produce inappropriate language content.]	135	1	5	3.64	1.187
Valid N (listwise)	135				

Table 4 above presents descriptive statistics of the items within Concerns Subscale. The table shows that some items have lower mean scores with relatively higher SD values. Although these items are negatively worded, since they were reverse-coded, these lower mean scores reflect more positive attitudes toward AI tools, and higher mean scores reflect more negative perceptions. For instance, PAS15 (I believe that overreliance on writing with AI tools debilitates my critical thinking skills) had the lowest mean score (M = 2.55) with a relatively high SD value (SD = 1.280), indicating that participants did not believe that AI significantly undermines their critical thinking while showing a considerable disagreement among participants about the effect of AI on critical thinking. Similarly, PAS16 (I think the use of AI debilitates my problem-solving abilities) had a mean score of 2.65 (SD = 1.186) implying that, overall, participants did not believe that the use of AI tools significantly impairs their problem-solving skills. However, the moderate standard deviation suggests that some participants may still have concerns or doubts about the impact of AI on problem-solving, leading to more diverse opinions on this topic. In contrast, for PAS17 (AI tools produce inappropriate language content), which is another reverse-coded item, the mean score of

3.64 (SD = 1.187) indicates that participants, on average, somewhat agreed with the statement that AI tools produce inappropriate language content, reflecting a more negative perception of AI tools in this regard.

Overall, the findings suggest that participants generally perceive AI as useful in language learning. However, while participants' responses are mostly positive regarding the role of AI in language learning, the results also indicate that participants hold moderate opinions.

Descriptive analysis of SLWAI Scale

Table 5. Descriptive statistics for total scores of SLWAI

Variable	N	Mean	Std. Deviation	Minimum	Maximum
SLWAI_Total	135	59.03	16.138	24	96
Valid N (listwise)	135				

As Table 5 illustrates, the mean score for SLWAI_Total is 59.03, which indicates a moderate level of writing anxiety as Cheng (2004) states that a mean score between 50 and 65 shows a moderate level of anxiety. The standard deviation of 16.138 suggests a wide dispersion of scores. The minimum score observed was 24, and the maximum was 96, indicating that participants' perceptions of foreign language writing anxiety varied considerably. This diversity suggests that there are differences in the participants' levels of foreign language writing anxiety.

To have a deeper understanding of the participants' levels of foreign language writing anxiety, descriptive statistics for the three subscales were analysed separately. Table 6 presents descriptive statistics for Somatic Anxiety subscale.

Table 6. Descriptive statistics for SLWAI - Somatic Anxiety Subscale Items

Items	N	Min.	Max.	M	SD
2-[I feel my heart pounding when I write English compositions under time constraint.]	135	1	5	2.88	1.282
6- [My mind often goes blank when I start to work on an English composition.]	135	1	5	2.63	1.250
8- [I tremble or perspire when I write English compositions under time pressure.]	135	1	5	2.90	1.229
11- [My thoughts become jumbled (disorganized) when I write English compositions under time constraint.]	135	1	5	2.93	1.244
13- [I often feel panic when I write English compositions under time constraint.]	135	1	5	2.84	1.317
15- [I freeze up when unexpectedly asked to write English compositions.]	135	1	5	2.60	1.277
19- [I usually feel my whole body rigid and tense when I write English compositions.]	135	1	5	2.33	1.146
Valid N (listwise)	135				

As Table 6 shows, the mean scores for the items in the Somatic Anxiety subscale ranged from 2.33 to 2.93, with a standard deviation ranging from 1.146 to 1.317. These results suggest that participants generally reported mild to moderate levels of somatic anxiety when writing English compositions. Specifically, the lowest mean score was observed for item 19 *(I usually feel my whole body rigid and tense when I write English compositions)* (M = 2.33, SD = 1.146), indicating that bodily

tension was not a dominant reaction for most participants. On the other hand, the item 11 *(My thoughts become jumbled (disorganized) when I write English compositions under time constraint)* had a mean score of 2.93 (SD = 1.244), indicating a slightly higher degree of agreement though still generally indicating moderate levels of somatic anxiety.

The relatively high standard deviations across the items, ranging from 1.146 to 1.317, suggest notable variability in the responses, implying that participants had differing experiences and levels of somatic anxiety in response to writing tasks. Despite the overall trend of mild to moderate anxiety, the spread of scores shows that some participants may experience more intense physical reactions (such as trembling or sweating) than others when faced with writing tasks.

The descriptive statistics for the second subscale, which is Avoidance Behaviour, are presented in Table 7 below.

Table 7. Descriptive statistics for SLWAI - Avoidance Behaviour Subscale Items

Items	N	Min.	Max.	M	SD
4- [I often choose to write down my thoughts in English.]	135	1	5	2.78	1.131
5-[I usually do my best to avoid writing English compositions.]	135	1	5	2.37	1.164
10- [I do my best to avoid situations in which I have to write in English.]	135	1	5	2.53	1.251
12- [Unless I have no choice, I would not use English to write compositions.]	135	1	5	2.49	1.177
16- [I would do my best to excuse myself if asked to write English compositions.]	135	1	5	2.53	1.280
18- [I usually seek every possible chance to write English compositions outside of class.]	135	1	5	2.98	1.129
22- [Whenever possible, I would use English to write compositions.]	135	1	5	2.86	1.154
Valid N (listwise)	135				

As Table 7 shows, the Avoidance Behaviour subscale of the SLWAI includes seven items. Three of the items, which are 4, 18, and 22, are positively worded and thus reverse-coded prior to the descriptive statistics test. These items originally reflect active engagement with English writing, which is conceptually contrary to avoidance behaviour. After reverse coding, higher scores across all items indicate higher avoidance.

Although these reverse-coded items yielded slightly higher mean scores (e.g., Item 18: M = 2.98, SD = 1.129), in their original form, they indicate a tendency against avoidance. As for the other four items, which are directly indicative of avoidance behaviour, their mean values were lower (e.g. Item 5: M = 2.37, SD = 1.164), which suggests that avoidance behaviours were not prevalent among the participants.

Across the subscale, standard deviation values ranged between 1.129 and 1.280, indicating a moderate level of variability in participants' responses. Although this variability indicates some individual differences in avoidance tendencies, no extreme dispersion was observed, which means that participants' levels of avoidance were similar overall.

In sum, the findings suggest that participants have a relatively low to moderate level of avoidance behaviour in terms of writing in English.

Table 8. Descriptive statistics for SLWAI - Cognitive Anxiety Subscale Items

Items	N	Min.	Max.	M	SD

1- [While writing in English, I'm not nervous at all.]	135	1	5	2.55	1.164
3- [While writing English compositions, I feel worried and uneasy if I know they will be evaluated.]	135	1	5	2.95	1.248
7- [I don't worry that my English compositions are a lot worse than others'.]	135	1	5	2.54	1.131
9- [If my English composition is to be evaluated, I would worry about getting a very poor grade.]	135	1	5	2.94	1.220
14- [I am afraid that the other students would deride (make fun of) my English composition if they read it.]	135	1	5	2.28	1.213
17- [I don't worry at all about what other people would think of my English compositions.]	135	1	5	2.61	1.203
20- [I am afraid of my English composition being chosen as a sample for discussion in class.]	135	1	5	2.59	1.211
21- [I am not afraid at all that my English compositions would be rated as very poor.]	135	1	5	2.93	1.182
Valid N (listwise)	135				

Table 8 above presents the descriptive statistics for Cognitive Anxiety subscale, which is the last subscale of SLWAI. As can be seen in the table, the subscale comprises eight items involving mental aspects of anxiety such as worry, and negative thoughts related to foreign language writing.

Four of these items (1, 7, 17, 21) express feelings that are contrary to cognitive anxiety, and thus they were reverse coded before the tests were run. When examined, these reverse-coded items yielded mean scores ranging from 2.54 (Item 7) to 2.93 (Item 21). These mean scores indicate that participants were less likely to agree with these statements which suggest a lack of anxiety. For instance, the item with the lowest mean score was Item 7 (I don't worry that my English compositions are a lot worse than others'). The mean score of 2.54 for this item indicates a mild agreement that participants have some level of anxiety when writing in English.

The mean scores for the remaining items (3, 9, 14, 20) ranged from 2.28 (Item 14: "I am afraid that the other students would deride my English composition") to 2.95 (Item 3: "While writing English compositions, I feel worried and uneasy if I know they will be evaluated"). This also suggests that, on average, participants had a moderate level of cognitive anxiety related to writing in English. More specifically, participants expressed varying degrees of concern regarding the evaluation and potential social judgment of their written English compositions.

The standard deviations for the items ranged from 1.131 (Item 7) to 1.248 (Item 3), indicating variability in how participants expressed their cognitive anxiety. Some items, such as Item 3, showed relatively higher variability, which suggests that participants' levels of cognitive anxiety about their English compositions varied more, whereas others, like Item 7, had lower variability, indicating more uniform responses.

To sum up, these results illustrate that participants exhibit varying levels of cognitive anxiety, though the general trend indicates moderate anxiety. Additionally, their concerns are mainly centred on evaluation and judgment.

Tests of normality

Following the descriptive analyses of the two scales, tests of normality were run for the total scores of both instruments. Table 9 illustrates the results of the normality tests.

Table 9. Tests of normality for PAS and SLWAI

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PAS_Total	.117	135	<.001	.963	135	.001
SLWAI_Total	.119	135	<.001	.978	135	.028

a.   Lilliefors Significance Correction

As Table 9 shows, the Kolmogorov-Smirnov and Shapiro-Wilk tests indicated that PAS_Total (K-S = .117, p < .001; S-W = .963, p = .001) and SLWAI_Total (K-S = .119, p < .001; S-W = .978, p = .028) were both significantly non-normal. Since the result revealed that the data were not normally distributed, Spearman's Correlation test, which is a non-parametric statistical test, was selected for further analysis to examine the correlation between the two scales.

Spearman's correlation test

Table 10. Spearman's correlation test

			PAS_Total	SLWAI_Total
Spearman's rho	PAS_Total	Correlation Coefficient	1.000	.132
		Sig. (2-tailed)	.	.128
		N	135	135
	SLWAI_Total	Correlation Coefficient	.132	1.000
		Sig. (2-tailed)	.128	.
		N	135	135

A Spearman's Rank-Order Correlation test was run to determine the relationship between the total scores of PAS and SLWAI. As Table 10 illustrates, the results showed a weak relationship between the two variables, suggesting no significant correlation (rs(133) = .132, *p* = .128). This result indicates that there is a positive relationship between the two variables; however, since the *p*-value is greater than .05, this relationship is not statistically significant. This finding suggests that the relationship between the total scores of the two surveys does not show a significant effect in the analysed sample.

DISCUSSION
Learners' perceptions of AI in language learning
The first research question of the present study explored learners' perceptions of Artificial Intelligence (AI) use in language learning, guided by the Technology Acceptance Model (TAM) (Davis, 1989). As stated earlier, the scale (PAS) used to assess learners' perceptions of AI use in language learning consisted of items that focus primarily on PU, which is the most significant construct of TAM. While not explicitly including items that measure PEOU, the PAS scale involved three items that fall under the "Concerns" subscale. This indicates that the PAS scale aligns only partially with TAM and may be better understood within an extended version of the model, which incorporates variables regarding concerns.

The descriptive results of the PAS scale suggest that learners generally hold moderately positive views toward AI tools in language learning, indicating that they generally viewed these tools as beneficial in language learning contexts. This is particularly reflected in the "Contributions Subscale", where items regarding AI's positive influence on writing skills and writing quality received the highest mean score. These findings align with PU, as learners believed that AI tools held the potential to enhance their writing quality, consistent with recent studies (e.g. Zhao, 2023; Al-Sofi, 2024). The findings also suggest that learners perceive AI tools as an assistant which can support personalized learning, autonomy, and adaptive learning experiences, aligning with PU.

Learners' positive beliefs regarding AI integration suggest that AI tools are perceived as useful and effective in enhancing their language proficiency. These findings are consistent with findings from recent studies (e.g. Yetkin & Özer-Altınkaya, 2024; Alqaed, 2024; Aziza, 2025; Benek, 2025; Ozer, 2024).

With respect to the Concerns Subscale, which included reverse-coded items, the findings revealed relatively low mean scores for the statements which express AI tools' undermining impact on their critical thinking skills in case of overreliance and on their problem-solving abilities, indicating that learners did not perceive AI tools as hindrances, and instead illustrating a tendency towards the use of these tools in their language-related tasks. This finding contrasts with the view proposed by Kasneci et al. (2023), who argue that reliance on AI-generated information without personal effort may adversely affect learners' critical thinking and problem-solving skills. Although not specified as a concern regarding overreliance on writing with AI tools, findings from other studies indicate that learners are usually concerned about overreliance on AI tools (e.g. Aziza, 2025; Alqaed, 2024; Ozer, 2024), which contrast the findings of this study. However, the item regarding the production of language content by AI tools received somewhat a high mean score, which suggests that learners do not completely trust AI tools, demonstrating their concern about inappropriate language content AI might produce. This indicates that while learners are aware of the potential of AI tools for aiding in their language improvement, they are also sceptical about the reliability of the information or language provided by these tools including unnatural or incorrect language. This finding is echoed in other recent studies (e.g. Al-Sofi, 2024; Alqaed, 2024; Yetkin & Özer-Altınkaya, 2024).

Overall, these findings demonstrate that most participants viewed AI tools as beneficial for developing their language skills, indicating an acceptance despite some persisting concerns, particularly about the quality of AI-generated language content. Although the Technology Acceptance Model (TAM) has been widely used to examine users' attitudes toward technology, it does not explicitly account for users' concerns such as overreliance, cognitive impact, or content reliability, especially in the context of emerging AI tools. In the present study, the PAS scale used to measure learners' perceptions of AI included a distinct subdimension addressing such concerns, which is an aspect not captured by TAM. This suggests that, while TAM remains useful for examining learners' acceptance of technology, it may not fully capture the complexity of learner perceptions in AI-supported educational environments, particularly as these technologies continue to evolve. Given that TAM has been extended over time with additional constructs to better capture user experience, incorporating concern-related dimensions into future adaptations could promote a more comprehensive understanding of technology acceptance, particularly in AI-supported educational contexts.

Learners' perceived levels of writing anxiety

The second research question of the study probed learners' perceived levels of foreign language writing anxiety, which was assessed by SLWAI. The results of the total score of SLWAI indicate a moderate overall level of foreign language writing anxiety, with a mean score of 59.03. However, the broad range of scores (24 to 96) with a relatively high standard deviation ($SD = 16.138$) demonstrate that there was a considerable variation among participants, implying that they had differing writing anxiety levels. This variation could be attributed to factors such as low level of language proficiency, fear of negative evaluation, and inadequate writing practice or prior writing experience, all of which have been identified as significant factors in previous studies (Cheng, 2004; Zhang, 2011; Erdel, 2024; Atay & Kurt, 2006). The findings of the total scores of SLWAI show similar variability in some previous studies, which yielded varying levels of writing anxiety (e.g. Erdel, 2024; Genç & Yaylı, 2019), while they are in line with some studies which found moderate levels of writing anxiety (e.g. Öztürk & Saydam, 2014; Ateş, 2013; Ekmekçi, 2018).

With respect to the subscales, the descriptives for the first subscale "Somatic Anxiety" demonstrate that participants had a mild to moderate levels of somatic anxiety with a mean score

ranging from 2.33 to 2.93. The standard deviation scores distributed between 1.146 and 1.317 suggest a notable variation in participants' responses, indicating that they had differing levels of somatic anxiety when faced with writing tasks in English. This implies that some learners might be experiencing more physical tension as a component of somatic anxiety than others. These findings contrast with some previous studies, which showed higher levels of somatic anxiety (e.g. Erdel, 2024; Çağlar Kabınkara, 2023). This could be mostly attributed to language proficiency, which is among the most significant factors that contribute to writing anxiety.

Regarding the "Avoidance Behaviour" subscale, the findings illustrated that participants had a low to moderate levels of avoidance behaviour. The item with the lowest mean score (I usually do my best to avoid writing English compositions.), (*M* = 2.37, *SD* = 1.164), demonstrates that participants did not strongly identify with avoidance behaviour, suggesting that although some learners experience writing anxiety, it does not necessarily result in avoiding writing tasks. In addition, although item 18 (I usually seek every possible chance to write English compositions outside of class.) yielded a mean score of 2.98 which is relatively high (*SD* = 1.129), since it is positively worded, the results indicate a slight tendency against avoidance behaviour. Overall, the results of Avoidance Behaviour subscale suggest that participants do not strongly avoid writing in English. These results are in line with recent studies (e.g. Çağlar Kabınkara, 2023; Keyvanoğlu & Atmaca, 2023), though they showed slightly higher mean scores. The moderate avoidance behaviour observed among participants may be influenced by factors such as self-efficacy beliefs, and perceived competence in writing.

Finally, the descriptives for the last subscale "Cognitive Anxiety" also yielded moderate levels of anxiety among the participants. The reverse-coded items in the subscale yielded mean scores ranging from 2.54 (Item 7) to 2.93 (Item 21), indicating moderate levels of cognitive anxiety. This suggests that participants somewhat experience worry and negative thoughts while engaged in writing in English. Item 7 produced the lowest mean score; however, since it was a reverse-coded item, the mean score implies that participants mildly hold a fear of comparison, which is also connected with negative self-evaluation. This finding is in line with prior studies which emphasize the role of fear of judgment along with negative self-evaluation. As Cheng (2004) points out, cognitive anxiety is characterized by negative self-evaluation, worry about performance, and concern about others' judgments. These results resonate with recent studies (e.g. Çağlar Kabınkara, 2023; Keyvanoğlu & Atmaca, 2023).

In conclusion, the findings indicate that participants experience moderate levels of anxiety across different types when engaged in L2 writing tasks. The findings align with previous literature emphasizing that foreign language writing inherently triggers anxiety among learners due to its complex cognitive and emotional requirements. Additionally, varied anxiety levels of participants could be attributed to individual differences such as self-efficacy, perceived writing competence, language proficiency, prior writing experiences, and attitude towards writing, all of which play a crucial role in learners' writing experiences (Choi, 2013; Cheng, 2004; Erkan & Saban, 2011).

The relationship between learners' perceptions of AI and their writing anxiety
In accordance with the final research question, the relationship between participants' perceptions of AI usage in language learning and their perceived levels of L2 writing anxiety was investigated. As stated in the findings section, the results of the Spearman's Rank-Order Correlation test demonstrated a subtle relationship between these two variables, indicating no significant correlation (rs(133) = .132, *p* = .128). Although recent studies have not explicitly investigated the relationship between learners' general views of AI and their foreign language writing anxiety, there are some studies which explored AI-assisted writing and writing anxiety, which have yielded mixed results. For instance, Yu (2024) found a significant positive correlation between AI-assisted writing frequency and writing anxiety among Chinese university students, suggesting that frequent AI use may increase anxiety levels. However, Sumakul et al. (2022) reported positive student perceptions of AI in writing classes, noting that it aided students in their

writing process, assisted them with grammar and vocabulary in writing, and made learning enjoyable. Similarly, Phan (2023) found favourable student attitudes towards AI writing tools, particularly regarding accessibility, adaptability, and ease of use, though technology anxiety remained a challenge. Zhang (2024) tested AI-mediated language instruction and found that AI tools improved learners' writing skills. Liu (2024) investigated the interplay between writing anxiety and AI use and found that learners with higher writing anxiety are more inclined to use AI in writing. Another study conducted by Shen & Tao (2025) suggests that AI-based writing self-efficacy could alleviate writing anxiety, implying that learners with confidence in using AI tools for writing experience less writing anxiety.

The studies collectively highlight the complex relationship between AI use, learner perceptions, and writing anxiety, suggesting that whereas AI tools offer valuable benefits such as immediate feedback, personalized and adaptive learning and various affordances in language learning and foreign language writing, careful implementation is crucial to avoid potential negative effects of these technologies on learners' writing anxiety as well as overreliance, among others.

CONCLUSION

This study revealed that participants held moderately positive attitudes toward the use of AI in language learning, though their responses varied. This indicates that while some learners found AI highly useful, others were hesitant, particularly due to concerns about the quality of AI-generated content. Additionally, participants demonstrated low to moderate levels of foreign language anxiety. Though not statistically significant, a weak but positive relationship was observed between their perceptions of AI tools and their writing anxiety.

These findings not only deepen our understanding of learners' experiences with AI but also offer practical implications for language education in AI-integrated contexts. First, the generally positive perceptions suggest that, when carefully integrated, AI tools have the potential to support language development and increase learner motivation (Zhang, 2024). Language instructors and curriculum designers should recognize these benefits and incorporate AI tools into instruction with careful planning (Son et al., 2023). Effective integration requires both learners and instructors to develop AI literacy through continuous training and support (Chu et al., 2022; Kasneci et al., 2023). This includes reducing technology-related anxiety through scaffolding and structured guidance, which may, in turn, enhance AI self-efficacy and promote greater tool acceptance.

Importantly, addressing learners' concerns about AI should be a central part of this training. Curriculum designers should include instruction that emphasizes critical evaluation of AI-generated content, awareness of its limitations, and ethical use in language learning contexts (Kasneci et al., 2023).

Despite the participants' relatively high language proficiency, the findings revealed that their writing anxiety persisted. In addition, although the relationship between learners' AI perceptions and their foreign language writing anxiety was not statistically significant, the observed positive relationship highlights the potential of AI tools to help reduce writing anxiety. Pedagogically, instructors are encouraged to apply strategies such as peer feedback, process writing, free-writing, positive reinforcement (Atay & Kurt, 2006), and collaborative writing (Choi, 2013) in their classrooms to alleviate language learners' writing anxiety, while integrating AI tools to scaffold the writing process. Building learners' AI-based writing self-efficacy is also crucial as it appears to be a key factor in mitigating writing anxiety (Shen & Tao, 2025). Furthermore, incorporating higher-order thinking strategies like "planning, monitoring, and evaluating" into AI-supported writing environments may further support learners' confidence and positively impact their writing anxiety (Shen & Tao, 2025, p. 83).

In addition to these pedagogical implications, the results point to potential directions for extending current theoretical models of technology acceptance. Although TAM has been instrumental in explaining technology acceptance, it does not account for learner concerns such as overreliance, ethical issues, or trust in AI-generated content. Given the model's history of

incorporating new constructs, integrating concern-related dimensions could improve its applicability to emerging technologies in educational contexts.

In conclusion, educators and curriculum designers need to ensure that AI literacy becomes a core component of language education. To maximize the benefits of AI tools and address learner concerns, students must be equipped with the skills to use these technologies effectively and to critically assess AI-generated content.

LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

This study is limited to the participants drawn from a single state university in Türkiye, which may narrow the generalizability of the findings. The results of the study may not apply to broader populations, as learners' individual differences, educational contexts, and their experiences with AI tools may vary across institutions and regions. Additionally, the study focused on learners' general perceptions of AI tools and their overall writing anxiety, without examining the potential influence of demographic variables such as gender, age, academic level, or prior experience with AI tools. Future research could explore these variables to provide a fuller understanding of learner differences.

While the sample size was sufficient for the statistical analyses conducted, it may not fully capture the diversity of learner experiences with AI tools. Future studies could consider recruiting larger and more heterogeneous participant groups from varied educational contexts to enhance generalizability.

Finally, as this study employed a solely quantitative design, it did not capture the in-depth perspectives or experiences of participants. Future research could benefit from incorporating qualitative methods such as interviews, open-ended surveys, or classroom observations to gain a richer and more comprehensive understanding of learners' attitudes, the contextual factors influencing their engagement with AI, and the challenges they may face in AI-supported learning environments.

Ethical Approval: This study was approved by the Scientific Research Ethics Committee of Muğla Sıtkı Koçman University (Protocol No: 240151, Approval number: 140). Participation was voluntary and anonymous. Before the online survey, participants were informed about the purpose of the study and proceeding with the online survey was considered as consenting to the study.

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Language Teaching and Educational Research

EFL teachers' beliefs and instructional roles in the application of pre-reading strategies: A qualitative study

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EFL teachers' beliefs and instructional roles in the application of pre-reading strategies: A qualitative study

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Article Info

Abstract

In reading comprehension classes, EFL teachers should implement pre-reading strategies to activate the students' prior knowledge, avoid comprehension barriers, and motivate them to read and predict the passage's content. This exploratory case study examines English as a Foreign Language teacher' beliefs and instructional roles in the application of pre-reading strategies in secondary school reading comprehension. Edget Chora Secondary School in Addis Ababa, Ethiopia was purposively selected to do this qualitative study. Six experienced EFL teachers who teach ninth graders were selected using convenience sampling technique. Data collection methods involved observations and individual interviews. The collected data were open coded, and categorized into themes using Nvivo10 qualitative data analysis software. The findings from interview revealed teachers' noticeable positive views on the instructional importance of pre-reading strategies. Although they acknowledged the value of these strategies, they perceived them as time-consuming and instructionally demanding. The observation data showed that the participants apply few pre-reading strategies, such as pre-teaching key vocabulary, focusing on the title of the passage, and asking questions related to the passage. Therefore, the study concluded that regardless of their positive beliefs, EFL teachers apply inadequate pre-reading strategies. Hence, this situation calls up a need to improve their instructional role through continuous professional development and in-service training.

INTRODUCTION

Reading is an essential component of both teaching and learning because it provides access to knowledge and information in a combined manner, whether in print or digital form (Sun et al., 2013).It is considered the most crucial skill for academic performance (Chen & Intaraprasert, 2014).

The English language plays an essential part in Ethiopian education. The main objective of teaching the language in Ethiopia is to create students who can effectively adjust to the fast-paced, complex environment. It is necessary to have students who can read English-language materials, analyse, synthesize, and evaluate information and scientific facts, come up with well-considered solutions, and make decisions. English is taught as a required subject from first grade through higher education in order to achieve this goal. In Ethiopia, secondary and university education are taught in this language (MoE, 1994).

Few studies conducted abroad looked at the beliefs of secondary school EFL teachers and their actual use of reading strategies. For example, Khomatri and Salimi (2010) looked into how the beliefs of EFL high school teachers interacted with their use of reading strategies in the classroom. There was some disparity between teachers' self-reported practices and their views, according to the data. Kuzborska (2011) investigated the connections between reading research and the beliefs of EFL teachers in secondary schools. The results demonstrated that a skills-based approach to reading teaching, with an emphasis on vocabulary, reading aloud, translation, and whole class discussion of texts, was represented in the beliefs that were found to be consistent with the practices of the majority of the teachers.

Additionally, Bamanger and Gashan (2014) investigated the opinions of in-service EFL teachers in secondary schools about the teaching of reading strategies. Based on data from the questionnaire, the findings demonstrated that in-service EFL teachers definitely valued teaching reading skills highly. It was discovered that teachers think that guessing the meaning of ambiguous vocabulary, explaining vocabulary items, scanning the text, and asking questions to gauge students' comprehension are the most crucial reading strategies. In contrast, they think that translating words into Arabic is the least significant strategy.

Al-Husban (2019) also looked at how EFL teachers taught reading comprehension in secondary schools. The study found that teachers taught reading comprehension in a traditional way and that most of the teachers who were observed and interviewed knew the names of the reading comprehension strategies and the stages of teaching reading comprehension, but they were unsure of how to use and practice them. Similarly, Çak (2016) investigated the beliefs of secondary school EFL teachers regarding the use of reading strategies, and the findings showed that they believe in the necessity of the strategies and prefer to use them almost at every stage. Additionally, the study's findings indicate that post-reading strategies are the least preferred.

Secondary school EFL teachers' beliefs and their use of reading strategies in reading comprehension classes have not been extensively studied in Ethiopia. Atinafu (2018) examined how EFL teachers at secondary schools in Bahir Dar Town used reading strategies and how their beliefs and practices interacted. According to the study, teachers do not adequately teach their students how to employ reading strategies, despite their belief that doing so is essential to enabling them to become proficient readers. A few pre-reading strategies are tried by teachers. Nonetheless, the majority of while-reading and post-reading strategies are disregarded. Similar to this, Regassa and Teshome (2015) studied the beliefs of EFL teachers at Jimma and East Wollega

Zone High Schools about reading instruction and classroom practices. According to the study, EFL teachers have their own set of beliefs about teaching reading, but these beliefs are not always used in the classroom. The studies mentioned above investigated the issues quantitatively.

To the best of the researchers' knowledge, few qualitative studies have been carried out in Ethiopia that investigate secondary school EFL teachers' beliefs and actual implementation of reading comprehension strategies. Mekonnen (2020), for example, carried out an exploratory case study of the pedagogical approaches used by three EFL teachers in secondary schools to teach reading comprehension at various reading stages. Nurie (2017) also used a descriptive, interpretative case study design to study how teachers handle and arrange reading comprehension as well as how they teach reading. As a result, there appear to be few qualitative case studies that address the beliefs of secondary school EFL teachers and how they apply strategies in reading comprehension classes. In a broader sense, this research paper may contribute to the existing literature that secondary school EFL teachers' beliefs have significant impact on determining the type of reading strategies prior to teaching reading comprehension. It may indicate ways that EFL teachers can apply pre-reading strategies within the classroom constraints. It may also particularly suggest some important instructional roles of EFL teachers that should be emphasized in the pre-reading phase of the reading comprehension classes.

This study differs from the previous local and international studies in that it used a qualitative approach to investigate in depth the EFL teachers' beliefs and application of pre-reading strategies in secondary school reading comprehension classes. Therefore, the following research questions guided this study:

1. What beliefs do EFL teachers hold regarding the application of pre-reading strategies in reading comprehension classes?
2. Which pre-reading strategies do EFL teachers apply in their actual reading comprehension classes?

METHODOLOGY

Research design

This exploratory case study is entirely qualitative. Inquiry into a social or human issue through qualitative research is based on creating a comprehensive, multifaceted picture with words, documenting the in-depth opinions of informants, and taking place in a natural setting (Creswell, 2014). The qualitative method assisted the researchers in conducting a thorough analysis of the phenomenon they were studying. Therefore, a case study approach was selected to carry out this study since it was focusing on a single instance, examining a particular grade (grade nine) and a specified number of participants (six EFL teachers) in a specific secondary school (Ediget Chora Secondary School) in Addis Ababa, Ethiopia.

Research setting

There are two secondary schools in the sub-city of Lemi Kura, Addis Ababa, Ethiopia. One is a private secondary school, and the other is government-owned. The target school chosen for the study was Edget Chora Secondary School, which is government-owned. It was established in 2014. Under the English department, 24 EFL teachers were on duty during data collection. There were most experienced EFL teachers in the target school compared to the other private school. Hence, the researchers were convinced that the participants could deliver rich data.

Participants

To select the target school, as a guiding sampling method, purposive sampling was used. Since the study followed a case study design, one government secondary school was purposefully chosen. Ten EFL teachers who teach ninth graders were available in the target school. Therefore, using the convenience sampling technique, six were selected and took part in the study based on their willingness. All of them participated in interviews and reading comprehension lesson observations. The reason to choose only six cases (participants) was to ensure that the data generated by such limited number of participants would be manageable given the laborious nature of a qualitative study. The demographic information of the participants is presented in Table 1. To secure the anonymity and confidentiality of the information, short codes were given to each participant (T1 = Teacher 1, T2 =Teacher 2, T3=Teacher3, T4=Teacher4, T5=Teacher 5, and T6=Teacher 6).

Table 1.Demographic information of participants

No	Participants	Gender	Age	Qualification	Teaching experience
1	T1	Male	40	B.Ed.	16 years
2	T2	Male	51	MA in TEFL	32 years
3	T3	Male	36	MA in TEFL	14 years
4	T4	Male	52	MA in TEFL	29 years
5	T5	Male	40	MA in TEFL	17 years
6	T6	Male	39	MA in TEFL	18 years

As regards the profile of participants shown in table 1, all of them were experienced teachers, with 14 up to 32 years of service. The age range of participants was 36-50. The data signified that they were matured enough. Hence, they could provide ample data regarding their beliefs and practices of pre-reading strategies in their respective reading comprehension classes. Except for one participant, five of them were MA degree holders in TEFL, so it was expected that they had taken relevant courses on teaching reading comprehension. Thus, the participants were likely to deliver valuable data concerning the issue under study.

Data collection instruments
Observation

The primary method used in this study to gather data was observation of reading comprehension lessons. A non-participant observation approach was applied to carry out twelve reading comprehension lesson observations. The researchers conducted observations acting as an outsider to the students and the teachers. Field notes were taken by the researchers as they observed specific incidents related to the participating EFL teachers' application of pre-reading strategies in their reading comprehension classes.

Individual interview

Through individual interviews, pertinent information regarding the participants' beliefs and use of pre-reading strategies was gathered. The data from the interviews helped to validate the data from the observations. A structured interview guide was used for the interview since it was simpler to locate and compare responses during data analysis because each participant answers the same question in a structured interview. The interview guide was designed and refined based on insights gained from the relevant literature. Additionally, each interview guide

question was repeatedly checked by an associate professor of ELT in Addis Ababa University, Ethiopia. Finally, the guide was modified according to the expert's comments. The final version of the interview guide included nine questions i.e., four questions addressed the beliefs about the pre-reading strategies whereas, five questions considered the application of the pre-reading strategies.

Data collection and analysis

First, permission was obtained from the principal to collect data from the target secondary school. Second, the researchers maintained a good rapport with all grade nine EFL teachers at Edget Chora Secondary School to get approval of their participation in lesson observations. Following this, using an information letter, the participants were made aware of the purpose of the study. There were five units to be covered during the first semester, according to the Grade nine English annual lesson plans. Under each unit, there was one reading comprehension lesson. In sum, five reading lessons were expected to be covered in one semester.

To conduct the lesson observation smoothly, with the consent of the participants, two representative reading comprehension lessons were selected. (Unit 4: Reading Skills: National Park in Ethiopia, and Unit 5: Reading Skills: Horticulture). Hence, this situation was helpful in gathering observation data regarding EFL teachers' actual practices of pre-reading strategies under similar frameworks of lessons and classroom contexts.

During reading comprehension lesson observations, field notes were taken to collect data about activities, interactions, and dialogues made by the teacher and the students during the pre-reading phase. The lessons were not video recorded to avoid artificiality by teachers and to minimize frustration among the students. The researchers preferred to capture observation data by taking field notes since the reading comprehension instruction was going on at a manageable pace. To aid the data analysis and interpretation work, based on the field notes (descriptive notes), the reflective notes were organized immediately after each observation. This situation was important to give meaning to the field notes taken during the lesson observations. Hence, based on the observation schedule, the six participants were observed twice. In sum, twelve reading comprehension lesson observations were conducted. The lesson observations took 480 minutes. The lesson observation task was completed within four weeks.

The interview sessions were kept to the second phase of data collection to minimize artificial classroom behaviours that the participants may manifest during observation because of prior contamination of data, which might alert them about the study and might have affected the quality of data expected from the participants.

The interview data were translated and transcribed consecutively. The interview transcripts were edited and repeatedly read for better understanding. The irrelevant and repeated interview items and the responses given were refined and polished from the transcripts. The NVivo-10 qualitative data analysis software was used to facilitate the open coding process. The open coding of data continued using the line-by-line coding technique, not to miss important results that could be generated from the textual data. Primarily, the responses given for the first and second research questions regarding EFL teachers' beliefs and implementation of the pre-reading strategies were coded, respectively. The process was inductive and bottom-up (data-driven), moving from the particular to the general (from data to themes), and in the end, the data were interpreted (Creswell, 2014). After open coding of data ended, the repeated ideas (similar ideas) taken from each participant's responses are categorized under themes and the corresponding sub-themes. Themes and sub-themes emerged as a result of open coding of each interview transcript were organized in to tables parallel to each participant. In the narration of results, direct quotations taken form interview transcripts are incorporated to show evidence of results.

More specifically, the interview data were analyzed using a thematic analysis, which entails categorizing and organizing data thematically based on techniques borrowed from Lewis & Ritchie (2003) study. Consideration was given to the identification and reporting of themes that appeared in the data. A thorough coding of the data, exposing the experiences, perceptions, and realities that were communicated by the participants was emphasized (Braun & Clarke, 2006).Thus, the researchers used a thematic analysis of the interview data to examine in great detail EFL teachers' beliefs and application of pre-reading strategies during teaching reading comprehension in the target secondary school.

To maintain inter-coder reliability in thematic analysis of interview data, the researchers first established a coding framework based on the research questions of the study. Next, the two researchers coded the interview data individually and identified themes to prevent biases. Then, they compared the coded findings, checked for discrepancies and reached an agreement on themes and interpretations. The researchers made sure if there was consistency between their codes to ensure validity in data analysis.

In general, drawing on (Dornyei, 2007) the process of data analysis involved the following inductive analysis stages: translation and transcription of voice data, coding of data, and thematic categorization of data followed by a description, interpretation and concluding were made.

For the observation data analysis, a reading comprehension lesson observation framework (RCLOF) adapted from Henk et.al. (2000) was used as a rubric. To ensure validity, the researchers aligned the content of the rubric with the study's research questions. This rubric was not directly used to collect observation data from the actual reading comprehension classes. However, it was applied to compare and contrast the observation data collected by means of note-taking with the post-reading strategies incorporated in the rubric. This rubric was important to dig out and to double check the extent of the participants' application of the pre-reading strategies while teaching reading comprehension using the three phase approach i.e., the pre, while and post-reading phases.

Ethical issues

After a smooth relationship was maintained with the participants, the interview schedule was set with the respondents' full consent. Before the interview, the participants were given an information letter to make them aware of the purpose of the interview and ethical considerations. Then, they signed a consent letter to confirm their willingness to participate in the study. Six EFL teachers who were teaching ninth graders in the target secondary school volunteered to participate in the interview sessions. The interview was carried out in Amharic (the Ethiopian native language) and translated later into English. This situation helped to avoid the language barrier, which can possibly affect the quality and quantity of the expected data from the participants.

Next, after the researchers gained the participants' consent, all the individual interviews were audio-recorded using the Tecno DP10A tablet. We also took notes during the interview to avoid impulsive data loss. Therefore, the audio files were exported to NVivo-10 qualitative data analysis software to facilitate the data translation (Amharic into English) and verbatim transcription (changing audio data into textual data) work, which continued immediately after the interview sessions ended. An average of 50 minutes was needed to conduct a single individual interview. The individual interviews started and finished within four weeks.

Validity of data

Verifying the validity of data is essential in qualitative study. According to Gibson (2007), qualitative reliability reveals that a researcher's methodology is consistent across numerous projects and researchers. Qualitative researchers need to document the techniques of their case

studies and to document as many of the procedures as possible (Yin, 2011).In addition, he suggests creating a thorough database and protocol for case studies. Accordingly, the researchers frequently reviewed interview transcripts in light of these academic theories, and they revealed no obvious transcription errors. Additionally, we ensured that during the open coding process using NVivo-10 software, there was no drift in the definition of codes or a change in their meaning.

Creswell (2013) suggests using a variety of strategies that should improve the researcher's capacity to evaluate the quality of findings and persuade readers of their accuracy. One of the benefits of qualitative research is validity, which is based on determining whether the conclusions are true from the perspective of the participant, the researcher, or the readers of an account. In addition to the main approaches mentioned above, the researchers took the following actions to increase the validity of findings of this study. The data gathered from diverse sources i.e., interviews, and observations (field notes and reflective notes), have been triangulated by assessing evidence from the sources and applying it to develop a cohesive rationale for themes derived through analysis of textual data. For example, the outcomes of the observations were compared and contrasted with the interview data regarding the application of pre-reading strategies. In reference to this issue, Creswell (2009) stated that "the process can be claimed as adding to the validity of the study if themes are established based on converging several sources of data or perspectives from participants" (p.177). Member checking was employed to ascertain the accuracy of the qualitative findings by returning the completed report or particular themes or descriptions to the participants and asking them to confirm that the findings were accurate. Therefore, after looking over the copy of the study's findings given to them, all six of the participants agreed with it. Furthermore, the data analysis and discussion section provided detailed and comprehensive explanations of the results. Consequently, the results of the observations and interviews were thoroughly explained, taking into consideration the various viewpoints of the participants. Accounts of specific quotes from the transcripts of the interviews further strengthen these statements. This made the results more realistic and richer and added to the validity of the results of the study.

FINDINGS

The study intends to explore secondary school EFL teachers' stated beliefs and their actual application of the pre-reading strategies in their respective reading comprehension classes. Individual interviews and reading comprehension lesson observations were used to generate data to respond to the research questions. Hereafter, the results of the study are presented in line with the research questions.

Results of the interview on EFL teachers' beliefs about application of pre-reading strategies in reading comprehension classes

The first research question was intended to explore beliefs the participating EFL teachers hold about the reading strategies that can be applied in the pre-reading phase of reading comprehension classes. Six participating EFL teachers responded to four interview questions.

Table 2. Codes and themes established from interview data regarding beliefs about application of pre-reading strategies

No	Codes	Themes	Sub themes

1	-Pre reading strategies activate students' background knowledge; They help students to get ready for reading [T2]. It helps students to predict the passage; helps to connect students' background knowledge with the passage [T3] It helps to activate the background knowledge of students ; It motivates students to get ready for reading [T4] -Helps to assist students connect their background knowledge with the text they are assigned to read; it is also important to make students curious and motivated for reading. [T5] -It helps students to get ready for reading, to predict about the passage; to connect students' prior knowledge with the passage. [T6]	The instructional importance of implementing pre-reading strategies	Participants' believe that pre-reading strategies: -Activate students background knowledge & connect it with the passage -Predict the content of the passage -Motivate students for reading
2	-Believes that reading strategies are necessary; however, there is scarcity of time to handle pre- reading strategies [T1] -If done according to plan, they are not time taking; most of the instructional time should be devoted to the while-reading strategies [T2] -Believes that reading strategies are instructionally important. [T3] -Pre-reading strategies help them to relate their prior knowledge with the text they are going to read; post reading strategies are given less emphasis. [T4] -Believes that except the negligence, pre, while and post reading strategies are necessary; due to time constraints, I ignore the pre-reading activities. [T5] -The pre-reading strategies are time taking since they take 5-10 minutes; thirty minutes are left to accomplish while-reading activities.[T6]	Beliefs about the necessity or time taking nature of implementing pre-reading strategies	The participants believe that : -Time constraints to practice reading strategies -More emphasis should be given for the while reading strategies -Less emphasis is given to the post-reading strategies -Ignoring the pre-reading strategies to save time for reading the passage
3	-Escapes the pre-reading strategies due to shortage of instructional time; devote more time for the while-reading strategies[T1] -Less emphasis is given to the post-reading strategies; most of the instructional time should be given for the while- reading strategies[T2] -Devotes much of the instructional time for the while-reading strategies[T3] -The aim of RC lesson is to help students develop the RC skills; Beliefs much attention should be given for the while-reading strategies [T4] -Post-reading strategies are inescapable; they are helpful to check students' overall comprehension. [T5] -Beliefs that the aim of teaching reading is to assist students to comprehend the passage; Believes much attention should be given for the while-reading strategies.[T6]	Beliefs about frequent application of pre-reading strategies	-shortage of instructional time -Ignore the pre-reading strategies to save time -Much attention is given to the while-reading strategies
4	The purpose of teaching reading is not only to help students understand the passage; Its aim is to assist them to become familiar with the RC strategies; It is also to help students become strategic readers.[T1] -The aim of teaching reading is to help students to be strategic readers; It is also to help students become familiar with and apply reading strategies in both academic and nonacademic contexts; when students emphasize comprehension questions they become exercise oriented.[T2] -Pre-reading strategies help students to be familiar with the passage; Doing comprehension questions helps students to be aware of RC strategies; while-reading strategies would help to check students' comprehension.[T3] -Its aim is to assist students to become strategic readers; to help students develop reading skills; to make students apply the reading strategies in both academic and non-academic contexts. -To help students familiar with the reading comprehension strategies.[T4] Believes that reading becomes mechanical if teachers allow students to use strategies; when students try to use reading strategies, they fail to comprehend the passage; students shouldn't know the reading strategies not to divert their attention while reading;	Beliefs about more important notion in teaching reading comprehension	-The participants believe in: -Teaching pre, while and post-reading strategies. -Assisting students to be strategic readers. -Assisting students to apply reading strategies in academic and non-academic reading contexts -The aim of teaching reading is both to assist students become familiar with reading strategies and comprehend the passage

teachers should know the strategies and techniques of reading; believes that the aim of teaching reading comprehension is to assist students develop the skills [T5]

-Believes that the aim of teaching reading is both to assist students to comprehend the passage and to make them familiar with reading comprehension strategies.[T6]

Theme No1: The instructional importance of implementing pre-reading strategies

Interview Question 1 sought responses to the beliefs that participant EFL teachers hold about the instructional importance of implementing the pre-reading strategies. The assumption behind this question is that if teachers believe that pre-reading strategies are important, they are likely to implement these strategies during their reading comprehension instruction. As the data shows, most of the participating EFL teachers believe the pre-reading strategies are instructionally important. Unlike others, T1 said, "I escape the pre-reading strategies because of a shortage of instructional time. Whereas, T2 mentioned, "pre-reading strategies activate students' background knowledge. These strategies help students get ready for reading." T4, on the other hand, explained that the pre-reading strategies help to activate the background knowledge of students. These strategies motivate students to get ready for reading. According to the views of T5 and T6, "the pre-reading strategies assist students to connect their background knowledge with the text they are assigned to read. They believe these strategies are also important to make students curious and motivated to read." One way or another, most of the participants disclosed similar perspectives about the instructional importance of pre-reading strategies. In this regard, T3 illuminated:

> *I believe the aim of pre-reading strategies is to enable students to connect their prior knowledge with the text they are about to read. By having background knowledge about the text, they can predict what comes next in the passage during the actual reading phase. I ask students questions to dig out what they know in relation to the passage.*

Theme No.2: The necessity of implementing pre-reading strategies

Interview Question 2 aimed to examine whether the participants believed that using pre-reading strategies during the reading comprehension instruction was time-consuming and unnecessary. T1, T2, T3, and T5 believe that the pre-reading strategies are necessary, though they confess that such strategies require portions of the instructional time. Conversely, T1 said, "The strategies are necessary; however, there is a scarcity of time to handle pre-reading strategies." Opposed to T1, T2 said, "…if done according to plan, the pre-reading strategies are not time-consuming; however, most of the instructional time should be devoted to the while-reading strategies." T3 said that reading strategies are instructionally important. Similarly, T5 indicated, "…except for the negligence, pre-reading strategies are necessary; however, because of time constraints, I ignore the pre-reading strategies." Contrary to other participants, T6 stated that the pre-reading strategies are time-consuming (take 5–10 minutes). Hence, he noted that from the regular class time, thirty minutes are left to accomplish the while and the post-reading strategies.

Theme No.3: Regular application of pre-reading strategies

Interview Question 3 was asked with the intention of getting information about the reading strategies that the participants regularly implement. T1, T2, T4, and T6 clarified that the aim of teaching reading is to assist students in comprehending the passage. T1 said, "I skip the pre-reading strategies due to a shortage of time. Rather, I devote more time to the while-reading phase." T2 explained, "less emphasis is given to the post-reading phase; most of the instructional time should be given to the while-reading phase." T5 elucidated, "The post-reading strategies are inescapable; they are helpful to check students' overall comprehension." In sum, as the data

exhibited, the participant EFL teachers give most of the instructional time for the implementation of the while reading strategies. This shows there is a tendency to ignore pre-reading and post-reading strategies. In relation to this, T3 said:

> *I spent much of the instructional time on the while-reading and post-reading phases since the aim of teaching reading is to assist students in comprehending the text. I believe pre-reading questions are important to give students a clue about the new passage they are assigned to read. I believe most of the instructional time should be devoted to the while and post-reading phases [T3].*

Theme No.4: More important notion in teaching reading comprehension

Finally, the purpose of interview question 4 was to dig out the participants' responses to the notion they believe is more important in teaching reading comprehension. T1, T2, T3, T4, and T6 believe that the purpose of teaching reading is not only to help students comprehend the passage. Its aim is to assist them in becoming familiar with pre-reading strategies and being strategic readers. In contrast, T5 disclosed: "I believe reading becomes mechanical if teachers allow students to use reading strategies. When students try to use reading strategies, they fail to comprehend the passage because their attention will be diverted from focusing on reading and comprehending the passage."

Results of observation on application of the pre-reading strategies

Six sample excerpts showing the pre-reading phases are taken from the first round of observation data base or field notes recorded during 12 rounds of reading comprehension lesson observations. The reading comprehension classes of the six participants were observed twice. Based on the lesson observation data, the analysis and results on how the participants' apply the pre-reading strategies are presented below. For consistency, the sample lesson observations focused on unit four, reading comprehension, 'National Parks in Ethiopia.'(In the following lesson transcripts, T1 up to T6 represent the six participants whereas, S/Ss represent a student or students)

Extract 1: Sample Reading Comprehension Lesson

Lesson 1: Unit 4: Reading Skills: National Parks in Ethiopia

Pre-reading phase [1:30-1:40]

Observation Round-1

T1: Good afternoon.

Ss: Good afternoon teacher.

T1: Previously, we have learned about how to write an informal letter (Revision). Today we are going to read the passage. Then, the teacher writes on the whiteboard" Unit Four: National Parks in Ethiopia. Page, 88." He jots down key vocabulary taken from the passage [reserve, endemic, wildlife, and species.] on the whiteboard.

Ss: Copy the list of vocabularies from the whiteboard.

T1: Rearranges students in groups since most of the students didn't have the textbooks.

Ss: Move from one group to another to share the textbooks.

During the first round of observation, T1 tried to pre-teach key vocabulary taken from the passage. This could help students to become familiar with definitions of key vocabulary to facilitate comprehension. During the second round of observation, the teacher didn't apply the pre-reading strategies that could help students to activate their prior knowledge, to predict the passage, to get motivated to read, and to avoid comprehension barriers (both linguistic and text

structure barriers).The data imply that the participant did not exhibit instructional consistency in applying the pre-reading strategies.

Extract 2: Sample Reading Comprehension Lesson

Lesson 1: Unit 4: Reading Skills: National Parks in Ethiopia

Pre-reading phase [9:30 -9:40]

Observation Round-1

T2: Good morning students.

Ss: Good morning teacher.

T2: Today, we will read the passage, "National Parks in Ethiopia.." But, before that I want you to do pre-reading questions on page 88. Then, he writes the title of the passage on the board. What do you know about national parks?

Ss: Wild animals like lions, zebras, etc., live in national parks.

T2: Yes, you are right. What about you? He points to a student.

S: Tourists come to national parks.

T2: Yeah, tourists visit national parks. Then, he lists down keywords taken from the passage. (reserve, endemic, wildlife, species) on the whiteboard and said, " Study the words."

Ss: Copy down the words in their exercise book.

T2: Now, in your groups, please read the passage silently.

During the first round of observation, T2 tried to pre-teach key vocabulary to minimize comprehension barriers. He also let the students do pre-reading questions to connect students' schema with the passage they are assigned to read. However, he did not elicit students' prior knowledge by assisting them to look at pictorial descriptions given for each paragraph to help students better comprehend the passage.

As the data exhibited, T2 did not implement the pre-reading strategies during the second round of observation. He did not activate the background knowledge of students about the passage, so they could not feel curiosity about the text they are going to read. Consequently, they may have confusion about the purpose of reading. In addition, they might not choose and apply the while-reading strategies because the teacher said nothing about the selection and utilization of reading strategies before the actual reading. There seems instructional inconsistency in applying the pre-reading strategies in reading comprehension classes.

Extract 3: Sample Reading Comprehension Lesson

Lesson 1: Unit 4: Reading Skills: National Parks in Ethiopia

Pre-reading phase [11:45-11:53]

Observation Round-1

T3: Good morning.

Ss: Good morning teacher.

T3: Do you remember what we learned last period?

Ss: About adverbs of frequency.

T3: What can you say, Cristina?

S: We have seen about the position of adverbs of frequency.

T3: Yeah, an adverb of frequency can be placed before the main verb except auxiliary verbs. Letter writing is given to you as an assignment. Today, our next topic will be a reading comprehension lesson. Unit Four: National Parks in Ethiopia. What do you know about national parks?

S: It is a place where animal species and birds live in.

T3: Yes, do you agree? In the national parks, different species of animals live. Now go to the desks where you can access textbooks. We are going to read the passage about National Parks in Ethiopia. But before that let us study the contextual meaning of some key words taken from the passage.(reserve, endemic, wildlife, species). Then, immediately the teacher gives the students the contextual meanings of words (reserve=resource, endemic=native, wildlife=untamed animals, species=variety, race. Now read the passage silently and then you will do comprehension questions.

During the first round of observation, the teacher asked one general question (what do you know about national parks?) to elicit students' background knowledge in relation to the passage, but it was not adequate. During the second round of observation he completely ignored the pre-reading strategies. Except for his trial to pre-teach key vocabulary during the first round of observation, T3 did not implement the pre-reading strategies consistently. Such instructional inconsistency may suggest that he did not take a firm stand to implement the pre-reading strategies in reading comprehension classes regularly.

Extract 4: Sample Reading Comprehension Lesson

Lesson 1: Unit 4: Reading Skills: National Parks in Ethiopia

Lesson1: Pre-reading phase [9:30 -9:40]

Observation Round-1

T4: The teacher cleans the board and writes the topic of the lesson 'Unit Four: Reading: National Parks in Ethiopia' and says good morning students.

Ss: Good morning teacher. We are fine thank you.

T4: Let's do pre-reading questions on page 88. What is your previous knowledge about national parks?

Ss: Different animals live in national parks.

T4: Yes, but wild animals live in national parks. Good, he said. Then, he jots down keywords taken from the passage.(Reserve, endemic, wildlife, species) on the whiteboard. Copy the words in your exercise book and study them. You can do it together in your groups.

Ss: Copy down the words in their exercise book.

T4: Now, be in your groups and read the passage silently as much as possible.

During the first round of observation, T4 tried to implement the pre-reading strategies such as activating the background knowledge of students to assist them in connecting their prior knowledge with the text they were going to read. Also, he tried to motivate students to read. He drew students' attention to the title of the passage to help them predict the content of the

passage. But during the second round of observation, T4 completely ignored the pre-reading strategies. Thus, the data may suggest that his application of the pre-reading strategies is inconsistent. He failed to assist the students in implementing the pre-reading strategies regularly.

Extract 5: Sample Reading Comprehension Lesson

Lesson 1: Unit 4: Reading Skills: National Parks in Ethiopia

Pre-reading phase [11:45-11:55]

Observation Round-1

T5: Good morning.

Ss: Good morning teacher.

T5: Last week we learned about adverbs. Do you remember? Yes, an adverb of frequency can be placed before the main verb. For example, the boy always reads the poem. Which one is the adverb of frequency?

Ss: 'Always'

T5: Yes, you are right. It is located before the main verb 'reads' yes.

Ss: Yes.

T5: For today we will have a reading comprehension lesson. That is Unit Four: National Parks in Ethiopia. By the way, what do you know about national parks?

S1: Tourists visit national parks.

T5: Yeah, it is good. What else?

S2: Many animals live in national parks.

T5: yeah, but what kind of animals?

S3: Wild animals like lions, giraffes, and monkeys live in national parks.

T5: Good. We are going to read the passage about National Parks in Ethiopia. But before that let us study the following words.(Reserve, endemic, wildlife, species).Then, immediately the teacher orders the students to copy down the words in their exercise books without attempting the contextual meanings of words.

While the first round of observation was going on, the teacher asks few questions to elicit the students' background knowledge. He pre-teaches key vocabulary to minimize comprehension barriers. During the second observation, except for his trial to make students familiar with a few vocabulary words taken from the passage, T5 did not effectively implement the pre-reading strategies. Therefore, the results show that students might not be fully motivated and engaged in reading comprehension activities since they could not activate their schemata and get motivated to read the passage.

Extract 6: Sample Reading Comprehension Lesson

Lesson 1: Unit 4: Reading Skills: National Parks in Ethiopia

Pre-reading phase [9:30 -9:40]

Observation Round-1

T6: Good morning students.

Ss: Good morning teacher.

T6: For today we read the passage entitled, "National Parks in Ethiopia Page, 88. He then writes the title of the passage on the whiteboard. Before that let's try the pre-reading questions on page 88.What do you know about national parks?

Ss: Different wild animals live in national parks.

T6: Yes, we know that various wild animals live in national parks.

S: Tourists come to national parks to visit wild animals.

T6: Yeah, tourists usually visit national parks. Good, he said. Then, he jots down keywords taken from the passage. (reserve, endemic, wildlife, species) on the whiteboard. Copy the words in your exercise book and study them. You can do it together in your groups.

Ss: Copy down the words in their exercise book.

T6: Now, be in your groups and read the passage silently as much as possible.

During the first round of observation, T6 tried to implement the pre-reading strategies, like activating the background knowledge of students to assist them in connecting their prior knowledge with the passage they were assigned to read. He drew students' attention to the title of the passage to help them predict the content of the passage. Conversely, during the second round of observation, he completely ignored application of pre-reading strategies. The data may suggest that, similar to most of the participants, his implementation of the pre-reading strategies was inconsistent.

It seems logical to compare and contrast the pre-reading observation data (reflective notes) with the strategies incorporated under the reading comprehension lesson observation framework (RCLOF) or rubric to understand the extent of participants' endeavours in implementing the pre-reading strategies. Therefore, some participants infrequently practice pre-reading strategies like pre-teaching key vocabulary, activating background knowledge by asking questions related to the passage, motivating the students to read, and assisting them to predict the content of the passage by looking at the title. On the other hand, the majority of participants did not consistently invite the students to read the passage's title, examine the pictorial descriptions related to the passage, and then have a discussion on the contents.

Students were not encouraged to activate their background knowledge (schemata) by responding to relevant questions, brainstorming ideas related to the passage, and reflecting on what they know about the topic of the given passage. Additionally, the participants failed to help the students participate in individual, pair, or group discussions on pre-reading questions. By raising a discussion point about the topic prior to reading the passage, the teachers failed to motivate the students for reading. They failed to introduce and discuss unfamiliar words in a meaningful context, focusing on those words that were central to an understanding of the passage the students were assigned to read.

Likewise, the students were not encouraged to state or write predictions related to the topic of the reading passage on a regular basis. Before reading occurred, the teachers did not help the students identify the types of text structures that they were going to read to determine what their purpose should be for reading the passage.

Results of the interview on the application of the pre-reading strategies

The participant EFL teachers were asked five interview questions to explore the reading strategies they apply at the pre-reading stage to assist students in activating their schemata, get them motivated to read, and become familiar with the passage they are assigned to read.

Table3. Codes, themes and sub-themes established from interview data regarding application of pre-reading strategies

No.	Codes	Themes	Sub-themes
1	Ask students questions related to the passage; show pictures so that they can predict the passage.[T1] Students share ideas about pre-reading questions to facilitate their schema.[T2] Ask their expectation about the passage ; They do pre-reading questions [T3] -Students do pre-reading questions in pairs and reflect ideas.[T4] Elicit students' prior knowledge through questioning. [T5] Students do pre-reading questions in pairs and in groups.[T6]	Using pre-reading strategies to facilitate the students' comprehension of the passage	-Ask questions about the passage to elicit students' prior knowledge -Students share ideas to activate their prior knowledge -Students explain their expectations -They answer pre-reading questions
2	Advise students to consult a dictionary and to read the text at home; Pre teach key vocabulary (antonyms & synonyms); Teach prefixes and suffixes to help students guess the meaning of unfamiliar words [T1] Advising students to guess the meaning of words based on context clues, antonyms and synonyms. [T2] Pre teach unfamiliar words taken from the passage [T3] Students do vocabulary activities after reading the passage. [T4] Do not pre-teach key vocabulary before reading; Use context clues. [T5]-Pre teach key vocabulary; Advise students to guess the meaning of unfamiliar words using context clues [T6]	-Assisting students in avoiding comprehension barriers such as unfamiliar words.	Consulting a dictionary Pre teach key vocabulary Students guess the meaning of unfamiliar words using affixes and context clues.
3	Do not teach students text structures; Assist students to re-read the text [T1] knowing text structures facilitate comprehension; Do not teach students the text structures. [T2] Do not teach text structures before reading [T3].Advise students to look at information about the source and type of text ; Do not teach text structures.[T4] Assist students to guess the meaning of unfamiliar words.[T5] Do not teach students text structure [T6]	-Strategies used to help students avoid text structure barriers	Do not teach students text structures Help students see the source of text Assist students to look at sources and type of the text
4	Assist students in doing pre-reading questions and answering teacher made questions related to the passage. [T1] Make students look at the title & pictures of the passage; Discuss pre-reading questions to predict about the passage. [T2] Ask questions related to the passage to help students predict about the passage.[T3] Students answer pre-reading questions to predict about the content of the passage[T4] Students answer pre-reading questions to predict about the passage [T5] Students answer pre-reading questions to predict the passage[T6]	The strategies applied to assist the students to predict the passage	Help students answer pre-reading questions Look at the title and pictures about the passage Let them to look at the title and pictures related to the passage Ask students questions about the passage before reading

5	The students reflect on ideas they know about the title of the passage [T1]	Strategies applied to activate the background knowledge of the students in connection to the reading passage	Students explain information they know about the passage
	Before reading, ask students questions related to the passage to activate their prior knowledge.[T2]		Before reading, ask students questions about the passage to activate their schemata
	To facilitate schema and what they know about the title of the passage, students reflect orally on their experiences.[T3]		
	Students reflect orally on what they know about the title of the passage.[T4]		
	Help students to reflect on what they know related to the title of passage.[T5]		
	Ask students to respond to questions related to the passage[T6]		

Theme No.1: Facilitating the students' reading comprehension

Interview question 1 focused on exploring the pre-reading strategies the participants execute to facilitate the students' comprehension of the given passage. This general question was deliberately asked to provoke the participants' views about the implementation of pre-reading strategies before they are asked specific questions that conceivably offer them unnecessary clues.

As the interview data indicated, all of the participants agreed that to activate students' background knowledge (schemata), they encourage students to answer pre-reading questions in pairs and in small groups. They also said that they ask students questions to stimulate the students' prior knowledge about the passage they are assigned to read. The participants also clarified that they make students reflect on their prior knowledge and look at pictures related to the title of the passage. Hence, students can predict (tell their expectations) about the content of the passage.

Theme No.2: Assisting students in avoiding vocabulary barriers

Interview question 2 was intended to ascertain the pre-reading strategies the participants may implement to assist students in avoiding comprehension barriers like unfamiliar words. As regards such issues, T1 and T6 highlighted that they assist students in using context clues to guess the meaning of unfamiliar words while reading the passage. T1, for instance, said, "I advise students to consult a dictionary and to read the text at home, pre teach key vocabulary (antonyms and synonyms), and teach prefixes and suffixes to help students guess the meaning of unfamiliar words. " Additionally, T3, T4, and T6 described that they pre-teach key vocabulary taken from the passage to help students avoid vocabulary related barriers to comprehension. In opposition, T5 indicated he did not pre-teach key vocabulary; rather, he advised students to use context clues to find out the meaning of unfamiliar words during the actual reading. In connection to this issue, T1 recounted:

> *Mainly, the students encounter vocabulary related obstacles. Hence, I advise them to consult a dictionary when reading. I also encourage them to read the passage at home ahead of time. I also list out and pre-teach key vocabulary taken from the reading passage to minimize the effect of language barriers on students' comprehension of the text. Besides, I try to assist students in knowing the antonyms and synonyms of key words. Again, I help them identify the prefix and suffix of key words extracted from the passage so as to find out the meaning of unfamiliar words.*

Theme No.3: Helping students avoid text structure barriers

Interview question 3 concentrates on portraying the participants' reactions to the strategies they may apply during the pre-reading stage to avoid the text structure barriers. Text structure barriers are hindrances that students might experience while reading the passage. Except for *T5, t*he rest of the participants illustrated that they did not teach students about the text structures to aid their reading comprehension. Meanwhile, T4 pointed out that he advises students to look at information from the passage about the source and type of text. In the same

way, T1 specified that he guides students to re-read the passage rather than teach them the text structures. T2 remarkably explained that:

> *There are expository and scientific texts. I believe knowing text structure helps students to comprehend the text better. However, I have no experience in pre-teaching students about text structure. It is new for me. I try to use this strategy for the future when I teach reading comprehension lessons.*

As the data indicated, the majority of the participants did not teach their students the text structure prior to the while-reading phase. Therefore, this finding shows that the students may not become aware of the text structures due to teachers' lack of experience and commitment to teach them text structures during the pre-reading phase to aid the students' comprehension capabilities.

Theme No.4.Assisting students in Predicting the passage

Interview question 4 was intended to obtain responses related to the pre-reading strategies that the participants implement to assist the students in predicting the passage they are going to read. Except for T3, the other participants stated that they assist students in doing pre-reading questions so that the students can predict the content of the passage. In addition, T1 and T3 clarified that they ask teacher made questions related to the passage to assist students in predicting the passage. Unlike others, T3 said, "Students look at the title and pictures related to the passage. These activities enable the students to predict the content of the passage they are about to read. "

Theme No.5.Activating the students' background knowledge

Interview question 5 was asked to get responses to the kind of pre-reading strategies the participants implement to activate the background knowledge (schemata) of students related to the text they are going to read. Except for T1, all of the participants revealed that to facilitate the background knowledge (schemata) of students related to the passage, they assisted them in reflecting orally what they knew about the title of the passage. Therefore, the students can comprehend the passage better. T2 said, " Before reading, I ask students questions related to the passage to activate their prior knowledge. "

DISCUSSION

The next section presents the discussions of major findings gained from interviews and observation data parallel to each research question of the study. Then, the discussion was made in light of the findings of previous studies.

EFL teachers' beliefs regarding application of pre-reading strategies

The findings drawn from interview data elicited that the participants have positive beliefs about the instructional importance of the pre-reading strategies. These positive views may encourage them to implement the pre-reading strategies when teaching reading comprehension. However, due to lack of instructional time, the majority of the participants do not apply the pre-reading strategies. These findings run counter to the findings of Zhang's (1993) study which says modern reading activities in contrast to traditional materials entail three-phase procedures: pre-reading, while-reading, and post-reading. Comprehension is facilitated by explicitly introducing schemata through pre-reading activities. Therefore, the findings of this study in this regard would suggest that teachers do not let students do pre-reading activities. Consequently, the students do not get opportunity to get motivated for reading, solve text structure as well as linguistic barriers, and activate their schemata to facilitate comprehension. This situation may negatively affect the improvements of students' reading comprehension abilities.

As the findings from interview data vividly disclosed, the majority of the participants believe EFL teachers should assist students both to comprehend the passage and to become familiar with the relevant pre-reading strategies. This would in turn enable them to get motivated to read and to activate their schemata for better comprehension. Contrarily, the majority of the participants believe much attention should be given to the while-reading strategies. They give less attention to the pre-reading strategies. This mind-set would affect EFL teachers' endeavours in assisting students in getting ready psychologically and linguistically prior to the actual reading phase.

Application of pre-reading strategies

According to the results of the interviews, the participants apply the pre-reading strategies such as asking the students questions about the passage to elicit their prior knowledge and comprehend the text. They also help students explain their expectations, complete pre-reading questions, and assist students in exchanging ideas to draw on their past knowledge. According to a number of studies (e.g., Yeni Mardiyana Devant, 2017; Irawati, 2019), the pre-questioning strategy improves students' reading comprehension performance and aids in eliciting background information. This result suggests that the participants have prior experience posing pre-reading questions to help students improve their reading comprehension skills. As a result, students will be able to draw on their past knowledge and relate it to the text they are required to read. Their reading comprehension difficulties will therefore be significantly reduced.

The participants suggest that students use dictionaries to help them overcome comprehension obstacles such as unfamiliar words. Additionally, they advise students to use context clues, prefixes and suffixes to help them guess the meaning of words. They also pre-teach key terminologies useful to comprehend the passage. This finding is in line with the findings of other related studies (e.g., Mousavian & Siahpoosh, 2018; Taye et al., 2018; Chowdhury & Ara, 2021) showing students' reading comprehension is enhanced when important vocabulary is taught to them before they begin reading. However, as the observation data revealed, the EFL teachers failed to motivate students in reading by raising discussion topics or questions about the title before they even read the text. Besides, they did not focus on unfamiliar words that were essential to comprehending the text the students were required to read, nor did they present and explain the new vocabulary in context. In this sense, the disparity between the findings of the observations and the interviews may have resulted from limited observation rounds and the small sample size of this study.

Regarding the use of pre-reading strategies to assist students in avoiding obstacles related to text structure, the findings of the interviews showed that, despite not instructing the students in text structures, the participants encouraged them to examine the sources and kinds of texts. This finding is not consistent with the results of studies (e.g., Armbruster et al., 1987; Aghasafari & Malayeri, 2015; Eliata & Miftakh, 2021) which revealed teaching text structures can improve the reading comprehension skills of then students. This may be partially attributed to the participating EFL teachers' lack of awareness of the importance of teaching text structures beforehand in order to improve the students' reading comprehension. Furthermore, this result may happen due to biases brought about by the little observation period of reading comprehension classes used in this study to gather data.

In connection to the pre-reading strategies used to help the students predict the passage, the participants aid the students in answering pre-reading questions, allow the students to preview the title and accompanying images, and pose questions on the text prior to reading. According to Phuong & Trang (2021), teachers greatly value the significance that pictures play in helping the students' reading comprehension throughout the pre-reading phase. This suggests that in addition to making predictions, students might become more inclined to read the passage if they had retained specific hints from viewing images related to it prior to reading it.

Regarding the pre-reading strategies used to engage the students' prior knowledge, the interview findings showed that the participants asked students questions about the passage to activate their schemata. This would also assist the students in explaining what they already knew about it. On the other hand, the observation results showed the students were not prompted to use their prior knowledge (schemata) by answering pertinent questions, or by allowing them to consider what they already knew about the content of the text. These observational results contradict the research findings that showed students' reading comprehension skills are improved by activating their prior knowledge (Smith et al., 2021; Deshpande, 2016; Oluoch et al., 2023). Also, the findings of the observation demonstrate that the participants did not help the students participate in discussions of the pre-reading questions either individually, in pairs, or in groups. In this sense, the discrepancy between the observational and interview results may stem from EFL teachers' lack of experience of how to activate students' schemata during the pre-reading phases. This condition may also happen due to the fact that teachers lack dedication and have limited amount of instructional time. This may inhibited them to apply those pre-reading strategies efficiently.

According to the observation data, some participants infrequently use pre-reading strategies including pre-teaching important terminology, encouraging students to read, and activating prior knowledge by posing questions about the passage. They did not help the students guess the theme of the passage based on its title. In contrast, a number of studies (e.g., Augustina, 2012; Sumirate et al., 2019; Alfisyahrin, 2022) found that students' reading comprehension is enhanced when they use a prediction guide. The finding of this study in this regard would suggest that the participants were not aware of or dedicated to help students apply prediction strategies. EFL teachers' lack of pedagogical preparedness, dedication, knowledge and skills to fully implement strategies intended to help students predict the text may be the cause for this problem. In this sense, the findings of the observation and the interview were different. This could be because of the small sample size and short observation period of data collection. The findings might have been different if each participant had undergone more than two observation rounds and the sample size had increased.

On the other hand, the findings of the observation showed that most of the participants did not always ask the students to preview the text by reading the title, examining the images, and then talking about the potential contents of the text. According to Iklima et al. (2019), students will be able to comprehend the entire text more readily and develop their reading skills if they have more time to preview the material before reading it.

According to the observation results, students were not often encouraged to make or write predictions about the content of the reading passage. In reading comprehension classes, the teachers did not assist the students in identifying the kinds of text structures they would read or in determining why they should read the passage before reading it. This finding contradict with the results of studies (e.g., Aghasafari & Malayeri, 2015; Ghorbani Shemshadsara et al., 2019) that showed increasing students' understanding of text structure can improve their reading comprehension abilities. There are also differences between the results of interviews and observations with regard to teaching text structure and putting prediction strategies into practice during the pre-reading stage. Such disparities may mean the participants could not translate in to practice their theoretical awareness about the value of text structure in developing reading comprehension abilities of the students.

CONCLUSION

The following conclusions were drawn on the basis of the findings generated from the data gathered by means of individual interviews and reading comprehension lesson observations (field notes, reflective journals). Based on the findings, it seems reasonable to conclude that though the majority of the participants acknowledged the instructional advantage of the pre-reading strategies, they presume the pre-reading strategies are time-consuming and instructionally

demanding. They also admitted most of the instructional time should be given to the while-reading strategies. Hence, they give less attention to the pre-reading strategies. This situation may hamper the required support that should be given by the teachers to the students during the pre-reading phase in order to assist them in activating their schemata, getting them motivated, and comprehending the given passage well. This situation may affect the students' readiness for reading the passage. During pre-reading phase, teachers and students may also miss the opportunity to resolve linguistic as well as psychological barriers that students may encounter during the actual reading comprehension phase. Consequently, they cannot fully achieve the ultimate objectives of reading comprehension lessons.

As the findings from the interview indicated, all of the participants presume that the aim of teaching reading comprehension is both to assist students in becoming strategic readers and to develop reading comprehension skills. Having such insights in mind, the participating EFL teachers may devote time to support students to read and comprehend the content of the given passage. Also, they will attempt to assist the students in selecting and applying the necessary reading strategies to comprehend the passage with relative ease. Hence, the teachers and the students will be able to achieve the intended objectives of the reading comprehension lessons. To the contrary, the observation results indicated that the majority of the participating EFL teachers apply few pre-reading strategies. Therefore, it seems reasonable to conclude that regardless of their positive beliefs, EFL teachers' show limited application of pre-reading strategies. Hence, this situation calls up a need to improve their instructional role through continuous professional development and in-service training.

SUGGESTIONS

Based on the findings of the study, it is recommended that to enhance the instructional role of EFL teachers in utilizing the pre-reading strategies, continuous professional development programs or in-service training and workshops should be arranged. This may enable the teachers to assist the students in enhancing their reading comprehension strategy use in the long run. Furthermore, EFL teachers should read contemporary literature pertaining to reading comprehension strategy instruction to update their knowledge or theoretical awareness. Thus, the teachers can alter their positive beliefs about the instructional benefits of the pre-reading strategies into tangible enactments of such strategies in reading comprehension classes.

LIMITATIONS AND IMPLICATIONS FOR FUTURE RESEARCH

Any study could not be devoid of limitations. The sample size determined for this study was very limited. This might affect the transferability of the results of the study to other educational settings. Also, the researchers of this study applied only two rounds of observation for each participant to capture data on the trends of application of pre-reading strategies in the actual secondary school reading comprehension classes. However, the reliable picture of EFL teachers' instructional roles in applying pre-reading strategies may be portrayed better through extended classroom observations. Hence, by increasing the sample size, rounds of observations of reading comprehension lessons, and the number of target secondary schools, it seems possible to get further insights into the instructional roles of EFL teachers in applying the pre-reading strategies.

Further qualitative investigation can be carried out by future researchers to come up with an in-depth insight into the students' awareness, beliefs about the pre-reading strategies, and application of such strategies in reading comprehension classes. The current study didn't address the personal and the contextual factors that may affect EFL teachers' application of the pre-reading strategies. Hence, all these issues require more investigations by interested researchers through mixed methods and longitudinal approaches.

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