Preliminary Evidence for the Internal Structure and Reliability of the EFL Teachers' AI Usage Scale

Selami Aydın[1] & Sena Sayıcı[2]

[1]Prof. Dr., İstanbul Medeniyet University, Istanbul, Turkey
selami.aydin@medeniyet.edu.tr
https://orcid.org/0000-0003-1614-874X

[2]M.A., Olentangy Local School District, Ohio, USA
senakilicsayici@gmail.com
https://orcid.org/0009-0009-3324-4232

Abstract

Despite the growing integration of artificial intelligence (AI) into English as a foreign language (EFL) teaching, research lacks psychometrically sound instruments to measure EFL teachers' AI use. Moreover, existing scales predominantly focus on general attitudes, knowledge, or competencies related to AI in a general educational context. This study aimed to provide preliminary evidence for the factor structure and reliability of the EFL Teachers' AI Usage Scale (TAS). The scale was administered to 426 EFL teachers, and the Exploratory Factor Analysis (EFA) was conducted to examine its internal structure and consistency. The results indicated a clear, interpretable single-factor structure representing teachers' pedagogical and professional use of AI in EFL teaching and provided initial psychometric evidence supporting the TAS as a reliable instrument. It was recommended that future studies examine the internal structure of the TAS across diverse cultural and educational settings, test its structure using confirmatory approaches, and investigate its relationships with related constructs.

Keywords: English as a foreign language; teaching; artificial intelligence, scale; preliminary tests, explanatory factor analysis, reliability, internal structure.

Yabancı Dil Olarak İngilizce Öğretmenlerinin Yapay Zekâ Kullanım Ölçeğinin İç Yapısı ve Güvenirliğine İlişkin Ön Bulgular

Özet

Yapay zekânın İngilizcenin yabancı dil olarak öğretimi alanına giderek daha fazla entegre edilmesine rağmen, öğretmenlerin yapay zekâ kullanımını ölçmeye yönelik psikometrik açıdan güçlü araçlar henüz mevcut değildir. Mevcut ölçekler ise çoğunlukla genel eğitim bağlamında yapay zekâya ilişkin tutum, bilgi ya da yeterliklere odaklanmaktadır. Bu çalışma, yabancı dil olarak İngilizce öğretenlerin Yapay Zekâ Kullanım Ölçeğinin faktör yapısı ve güvenirliğine ilişkin ön kanıtlar sunmayı amaçlamaktadır. Ölçek 426 öğretmene uygulanmış ve iç yapısını ve tutarlılığını incelemek amacıyla Açımlayıcı Faktör Analizi gerçekleştirilmiştir. Bulgular; ölçeğin, İngilizce öğretiminde öğretmenlerin pedagojik ve mesleki açından yapay zekâ kullanımını simgeleyen, açık ve yorumlanabilir tek faktörlü bir yapı ortaya koymuş ve güvenilir bir ölçme aracı olduğuna dair ilk psikometrik kanıtlar ortaya çıktığını göstermektedir. Sonraki çalışmalarda ölçeğin iç yapısının farklı kültürel ve eğitimsel bağlamlarda incelenmesi, doğrulayıcı yöntemlerle test edilmesi ve ilişkili yapılarla olan bağlantılarının araştırılması önerilmektedir.

Anahtar Sözcükler: Eğitim dili İngilizce, EMI, EDİ, öğretim yöntem ve teknikleri, yükseköğretim

1. Introduction

In today's world, learning English is vital for several reasons. From a general perspective, English is now a *lingua franca* for people with another mother tongue (Rose et al., 2021). Thus, individuals need to develop their communication skills in the target language (Fandrych, 2009). Moreover, since English is considered the

language of the academy, knowing English enables non-native speakers to engage effectively with and succeed in academic contexts (Hamp-Lyons, 2005). In this way, it can be stated that a positive correlation exists between English proficiency and career development, including promotions, wage increases, and career satisfaction (Peltokorpi, 2023). Last, English is the dominant global language in diplomacy, international relations, tourism, popular culture, and business (Xhemaili, 2022). While proficiency in English brings certain benefits, EFL learning and teaching also pose challenges.

Both teachers and learners face several challenges in EFL classrooms. For example, large class sizes still pose a significant problem, as they prevent teachers from effectively managing the classroom, providing individualized attention, and offering personalized assessment and feedback (Roshan et al., 2022). Additionally, a lack of instructional resources restricts teachers' ability to practice effectively (Asmari, 2015). In other words, teaching programs still lack truly *authentic, real-world* videos, articles, and podcasts, which are known to increase interest and progress (Sabir & Ahmad Hammad, 2023), and often rely on ready-made textbooks (Acosta & Cajas, 2018). Moreover, the quality of language teaching and learning is adversely impacted when technology is not integrated into language courses (Eryansyah & Erlina, 2023). In this way, learners experience particular difficulties. For instance, they may have some psychological problems related to using the target language, such as low confidence, self-esteem, and speaking anxiety (Aydın, 2008). In addition to these psychological problems, negative classroom environments hinder engagement in learning (Ye, 2024).

Given the challenges mentioned, AI may offer several promising solutions for EFL teaching and learning. For instance, AI-powered platforms facilitate truly individualized learning pathways, allowing teachers to address diverse student needs even in crowded classrooms (Aydın & Zeinolabedini, 2024). Additionally, AI can enrich the quality of instructional materials (Octavio et al., 2024). By strengthening teachers' capacity to facilitate, manage, and actively engage learners, AI helps create a more effective and efficient classroom climate (Kostka & Toncelli, 2023). When thoughtfully integrated, AI tools boost learner motivation (Moybeka et al., 2023) and support personalized, flexible, and genre-sensitive practice (Alharbi, 2023; Sayici & Aydın, 2025). Moreover, using AI tools, in particular, creates low-pressure, learner-paced interaction that strengthens communicative competence and engagement (Chen et al., 2023), with expanded opportunities to develop their language proficiency, reduces anxiety, increases enjoyment (Jeon, 2024), and develops critical thinking skills (Hapsari & Wu, 2022). AI usage expands learners' access to authentic language and real-life communication (Aydın & Zeinolabedini, 2024) and improves proficiency and motivation (Jia et al., 2022). While using AI in the EFL teaching context offers certain benefits, two problems arise in the research context. First, there is a lack of research on teachers' use of AI-based tools and environments in EFL instruction. Thus, how EFL teachers utilize AI tools and environments in their teaching activities must be clarified within the research context. To achieve this aim, valid and reliable measurement tools must be used to measure their AI usage. However, current research lacks studies on developing and validating a scale to measure teachers' AI use in the teaching process, as shown in the research synthesis below. Before presenting the research synthesis, a theoretical background is established.

1.1. Theoretical framework

Several terms and concepts should be clarified within a theoretical framework. First, AI can be defined as a multidisciplinary field that draws on computer science and linguistics. Considering that AI is capable of performing multitasks such as understanding, learning, acquiring knowledge (Aydın & Zeinolabedini, 2024), problem-solving, decision-making, perception, and comprehension (Sarker, 2022), it can produce creative language by reactivating existing knowledge (Cizrelioğlu & Aydin, 2024; Sarker, 2022). Thus, the use of AI in the EFL teaching process is grounded in *Activity Theory*. The theory addresses the mental capabilities of users who are aware of and can understand the cultural and technical dimensions of human action (Bertelsen & Bødker, 2003). Within the scope of *autonomous learning*, grounded in Bandura's (1986) Social Cognitive Theory, learners possess the capacity for resourcefulness, agency, initiative, and persistence in personalized learning (Ponton & Rhea, 2006). In addition, since *learner-centeredness* requires involvement in activities and tasks (Dang, 2006), AI tools can foster an engaged, active learning environment. Considering that AI tools may provide opportunities for *interaction* through technology (Anderson & Elloumi, 2004), users can produce comprehensible input and engage in the negotiation of meaning (Ellis, 1999). *Active learning* is also a model for student-centered teaching (Meyers, 1993), whereas *blended learning* combines technology and face-to-face components (Hockly, 2018). *Flipped learning* includes interactive learning activities in technology-based and traditional environments (Ercan & Aydın, 2022; Romero et al., 2019). Since *constructivism* establishes the basic components for learning outcomes (Wood et al., 1976), AI tools can be utilized as a source of action-taking during activities within the limits of scaffolding, a process of organizing tasks and activities in accordance with learners' intellectual readiness (Vygotsky, 1978). Using AI in language teaching relates to Activity Theory,

which suggests that humans' mental capabilities involve both their technical and cultural aspects (Bertelsen & Bødker, 2003). The theory examines individuals and the social context in which they are embedded by analyzing their deliberate activities (Kaptelinin & Nardi, 2009). Second, *scale development* is a systematic, testable process for designing, constructing, adapting, and ultimately validating a measurement tool that assesses psychological, educational, or social constructs (DeVellis, 2017). It includes several steps, such as defining the construct, generating items representing its dimensions, and ensuring reliability and validity (John & Benet-Martínez, 2000) to collect standardized data for interpretation, inference, and comparison.

1.2. Previous research

A diverse range of AI usage scales has been developed in recent years to assess teachers' and pre-service teachers' knowledge, attitudes, competencies, and beliefs regarding artificial intelligence in educational settings. For instance, the Generative AI Attitude Scale (Nyaaba et al., 2024) implemented among pre-service high school education teachers included factors such as attitudes toward generative AI in teaching and learning, as well as ethical and advocacy-related attitudes. While the scale reported an overall explained variance of 54.0%, no data were reported regarding internal consistency. The (Mis)conceptions of AI Survey (Antonenko & Abramowitz, 2023), which targeted K-12 science teachers, aimed to identify both accurate and inaccurate conceptualizations of AI. However, it relied solely on descriptive statistics and lacked both factor analysis and reporting of internal consistency. In addition, the General Attitude towards AI Scale (Lipovec & Flogie, 2023) was used to assess pre-service K-12 teachers' positive and negative attitudes; however, it lacked psychometric properties and internal consistency. Lastly, Chounta et al. (2022) used a 10-item survey to assess K-12 teachers' perceptions and familiarity with AI, with the first five questions open-ended. Their analysis only combined descriptive statistics for the quantitative data and a coding scheme for the qualitative responses.

While the studies mentioned lacked data on internal consistency and validity, several robust instruments also emerged. For example, the Teachers' Perception Scale, developed by Işık et al. (2024), showed strong reliability (α=.97) and a three-factor solution: competence (34.42% of variance), anxiety (15.09%), and usefulness (14.78%), with a total explained variance of 64.29%. Additionally, the Teacher Attitudes towards AI Scale developed by Losada et al. (2023) was used to assess Spanish teachers' willingness, attitudes, and expectations toward AI, with high internal consistency (α=.86–.93), although the percentage of variance was not reported. The Artificial Intelligence Literacy Scale, developed by Ning et al. (2025), exhibited a multidimensional structure comprising perception, knowledge, application, and ethics, with high internal consistency (α = .88–.94) and 62.16% of variance explained. In addition, the Teacher AI Competence Self-Efficacy Scale by Chiu et al. (2025) was used to evaluate six aspects of AI competence, pedagogy, ethics, and professional engagement among K–12 teachers, showing a reliability value of 0.88, although variance data were missing. As a final example, Gayed (2025) developed a scale to measure the perspective of arts and humanities, as well as social sciences, educators on artificial intelligence and reported modest reliability (α = .81), explaining only 0.51% of the variance, indicating fairly limited psychometric robustness. Although various scales have been developed to explore teachers' perceptions of artificial intelligence in education, only a limited number have been specifically designed to assess how EFL teachers perceive AI use in EFL teaching, and existing measures lack sufficient evidence of reliability, construct validity, and psychometric rigor. For instance, the Knowledge, Attitude, Practice Scale, designed by Pokrivcakova (2023), included four subdimensions: knowledge, negative and positive attitudes, and practices. However, it did not report internal consistency or variance explained. Lastly, Ahmadi Fatalaki et al. (2025) developed the Teachers' Attitudes Toward AI in Education, which reported 88.62% variance across five dimensions, with an overall reliability of α = .8. Table 1 summarizes the referenced scales.

Table 1. Summary of the findings in previous research

Study	Scale	Target group	Focus and dimensions	Variance explained	Internal consistency
Nyaaba et al. (2024)	Generative AI Attitude Scale	Pre-service high school teachers	Attitudes	54.0%	Not reported
Antonenko & Abramowitz (2023)	(Mis)conceptions of AI Survey	K-12 science teachers	Accurate/inaccurate conceptions	Not reported	Not reported
Lipovec & Flogie (2023)	General Attitude towards AI Scale	Pre-service K-12 teachers	Attitudes	Not reported	Not reported
Işık et al. (2024)	Teachers' Perception Scale	Teachers	Competence, anxiety, usefulness	64.29%	α = .97
Losada et al. (2023)	Teacher Attitudes		Willingness,	Not reported	α = .86–.93

	towards AI Scale		attitudes, expectations		
Ning et al. (2025)	AI Literacy Scale		Perception, knowledge, application, ethics	62.16%	α = .88–.94
Chiu et al. (2025)	AI Competence Self-Efficacy Scale	K–12 teachers	Competence, pedagogy, ethics, engagement	Not reported	α = .88
Chounta et al. (2022)	10-item Perception Survey		Perceptions, familiarity	Not reported	Not reported
Gayed (2025)	AI Perspective Scale	Arts, humanities, and social sciences educators	Perspective on AI	0.51%	α = .81
Pokrivcakova (2023)	Knowledge, Attitude, Practice Scale	EFL teachers	Knowledge, positive/negative attitudes, practices	Not reported	Not reported
Ahmadi Fatalaki et al. (2025)	Teachers' Attitudes Toward AI in Education		Interest, Intention to use, Ethical concerns, Usefulness for Learners, and Usefulness for Teachers	88.62%	α = .87

1.3. Overview of the current study

While EFL learning offers benefits, EFL teachers and learners face persistent challenges in classroom environments, including large class sizes, insufficient instructional resources, limited technological integration, and psychological barriers to language use. In response to these issues, AI may offer solutions to improve EFL teaching and learning processes, but these solutions largely depend on how teachers perceive its use in the teaching process. Within this scope, it is necessary to accurately assess EFL teachers' use of AI. Notably, most existing instruments do not directly measure teachers' AI usage in teaching practices but instead focus on knowledge, attitudes, competencies, and beliefs. Moreover, research often targets broad groups, such as K–12 teachers, pre-service teachers, or educators in STEM fields, with limited evidence specifically focusing on EFL teachers. Most importantly, existing tools either omit internal consistency statistics or rely solely on descriptive analyses without factorial validation. With these concerns in mind, the current study aims to develop a contextually relevant instrument and measure EFL teachers' AI usage through preliminary tests of reliability and internal structure, and asks one research question:

- To what extent does the TAS demonstrate evidence of internal structure and reliability?

2. Method

2.1. Research context

The study aimed to measure EFL teachers' AI use and to develop an initial version of the scale. Grounded in the standards of psychological and educational measurement (AERA et al., 2014), the study focused on preliminary procedures, specifically internal consistency and construct validity. To this end, the research involved defining the construct, generating and reviewing items, and conducting statistical analyses to evaluate the internal structure and reliability. These initial steps aimed to provide foundational evidence of the scale's psychometric soundness and to inform future, theoretically grounded and psychometrically sound refinement and validation efforts for assessing EFL teachers' AI integration in EFL teaching and learning contexts.

Considering the complex nature of psychological and pedagogical constructs (Aydın et al., 2024), such as teachers' AI usage, it is essential to begin with a strong foundation that includes a structured procedure to generate initial evidence of the reliability and internal structure. Thus, the first process started with a conceptual definition of the construct, informed by a review of current literature and the theoretical landscape of AI integration in EFL teaching. Based on this foundation, an initial pool of items was created and subjected to expert review for clarity, relevance, and theoretical alignment (Beck & Gable, 2001). The second stage involved assessing the scale's internal structure using the EFA, which identified underlying dimensions and guided item refinement. Internal consistency analyses were also conducted to evaluate the reliability of each factor (Kenyon & MacGregor, 2013). While confirmatory procedures and external validation were beyond the scope of this

initial study, the findings served as an essential first step in the iterative process of scale validation. Thus, the study aimed to provide initial psychometric evidence for a theoretically grounded instrument that could support further studies exploring EFL teachers' AI integration in EFL teaching, as illustrated in Figure 1.

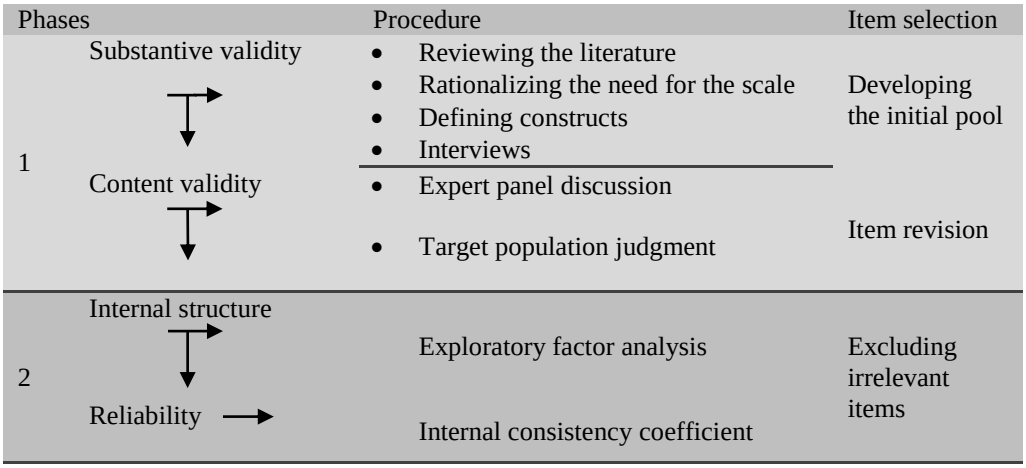

Figure 1. Flowchart of the scale development process (Aydın et al., 2024)

2.2. Participants

As presented in Table 2, three groups were used for data collection. The first group consisted of participants who took part in the interviews conducted to explore and clarify the construct and to inform item generation. The second group included EFL teachers who participated in the piloting phase, during which initial feedback on item clarity, content relevance, and comprehensibility was gathered. Last, the third group consisted of participants who responded to the finalized scale items to conduct the EFA to evaluate the internal structure and psychometric properties. It should be noted that the participant selection aimed to include a balanced representation of both novice and experienced teachers to ensure diverse perspectives on AI integration in language teaching, while the gender distribution reflected the characteristics of the broader EFL teaching population.

The participants in the interview process consisted of seven EFL teachers. Their ages ranged from 26 to 40 years, with a mean age of 30.43 (SD = 4.51). The group comprised five female (71.4%) and two male (28.6%) participants. Regarding educational qualifications, two participants held Bachelor's degrees (28.6%) and five held Master's degrees (71.4%). The participants' teaching experience ranged from 2 to 18 years, with a mean of 6.43 years (SD = 5.81). Regarding their institutional affiliation, one participant was from a high school (14.3%), and six were from higher education institutions (85.7%).

The participants in the piloting phase were 10 EFL teachers. The mean age was 37.4 (SD = 7.26), within the range of 29-55. Of the participants, four were male, while six were female teachers. The participants' teaching experience ranged from one to 30 years (M = 13.1, SD = 8.23). Regarding educational background, 10% of the participants held a Ph.D., 50% held an M.A., and 40% had a B.A. degree. Last, one participant worked in primary schools (10%), six in secondary schools (60%), and three in universities (30%).

Finally, the EFA group comprised 426 EFL teachers. The mean age of the participants was 32.58 (SD = 8.80), ranging from 21 to 60 years. Their teaching experience ranged between 1 and 39 years, with a mean of 9.65 years (SD = 8.01). In terms of gender distribution, 311 participants were female (73.0%), 112 were male (26.3%), and three participants (.7%) preferred not to specify their gender. Regarding educational background, 229 participants held a bachelor's degree (53.8%), 108 had a master's degree (25.4%), and 89 held a doctoral degree (20.8%). Regarding teaching context, 94 participants worked in primary schools (22.1%), 188 in secondary schools (44.1%), and 144 in higher education institutions (33.8%).

Table 2. Descriptives for the participants

		Sample1: Interview (n=7)		Sample 2: Piloting (n=10)		Sample 3: EFA (n=426)	
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Age		30.43	4.51	37.4	7.26	32.58	8.80
		(min.= 26, max.= 40)		(min.= 29, max.= 55)		(min.= 21, max.= 60)	
Teaching experience in years		6.43	5.81	13.1	8.23	9.65	8.01
		(min.=2, max.= 18)		min.=1, max.= 30)		(min.= 1, max.= 39)	
		N	%	N	%	N	%
Gender	Female	5	71.4	6	60.0	311	73.0
	Male	2	28.6	4	40.0	112	26.3
	Prefer not to say					3	.7
Degree	Ph.D.			1	10.0	229	53.8
	B.A.	2	28.6	5	50.0	108	25.4
	M.A.	5	71.4	4	40.0	89	20.8
School type	Primary		14.3	1	10.0	94	22.1
	Secondary	1		6	60.0	188	44.1
	University	6	85.7	3	30.0	144	33.8

2.3. Tools

The study employed two data collection tools: a background questionnaire and the TAS. First, the background questionnaire collected demographic information, including participants' age, gender, years of teaching experience, educational background, and institutional context. Second, the TAS was administered to measure foreign language teachers' self-reported use of AI in the EFL teaching context. The scale initially consisted of the items included in the exploratory factor analysis. All items were rated on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The responses obtained from the scale were used to examine the instrument's underlying factor structure and internal consistency reliability within the context of EFL teaching.

2.4. Procedure

Following approval from the institutional ethics committee, all research procedures involving human participants were conducted in accordance with established ethical standards. Participants were informed about the purpose of the study, the voluntary nature of participation, and the assurance of anonymity and confidentiality before data collection. Informed consent was obtained electronically from all participants. Data were collected via an online survey distributed via e-mail and professional networks. Reminder messages were sent periodically to increase participation rates, and the data collection process remained open for approximately one month. All responses were stored securely and used solely for research purposes. The study was conducted as an exploratory scale process. Initially, the TAS was administered to a large sample of EFL teachers. The collected data were then subjected to the EFA to identify the underlying factor structure of the scale. All procedures were carried out in English.

2.5. Analysis

IBM SPSS Version 21 was used to conduct the statistical analyses. Before the main analyses, assumptions related to sample size adequacy, univariate normality, outlier detection, linearity, and multicollinearity were examined, following the guidelines of Tabachnick and Fidell (2014). Exploratory factor analysis was performed using the maximum likelihood extraction method to identify the underlying factor structure of the Teachers' AI Usage Scale. Items with factor loadings below .70 or communalities below .50 were removed, and the remaining items were reanalyzed until a stable and interpretable factor solution was obtained. Internal consistency reliability of the resulting factors was assessed using Cronbach's alpha coefficients.

3. Results

Before conducting the EFA, several assumptions were assessed, including the presence of missing data, sampling adequacy, and normality. First, the participant-to-item ratio was approximately 11:1 (426 participants and 40 items), exceeding the recommended minimum for factor analysis (Hair et al., 1998). Second, sampling adequacy was evaluated using the Kaiser–Meyer–Olkin (KMO) measure, which yielded a value of .96, indicating excellent adequacy for factor analysis. Third, Bartlett's test of sphericity was statistically significant ($\chi^2 = 10137.26$, df = 378, $p < .001$), confirming that the correlation matrix was suitable for factor extraction.

The item-level descriptive statistics presented in Table 3 indicate that participants tended to endorse many items toward the higher end of the response scale. This pattern was reflected in predominantly negative skewness values ranging from –2.53 to –.02 and relatively high mean scores across items. Skewness values within ±2 are considered acceptable for normality, while values up to ±3 may be tolerated in large samples (Kline, 2023). Although several items exceeded the conservative ±2 threshold, the large sample size (N = 426) mitigated potential violations of normality. Kurtosis values ranged from -1.31 to 5.75. While kurtosis values within ±3 are generally considered acceptable (Hair et al., 1998), the higher positive kurtosis observed for some items suggests a degree of response clustering and peaked distributions. This pattern indicated a tendency toward limited dispersion, implying that respondents expressed relatively strong agreement on several items. Corrected item–total correlations ranged from .24 to .76, with most items exceeding the recommended minimum threshold of .30 (Nunnally & Bernstein, 1994), indicating satisfactory item discrimination overall. However, items with lower item–total correlations and restricted variability were closely examined during the exploratory factor analysis, as such characteristics might reduce the capacity of the scale to differentiate among respondents and contribute to redundancy.

Table 3. Item-level descriptive and psychometric statistics for the initial items (N = 426)

	Mean	Standard Deviation	Skewness	Kurtosis	Item–Total Correlation
1. AI tools help me generate diverse ideas for planning lessons, varying by task type, skill focus, modality, topic, and proficiency level.	3.70	.73	-2.53	5.75	.72
2. AI tools help me design classroom activities tailored to students' interests.	3.68	.72	-2.31	4.80	.68
3. AI tools enhance my ability to prepare effective vocabulary materials.	3.66	.75	-2.35	4.83	.74
4. AI tools enhance my ability to design effective grammar activities.	3.60	.78	-1.99	3.15	.67
5. AI tools support me in developing writing tasks.	3.63	.75	-2.06	3.83	.67
6. AI tools help me prepare for speaking activities.	3.54	.86	-1.85	2.48	.70
7. Using AI tools in my teaching increases student engagement, as shown by higher active participation and longer time on-task.	3.47	.83	-1.62	2.02	.69
8. Using AI tools in class enhances student motivation.	3.46	.83	-1.54	1.77	.71
9. Using AI tools makes lessons more enjoyable for students.	3.53	.81	-1.72	2.28	.72
10. Using AI tools makes lessons more interactive.	3.53	.81	-1.80	2.62	.73
11. AI tools support the authentic language use (texts or recordings created for non-instructional audiences) in classroom activities.	3.51	.84	-1.71	2.03	.67
12. AI tools offer real-world learning opportunities/tasks that mirror everyday communication and context, such as composing e-mails and making reservations.	3.52	.82	-1.68	2.03	.69
13. AI tools help me provide feedback on students' writing.	3.45	.86	-1.49	1.38	.66
14. AI tools help me provide feedback on students' speaking.	3.02	1.01	-.69	-.68	.59
15. AI tools help me create quizzes and worksheets effectively (fit for purpose, level-appropriate, and free of errors).	3.67	.76	-2.31	4.78	.72
16. AI tools help me create quizzes and worksheets efficiently, reducing prep time, automating formatting, and generating answer keys.	3.69	.74	-2.38	5.35	.75
17. AI tools enable me to tailor lesson materials to meet learners' diverse needs, such as differing proficiency levels and learning styles.	3.60	.80	-2.02	3.47	.73
18. AI tools provide ideas that enhance my productivity in lesson planning.	3.67	.760	-2.28	4.58	.76
19. I use AI tools to assess students' grammar.	3.15	1.05	-.83	-.62	.50
20. I use AI tools to assess students' vocabulary.	3.19	1.04	-.91	-.48	.55
21. Using AI tools encourages me to reflect on my teaching practices.	3.46	.87	-1.37	.97	.67
22. Using AI tools encourages me to improve my teaching practices.	3.55	.84	-1.77	2.40	.72
23. I feel confident selecting appropriate AI tools for my teaching.	3.51	.80	-1.62	2.10	.62
24. I see AI tools as collaborators that complement my expertise.	3.60	.78	-2.04	3.56	.71
25. I worry about the accuracy of AI-generated teaching content.	3.13	.98	-.73	-.62	.39
26. AI tools produce incorrect examples or explanations.	3.01	.93	-.44	-.93	.31

27. AI tools provide unnecessary corrections in students' writing.	2.87	.94	-.30	-.85	.36
28. Learning how to use AI tools for teaching is overwhelming.	2.44	1.10	.12	-1.31	.25
29. AI tools distract students during in-class activities. e.g., more tab-switching/unrelated browsing, and trying off-topic prompts.	2.57	.99	-.023	-.99	.24
30. I am concerned that using AI tools in language activities limits students' opportunities to develop critical thinking skills.	2.98	1.06	-.529	-1.02	.27
31. I am concerned that some students rely too heavily on AI instead of completing assignments independently.	3.46	.90	-1.48	1.04	.50
32. AI tools generate content that is too difficult or too easy for some students.	2.86	.96	-.37	-.89	.30
33. Overusing AI tools reduces my creativity in lesson planning.	3.04	1.08	-.67	-.90	.32
34. Technical issues prevent me from using AI tools in class.	2.76	1.09	-.33	-1.20	.28
35. Lack of internet access limits the use of AI tools in teaching.	3.00	1.15	-.65	-1.10	.35
36. I am careful not to overuse AI tools in my lessons.	3.44	.92	-1.50	1.09	.48
37. I need further training on how to use AI tools in teaching effectively.	3.39	.96	-1.38	.66	.49
38. My institution should provide clear guidelines on the use of AI tools in education.	3.43	.96	-1.50	1.06	.52
39. I would like to attend workshops on using AI tools in language teaching.	3.57	.85	-1.96	2.81	.64
40. I benefit from sharing AI-related ideas with other teachers.	3.60	.81	-2.06	3.44	.67

To refine the scale, analyses of communalities and factor loadings were conducted iteratively. All retained items demonstrated communalities above .50, indicating adequate shared variance. In line with established guidelines (Hair et al., 1998), items with factor loadings below .70 were excluded from further analysis. Through this item-reduction process, the initial pool of 40 items was reduced to 23 that demonstrated strong psychometric properties. The suitability of the final dataset for factor analysis was confirmed by Bartlett's test of sphericity, which was statistically significant ($\chi^2(300) = 9638.42$, $p < .001$), and a KMO measure of sampling adequacy of .96, indicating excellent sampling adequacy. A one-factor solution emerged from the analysis, accounting for 68.52% of the total variance. All retained items loaded strongly on the single factor, with factor loadings ranging from .64 to .84, supporting a unidimensional structure of the scale, as in Table 4 and Figure 1. The eigenvalues for the root, mean, and percentile criteria were all equal to 1.00, consistent with the scree plot and supporting a one-factor solution.

Table 4. Communalities, factor loadings, and item-total statistics of the items (N = 426)

Items	Communalities	Component	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
18. AI tools provide ideas that enhance my productivity in lesson planning.	.58	.84	.82	.968
10. Using AI tools makes lessons more interactive.	.65	.83	.81	.968
22. Using AI tools encourages me to improve my teaching practices.	.70	.82	.80	.968
3. AI tools enhance my ability to prepare effective vocabulary materials.	.57	.82	.81	.968
6. AI tools help me prepare for speaking activities.	.74	.82	.79	.968
17. AI tools enable me to tailor lesson materials to meet learners' diverse needs, such as differing proficiency levels and learning styles.	.64	.81	.80	.968
9. Using AI tools makes lessons more enjoyable for students.	.66	.81	.79	.968
8. Using AI tools in class enhances student motivation.	.69	.81	.74	.969
7. Using AI tools in my teaching increases student engagement, as shown by higher active participation and longer time on-task.	.69	.81	.78	.968
24. I see AI tools as collaborators that complement my expertise.	.61	.80	.79	.968
16. AI tools help me create quizzes and worksheets efficiently— reducing prep time, automating formatting, and generating answer keys.	.55	.80	.79	.968
15. AI tools help me create quizzes and worksheets effectively.	.58	.79	.77	.968
12. AI tools offer real-world learning opportunities/tasks that mirror everyday communication and context, such as composing e-mails and making reservations.	.67	.79	.76	.969
1. AI tools help me generate diverse ideas for planning lessons, varying by task type, skill focus, modality, topic, and proficiency level.	.55	.79	.77	.969

2. AI tools help me design classroom activities tailored to students' interests.	.52	.79	.77	.969
21. Using AI tools encourages me to reflect on my teaching practices.	.75	.77	.74	.969
11. AI tools support authentic language use in classroom activities.	.70	.76	.73	.969
4. AI tools enhance my ability to design effective grammar activities.	.60	.75	.74	.969
5. AI tools support me in developing writing tasks.	.56	.75	.73	.969
13. AI tools help me provide feedback on students' writing.	.73	.71	.69	.969
23. I feel confident selecting appropriate AI tools for my teaching.	.65	.71	.69	.969
40. I benefit from sharing AI-related ideas with other teachers.	.66	.71	.68	.968

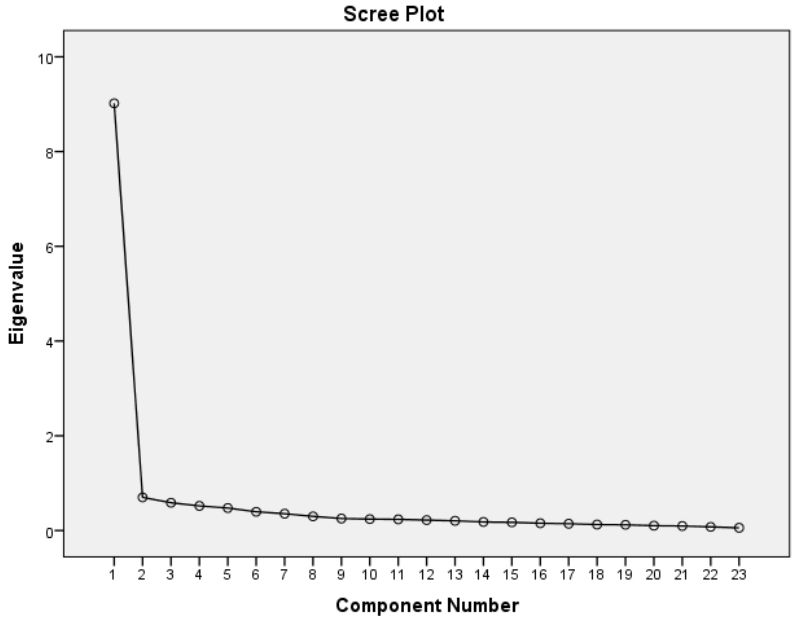

Figure 2. Scree plot

The internal consistency reliability of the final scale was examined using Cronbach's alpha. The results indicated excellent reliability, with a Cronbach's alpha coefficient of .97 for the 23-item scale. This value exceeded the commonly accepted threshold for strong internal consistency ($\alpha \geq .90$), suggesting that the items are highly consistent in measuring the same underlying construct. Corrected item–total correlations also ranged from r = .71 to r = .82, indicating that all items were strongly related to the overall scale and contributed meaningfully to the measurement of the construct. Last, descriptive statistics for the scale showed a mean score of 88.41 (SD = 15.63), indicating adequate variability in participants' responses.

4. Conclusions and Discussion

Based on the results of the study, which aimed to provide preliminary psychometric evidence for the TAS, several conclusions can be drawn. First, the EFA findings indicate that the scale demonstrates a clear, interpretable factor structure. Following a systematic item reduction process, the initial pool of 40 items was reduced to 22 items (See Appendix A), all of which met the recommended criteria for communalities and factor loadings. The final EFA solution reveals a single-factor structure, suggesting that teachers' AI usage in the EFL teaching process can be conceptualized as a unidimensional construct reflecting pedagogical, instructional, and professional engagement with AI tools. The factor accounts for a substantial proportion of the total variance, supporting the explanatory power of the model.

This study appears to be significant for several reasons. First, the TAS consists of 22 items and demonstrates a clear single-factor structure, providing a coherent, interpretable measurement structure for capturing EFL teachers' self-reported AI use in the teaching context. Second, although recent years have witnessed the emergence of several instruments focusing on teachers' AI-related knowledge, attitudes, literacy, competence, and perceptions in general education settings, relatively few tools have been designed to assess AI usage specifically within EFL teaching practices, and existing measures often provide limited psychometric reporting or are not tailored to language teaching contexts. In this respect, the TAS offers a context-sensitive instrument

that directly targets AI use in the mentioned process. As an essential point, the emergence of a one-factor structure suggests that EFL teachers' AI usage may operate as a relatively unified construct in practice, reflecting a broad, integrated set of AI-supported teaching behaviors rather than sharply separated sub-dimensions. In conclusion, the current study contributes to the literature by providing preliminary psychometric evidence for an EFL-specific measure of teachers' AI usage, addressing a methodological gap in AI-assisted language teaching research, and offering a foundation for future validation studies using confirmatory procedures and evidence of external and internal structure across diverse contexts.

The study is not without limitations. First, the sample comprised 426 EFL teachers in a single national context, which may limit the generalizability of the findings to other educational or cultural settings. Second, the present study relied solely on the EFA to examine the internal structure of the TAS. Although the EFA is appropriate for initial scale validation, the CFA is necessary to test the stability of the one-factor model in independent samples. Third, the study focused exclusively on internal structure and internal consistency reliability. Other forms of validity evidence, such as criterion-related validity, convergent validity, and test–retest reliability, were beyond the scope of the current investigation. Fourth, although the one-factor structure provides a parsimonious representation of teachers' AI usage, it does not preclude the possibility that more differentiated dimensions may emerge in different instructional contexts, with longitudinal designs, or as AI technologies continue to evolve. Lastly, the scale captures teachers' self-reported AI use and perceived pedagogical value rather than actual classroom implementation.

Several recommendations for future research are noted. First, the validity and reliability of the TAS should be further examined across diverse linguistic, cultural, and educational contexts. Second, the CFA should be conducted with independent samples to verify the stability of the one-factor structure identified through the EFA to compare alternative model configurations. Third, further studies are also encouraged to incorporate multiple sources of validity evidence as outlined in the Standards for Educational and Psychological Testing (AERA et al., 2014), including evidence based on test content, response processes, internal structure, relationships with other variables, and consequences of testing. Fourth, examining relationships between teachers' AI usage and external constructs such as technology acceptance, digital competence, teaching self-efficacy, and learner outcomes would provide stronger evidence of criterion-related validity. Finally, researchers should investigate whether the scale operates equivalently across relevant subgroups, such as gender, teaching experience, and educational level, through measurement invariance testing, which is essential for ensuring meaningful group comparisons (Holland & Wainer, 1993; Vandenberg & Lance, 2000).

Declaration of Competing Interests

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

Funding Statement

This research received no specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Author Contributions

First author: Conceptualization, methodology, writing original draft, analysis.

Second author: Writing original draft, data collecting, review, editing, and interpretation.

Ethics Approval Statement

Ethical approval for this study was obtained from the Ethics Committee of Istanbul Medeniyet University (Decision No. 2026/5, dated 05 June 2026).

Informed Consent Statement

Informed consent was obtained from all individual participants included in the study.

Declaration of Generative AI Use

The authors used Grammarly for language editing assistance. The authors reviewed and edited the output and take full responsibility for the content.

References

Acosta, H., & Cajas, D. (2018). Analysis of teaching resources used in EFL classes in selected Ecuadorian universities. *Indonesian Journal of Applied Linguistics*, *8*(1), 100–109. ttps://doi.org/10.17509/ijal.v8i1.11469

AERA, APA, & NCME. (2014). Standards for educational and psychological testing. In *American Educational Research Association, American Psychological Association, & National Council on Measurement in Education*. American Educational Research Association.

Ahmadi Fatalaki, J., Saeedi, Z., Sheikhzadeh Marand, E., & Nasiri Firuz, A. (2025). Artificial intelligence in education and EFL teachers' attitudes: Scale development and validation. *Innovation in Language Learning and Teaching*, 1–17. https://doi.org/10.1080/17501229.2025.2494823

Alharbi, W. (2023). AI in the foreign Language classroom: A pedagogical overview of automated writing assistance tools. *Education Research International*, *12*(1), 1–15. https://doi.org/10.1155/2023/4253331

Antonenko, P., & Abramowitz, B. (2023). In-service teachers' (mis)conceptions of artificial intelligence in K-12 science education. *Journal of Research on Technology in Education*, *55*(1), 64–78. https://doi.org/10.1080/15391523.2022.2119450

Asmari, A. (2015). Communicative language teaching in EFL university context: Challenges for teachers. *Journal of Language Teaching and Research*, *6*(5), 976–984. https://doi.org/10.17507/jltr.0605.09

Aydın, S. (2008). An investigation on the language anxiety and fear of negative evaluation among Turkish EFL learners. *Asian EFL Journal*, *30*(1), 421–444.

Aydın, S., Tekin, I., & Akkaş, F. (2024). Construction and validation of the foreign language learning enjoyment scale. *Psychology in the Schools*, *61*(2), 657–670. https://doi.org/10.1002/pits.23076

Aydın, S., & Zeinolabedini, M. (2024). Integrating artificial intelligence into foreign language learning: Learners' perspectives. *11th EJER Congress*.

Beck, C., & Gable, R. (2001). Ensuring content validity: An illustration of the process. *Journal of Nursing Measurement*, *9*(2), 201–215. https://doi.org/10.1891/1061-3749.9.2.201

Bertelsen, O., & Bødker, S. (2003). Activity Theory. In C. Carroll (Ed.), *HCI models, theories, and frameworks: Toward a multidisciplinary science* (pp. 291–324). Elsevier. https://doi.org/10.4135/9781412957397.n3

Chen, Y., Jensen, S., Albert, L., Gupta, S., & Lee, T. (2023). Artificial intelligence (AI) student assistants in the classroom: Designing chatbots to support student success. *Information Systems Frontiers*, *25*(1), 161–182. https://doi.org/10.1007/s10796-022-10291-4

Chiu, T., Ahmad, Z., & Çoban, M. (2025). Development and validation of teacher artificial intelligence (AI) competence self-efficacy (TAICS) scale. *Education and Information Technologies*, *30*(5), 6667–6685. https://doi.org/10.1007/s10639-024-13094-z

Chounta, I., Bardone, E., Raudsep, A., & Pedaste, M. (2022). Exploring teachers' perceptions of artificial intelligence as a tool to support their practice in Estonian K-12 education. *International Journal of Artificial Intelligence in Education*, *32*(3), 725–755. https://doi.org/10.1007/s40593-021-00243-5

Cizrelioğlu, İ., & Aydin, S. (2024). Using artificial intelligence in EFL learning among multilingual young learners. In Z. Sanmugam, M. Edwards, B. Barkhaya, N. Khlaif (Ed.), *Fostering Inclusive Education With AI and Emerging Technologies* (pp. 303–322). IGI Global. https://doi.org/10.4018/979-8-3693-7255-5.ch013

Dang, H. (2006). Learner-centeredness and EFL instruction in Vietnam: A case study. *International Education Journal*, *7*(4), 598–610.DeVellis, R. (2017). *Scale development: Theory and applications*. Sage Publications Ltd.

Ellis, R. (1999). *Learning a second language through interaction*. John Benjamins Publishing.

Ercan, G. E., & Aydın, S. (2022). Flipped learning in the English as a foreign language learning context: A theoretical framework. In *The new normal of online language education* (pp. 161–180). Eğiten.

Eryansyah, E., & Erlina, E. (2023). EFL teachers' perception of ICT integration in EFL teaching and the current practice of ICT in EFL teaching. *LEARN Journal: Language Education and Acquisition Research Network*, *16*(2), 379–394.

Fandrych, I. (2009). The importance of English communication skills in multilingual settings in Southern Africa. *English Today*, *25*(3), 49–55. https://doi.org/10.1017/S0266078409990277

Gayed, J. (2025). Educators' perspective on artificial intelligence: equity, preparedness, and development. *Cogent Education*, *12*(1), 1–21. https://doi.org/10.1080/2331186X.2024.2447169

Hair, J., Black, W., Babin, B., Anderson, R., & Tatham, R. (1998). *Multivariate data analysis*. Pearson.

Hamp-Lyons, L. (2005). English for academic purposes. In E. Hinkel (Ed.), *Handbook of research in second language teaching and learning* (pp. 89–105). Routledge. https://doi.org/10.4324/9781410612700

Hapsari, I. P., & Wu, T.-T. (2022). AI chatbots learning model in English speaking skill: Alleviating speaking anxiety, boosting enjoyment, and fostering critical thinking. In F. E. Huang, YM., Cheng, SC., Barroso, J., Sandnes (Ed.), *Innovative technologies and learning* (pp. 444–453). Springer. https://doi.org/10.1007/978-3-031-15273-3_49

Hockly, N. (2018). Blended learning. *ELT Journal*, *72*(1), 97–101. https://doi.org/10.1093/elt/ccx058

Holland, P., & Wainer, H. (1993). *Differential item functioning*. Psychology Press.

Işık, S., Çakır, R., & Korkmaz, Ö. (2024). Teachers' Perception Scale towards the use of artificial intelligence tools in education. *Participatory Educational Research*, *11*, 80–94. https://doi.org/10.17275/per.24.95.11.6

Jeon, J. (2024). Exploring AI chatbot affordances in the EFL classroom: Young learners' experiences and perspectives. *Computer Assisted Language Learning*, *37*(1–2), 1–26. https://doi.org/10.1080/09588221.2021.2021241

Jia, F., Sun, D., Ma, Q., & Looi, C. (2022). Developing an AI-based learning system for L2 learners' authentic and ubiquitous learning in English language. *Sustainability*, *14*(23), 15527. https://doi.org/10.3390/su142315527

Kaptelinin, V., & Nardi, B. (2009). *Acting with technology: Activity theory and interaction design*. MIT Press.

Kenyon, D., & MacGregor, D. (2013). Pre-operational testing. In *The Routledge handbook of language testing* (pp. 309–320). Routledge.

Kline, R. (2023). *Principles and practice of structural equation modeling*. Guilford Publications.

Kostka, I., & Toncelli, R. (2023). Exploring applications of ChatGPT to English language teaching: Opportunities, challenges, and recommendations. *Teaching English as a Second or Foreign Language--TESL-EJ*, *27*(3), 1–19. https://doi.org/10.55593/ej.27107int

Lipovec, A., & Flogie, A. (2023). Empowering future teachers: Unveiling their attitudes and knowledge about AI in slovenian K-12 education. *12th Mediterranean Conference on Embedded Computing*, 1–4. https://doi.org/10.1109/MECO58584.2023.10155010

Losada, D., Campo, L., Maza, M., & Galindo Domínguez, H. (2023). Design and validation of a multidimensional scale for assessing teachers' perceptions towards artificial intelligence in education. *International Journal of Learning Technology*, *1*(1–22). https://doi.org/10.1504/IJLT.2023.10062094

Meyers, M. (1993). *Teaching to diversity: Teaching and learning in the multi-ethnic classroom.* Addison-Wesley Publishing Company.

Moybeka, A., Syariatin, N., Tatipang, D., Mushthoza, D., Dewi, N., & Tineh, S. (2023). Artificial intelligence and English classroom: The implications of AI toward EFL students' motivation. *Edumaspul: Jurnal Pendidikan*, *7*(2), 2444–2454. https://doi.org/10.33487/edumaspul.v7i2.6669

Ning, Y., Zhang, W., Yao, D., Fang, B., Xu, B., & Wijaya, T. T. (2025). Development and validation of the Artificial Intelligence Literacy Scale for Teachers (AILST). *Education and Information Technologies*. https://doi.org/10.1007/s10639-025-13347-5

Nunnally, J., & Bernstein, I. (1994). *Psychometric Theory*. MacGraw-Hill.

Nyaaba, M., Kyeremeh, P., Majialuwe, E., Owusu-fordjour, C., Asebiga, E., & A-ingkonge, B. (2024). Generative AI in academic research: A descriptive study on awareness, gender usage, and views among pre-service teachers. *Journal of AI*, *8*(1), 45–60. https://doi.org/10.61969/jai.1400867

Octavio, M., González Argüello, M., & Pujolà, J. (2024). ChatGPT as an AI L2 teaching support: A case study of an EFL teacher. *Technology in Language Teaching & Learning*, *6*(1), 1–25. https://doi.org/10.29140/tltl.v6n1.1142

Peltokorpi, V. (2023). The "language" of career success: The effects of English language competence on local employees' career outcomes in foreign subsidiaries. *Journal of International Business Studies*, *54*(2), 258–284. https://doi.org/10.1057/s41267-022-00544-4

Pokrivcakova, S. (2023). Pre-service teachers' attitudes towards artificial intelligence and its integration into EFL teaching and learning. *Journal of Language and Cultural Education*, *11*(3), 100–114. https://doi.org/10.2478/jolace-2023-0031

Ponton, M., & Rhea, N. (2006). Autonomous learning from a social cognitive perspective. *New Horizons in Adult Education and Human Resource Development*, *20*(2), 38–49. https://doi.org/10.1002/nha3.10250

Romero, M., Buzón-García, O., & Touron, J. (2019). The flipped learning model in online based education for secondary teachers. *Journal of Technology and Science Education*, *9*(2), 109. https://doi.org/10.3926/jotse.435

Rose, H., McKinley, J., & Galloway, N. (2021). Global Englishes and language teaching: A review of pedagogical research. *Language Teaching*, *54*(2), 157–189. https://doi.org/10.1017/S0261444820000518

Roshan, A., Gurbaz, M., & Rahmani, S. (2022). The effects of large classes on english language teaching. *Integrated Journal for Research in Arts and Humanities*, *2*(2), 38–41. https://doi.org/10.55544/ijrah.2.2.20

Sabir, G., & Ahmad Hammad, F. (2023). Effects of using authentic materials on motivating EFL (English as a foreign language) learners. *Sprin Journal of Arts, Humanities and Social Sciences*, *1*(12), 40–48. https://doi.org/10.55559/sjahss.v1i12.75

Sarker, I. (2022). AI-based modeling: Techniques, applications and research issues towards automation, intelligent and smart systems. *SN Computer Science*, *3*(2), 1–20. https://doi.org/10.1007/s42979-022-01043-x

Sayıcı, S., & Aydın, S. (2025). Using artificial intelligence in foreign language teaching: Teachers' perspectives. *Proceedings of The World Conference on Education and Teaching*, *4*(1), 1–10. https://doi.org/10.33422/etconf.v4i1.1016

Tabachnick, B., & Fidell, L. (2014). *Using multivariate statistics*. Pearson.

Vandenberg, R., & Lance, C. (2000). A review and synthesis of the measurement invariance literature: Suggestions, practices, and recommendations for organizational research. *Organizational Research Methods*, *3*(1), 4–70. https://doi.org/10.1177/109442810031002

Vygotsky, L. (1978). Interaction between learning and development. In M. Gauvain & M. Cole (Eds.), *Readings on the development of children* (pp. 34–40). Scientific American Books.

Xhemaili, M. (2022). The importance of the English language in public diplomacy and international relations. *Journal of Liberty and International Affairs, Institute for Research and European Studies - Bitola*, *8*(1), 322–339. https://doi.org/10.47305/JLIA2281322x

Ye, X. (2024). A review of classroom environment on student engagement in English as a foreign language learning. *Frontiers in Education*, *9*. https://doi.org/10.3389/feduc.2024.1415829

Appendix A. The EFL Teachers' AI Usage Scale

Items	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. AI tools provide ideas that enhance my productivity in lesson planning.	( )	( )	( )	( )	( )
2. Using AI tools makes lessons more interactive.	( )	( )	( )	( )	( )
3. Using AI tools encourages me to improve my teaching practices.	( )	( )	( )	( )	( )
4. AI tools enhance my ability to prepare effective vocabulary materials.	( )	( )	( )	( )	( )
5. AI tools help me prepare for speaking activities.	( )	( )	( )	( )	( )
6. AI tools enable me to tailor lesson materials to meet learners' diverse needs, such as differing proficiency levels and learning styles.	( )	( )	( )	( )	( )
7. Using AI tools makes lessons more enjoyable for students.	( )	( )	( )	( )	( )
8. Using AI tools in class enhances student motivation.	( )	( )	( )	( )	( )
9. Using AI tools in my teaching increases student engagement, as shown by higher active participation and longer time on-task.	( )	( )	( )	( )	( )
10. I see AI tools as collaborators that complement my expertise.	( )	( )	( )	( )	( )
11. AI tools help me create quizzes and worksheets efficiently— reducing prep time, automating formatting, and generating answer keys.	( )	( )	( )	( )	( )
12. AI tools help me create quizzes and worksheets effectively.	( )	( )	( )	( )	( )
13. AI tools offer real-world learning opportunities/tasks that mirror everyday communication and context, such as composing e-mails and making reservations.	( )	( )	( )	( )	( )
14. AI tools help me generate diverse ideas for planning lessons, varying by task type, skill focus, modality, topic, and proficiency level.	( )	( )	( )	( )	( )
15. AI tools help me design classroom activities tailored to students' interests.	( )	( )	( )	( )	( )
16. Using AI tools encourages me to reflect on my teaching practices.	( )	( )	( )	( )	( )
17. AI tools support authentic language use in classroom activities.	( )	( )	( )	( )	( )
18. AI tools enhance my ability to design effective grammar activities.	( )	( )	( )	( )	( )
19. AI tools support me in developing writing tasks.	( )	( )	( )	( )	( )

20. AI tools help me provide feedback on students' writing.	( )	( )	( )	( )	( )
21. I feel confident selecting appropriate AI tools for my teaching.	( )	( )	( )	( )	( )
22. I benefit from sharing AI-related ideas with other teachers.	( )	( )	( )	( )	( )