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THE CORRELATION AMONG AI-ASSISTED ENGLISH LEARNING, TECHNOLOGY ACCEPTANCE, AND WILLINGNESS TO USE ENGLISH AMONG ENGLISH EDUCATION ALUMNI GRADUATES FROM UIN RADEN MAS SAID SURAKARTA

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Abstract

This quantitative correlational study was conducted to find out the relationship between AI-Assisted English Learning, Tech Acceptance, and Willingness to Use English in the AI Learning, with the target population being the graduates of the English Language Education program at UIN Raden Mas Said Surakarta. There were 30 respondents taken for this quantitative correlation analysis, with the respondents completing an online questionnaire designed in relation to the AI usage scale, Tech Acceptance Model, and Willingness to Communicate. The data revealed that both predictors were found to be at high levels, denoting the involvement of the graduates in learning English and their positive attitude towards technology. AI-supported learning in English was revealed to be positively significant with Willingness to Use English (ρ =.386, p =.035), indicating that regular use of AI technologies boosts alumni confidence and drive when speaking English. In contrast, Willingness to Use English did not significantly correlate with Technology Acceptance (ρ =.155, p =.414). Nonetheless, the combination of the two variables explained 23.2% of the variance (R^2 =.232) and significantly contributed to the variation in Willingness to Use English (F = 4.085, p =.028). This result implied that the integration of AI with English language learning could enhance the quality of graduates' communication preparedness, especially when they possessed an optimistic attitude towards technology. Future studies involving more factors, such as affective elements, should be conducted to further explore English language usage behavior post-graduation.

Keyword: *AI-Assisted English Learning, Technology Acceptance, Willingness to Use English, English Education Alumni*

A. INTRODUCTION

In today's modern world, education is not limited to a single rule that requires learners to follow an existing learning method. Learners today have flexibility in relation to the modern world. In the digital world, the development of machine learning is one of the catalysts for learning in all fields, situations, and without limitations in terms of time and learning resources. The development of machine learning today gives all elements the

freedom to participate in the development of machine learning (AI), including the world of education. According (Earle, 2002), the integration of technology is not only a symbol of modernization, but also a tool to improve the quality of learning and teaching. Technology provides an efficient space to support learning objectives and create meaningful learning and experiences.

The development of machine learning, especially AI (Artificial Intelligence), which is becoming increasingly advanced, allows learners from all walks of life to dive into AI. In terms of generations, the current generation is capable of integrating AI into almost all aspects of life. One generation that can be considered productive in the use of AI is Generation Z. In their book, (Seemiller & Grace, 2016) state that Gen Z (Generation Z) has strong characteristics in terms of access to technology and dependence on technology, as they like quick access to information and are comfortable working in a digital environment. In general, according to researchers who are also Gen Z, Gen Z is currently the generation most prepared to face AI-Driven Learning, although it is very possible that previous generations are similar. This is reinforced by (Turner, 2015) opinion that Generation Z not only uses technology, but they also innovate and collaborate through technology to learn and communicate. (Holmes et al., 2019), in relation to AI-based learning, argue that AI technology enables learning to be more personalized and adaptive to the user's learning style. And (UNESCO, 2021) emphasizes that this integration in the world of education encourages autonomous learning, which is one of the characteristics of Gen Z. This generation places AI tools such as ChatGPT, Grammarly, Duolingo etc as tools, but positions AI as a learning partner, to hone their English skills. Recent intervention studies show that using ChatGPT as a tool for receiving formative feedback can significantly improve the academic writing skills of students in English as a Second Language (ESL) programs. with the experimental group showing better performance than the control group in post-treatment tests and reporting a positive perception of artificial intelligence-based feedback (Mahapatra, 2024).

Globally, English proficiency has become one of the most important basic competencies to support education, careers, and international communication. (Graddol, 2006) states that English has become global literacy, not just as a foreign language, but as a skill that must be possessed in order to participate in the global community. In relation to Gen Z, who live and grow up in the era of globalization and AI, these two things have become forces that demand more advanced English language skills, in both informal and formal contexts, whether academic, professional, or even digital. The use of AI such as ChatGPT, Duolingo, or DeepL has

become one of the main means of modern learning to improve fluency, enrich vocabulary, and practice communication. In the context of learning English as a foreign language (EFL), students in Indonesia also report that AI such as ChatGPT helps them correct grammar, rephrase sentences, and develop ideas, which then leads to more fluent and less stressful academic writing. However, on the other hand, they are also aware of potential risks such as inaccuracy and plagiarism (Putri et al., 2025). In other elements, recent research on informal English language learning through digital platforms also shows that interacting with English through digital platforms can increase students' willingness to communicate by strengthening learners' confidence in their own abilities (Zadorozhnyy & Lee, 2023).

The past 5 to 10 years have been a period of rapid technological development, during which Gen Z has been learning and growing, whether in the context of high school, college, or even as professionals. Based on the Technology Acceptance Model (Liu & Ma, 2024), whose study shows that perceived usefulness and perceived ease of use significantly predict the behavioral intention of English as a Foreign Language (EFL) learners to use ChatGPT as part of their digital and informal learning in English, which in turn influences their actual usage. Reflecting on this, it is clear that Gen Z, as learners and practitioners, must have English language skills that can be applied in all aspects of life. This ability makes Gen Z one of the prerequisites for participating in this study. In this study, the researcher involved graduates of English Education from the Raden Mas Said State Islamic University in Surakarta as the main participants, with the requirement that they had graduated within the last 1-3 years. This is because these subjects are closely and strongly related to AI/technology users, English learners, English language competence, and Generation Z. This can be one of the main benchmarks that the subject has great opportunities and responsibilities in the use and optimization of AI. As alumni who have good pedagogical and linguistic competencies, it indicates that they are familiar with technology-based learning and can expand their English language practice to work, academic, and social contexts. According to Egbert and (Egbert & Shahrokni, 2018), teachers and graduates in English education can leverage AI tools to enhance language learning and support continuous professional development, which means they have the opportunity to use AI for self-development (writing scientific articles, creating teaching materials, or socializing). However, the desire to use English among alumni will certainly vary, depending on their level of acceptance of technology, experience in using AI, and perception of the perceived usefulness of AI in real life.

According to (Davis, 1989) in the Technology Acceptance Model (TAM), Perceived Usefulness (PU) and Perceived Ease of use (PEoU) are the main keys and main factors that determine a person's acceptance and use of a technology.

Understanding the relationship between the application of artificial intelligence (AI) and the acceptance of technology with the willingness of the alumni to apply the English language is highly significant, since such factors give insight into the sustainability of learning the English language outside the classroom. Thus, the current paper aims to explore the relationship between the three factors pertaining to the alumnus of English Education in the UIN Raden Mas Said Surakarta.

B. RESEARCH METHOD

Research Design

This research utilized a quantitative correlational multivariate design. The independent variable is AI-Assisted English LEarning Frequency (X1), and Technology Acceptance (X2), while the dependant variable is Willingness to Use English (Y). The Research did not involve experimental manipulation, and its purpose was to determine whether these variables had a significant correlation.

Participants

The participants of this research were 30 English Education alumni from the Faculty of Cultures of Laguages, Universitas Islam Negeri Raden Mas Said Surakarta. These participants were selected through purposive sampling, based on the specific inclusion criterua.

1. Alumni who have used at least one artificial intelligence (AI)-based tool for the purpose of English Learning (e.g., ChatGPT, Grammarly, QuillBot, or DeepL).
2. Those from the alumnus group, with consent, completing an online survey by Google Form.

All participants provided written consent prior to participating. T Personal data was kept confidential and was only used for academic purposes, in line with ethical research principles, according to (Cohen et al., 2018).

Instruments

Three types of questionnaires were used to collect quantitative data in this research, each using a 5-point Likert scale (1= strongly disagree to 5= strongly agree). All items were adapted from previously validated studies to ensure theoretical validity and construct validity.

AI-Assisted English Learning Frequency Scale (X_1)

Adapted from (Holmes et al., 2019) these 8 items scale measures how often alumni use artificial intelligence (AI) tools such as ChatGPT or Grammarly for English related activities.

Example item:

"I use AI such as ChatGPT or Grammarly to help me write professional papers or documents in English."

Technology Acceptance Scale (X2)

Recent studies applying the Technology Acceptance Model (TAM) to the use of ChatGPT in English language learning also confirm that perceived usefulness and perceived ease of use are the main predictors of learners' intention to adopt artificial intelligence (AI) tools in informal digital English learning outside the classroom (Liu & Ma, 2024; Hwang et al., 2025). These types of questionnaires were based on on the Technology Acceptance Model (TAM) by (Davis, 1989) and expanded by (Venkatesh & Davis, 2000) and (Teo, 2010), this 10-item scale covers two sub-dimensions: Perceived Usefulness (PU) and Perceived Ease of Use (PEoU).

Example item:

"AI applications make my English communication more effective and efficient."

Willingness to Use English Scale (Y)

Adapted (Macintyre et al., 1998; Peng & Woodrow, 2010), this 10-item scale assessed alumni's motivation and readiness to use English in social and professional settings.

Example item:

"I am willing to use English when communicating with colleagues or clients in my workplace."

Data Collection Procedure

This procedure focuses exclusively on data collection and analysis.

1. Distribution, researcher distributes written consent via WhatsApp or Instagram Direct Message
2. Response Collection, participant was given a few days after received researcher mesaage to complete the google form questionnaire.
3. Data Export, researcher export raw data from Google form into Excel or CSV, before analyze it in SPSS.
4. Data Screening, Incomplete and duplicate response were removed.

Then this activity is to ensure systematic, ethic, and transparent approach to data collection.

Data Analysis

Data analysis will be conducted using IBM SPSS Statistics through several steps to ensure accuracy and reliability of findings. To achieve the objectives of the research, multiple statistical analysis tasks were undertaken. These include the application of descriptive statistics, such as mean, minimum, maximum, and standard deviation, to describe the distribution of data related to the variables in the study, which include AI-Assisted English Learning (X1), Technology Acceptance (X2), and Willingness to Use English (Y).

After that, the validity of the instruments used in the research was tested using Cronbach Alpha to confirm if the items of the questionnaires were properly measuring the constructs. Normality test, on the other hand, was conducted due to the small sample size of less than 50, and the result showed that X1 and X2 data were not normally distributed. Hence, non-parametric correlationshah analysis was conducted.

Hence, Spearman's Rank Correlation was employed in establishing the nature of the connection between the predictors and the dependent variable. Lastly, multiple regression analysis was conducted to explore the joint influence of AI-Assisted English Learning and the Technological

Acceptance construct in explaining the Willingness to Use English. This served to further ascertain the contribution made by the predictors in explaining the variation in the outcome variable.

C. RESULTS AND DISCUSSION

Descriptive

Descriptive results show that all variables are in the high category, which means that PBI alumni have a positive tendency towards AI-based English learning.

Table 3.1. Descriptive Statistics

Variable	N	min	Max	Mean	SD	Category
X1-AI-Assisted English Learning	30	2.38	4.50	3.68	.55678	High
X2- Technology Acceptance	30	1.60	5.00	3.79	.65662	High
Y- Willingness to use English	30	1.90	5.00	3.88	.71055	High

Alumni generally have good exposure to AI, strong acceptance of technology, and a high willingness to use English.

Reliability Test

Reliability test using Cronbach's Alpha shows all instruments reliable.

Table 3.2. Reliability Statistics

Variable	Cronbach alpha	Items	Category
X1	.745	8	Acceptable
X2	.893	10	Excellent
Y	.921	10	Excellent

The Shapiro–Wilk test was used to test the normality of the data because the number of respondents is < 50.

Table 3.3. Tests of Normality

Variable	Sig.	Normality
X1	.022	Not normal
X2	.005	Not normal
Y	.245	Normal

Since X1 and X2 show abnormality, then Spearman Rank Correlation is used.

Correlation Result

Table 3.4. Spearman Correlation

Variables	ρ (rho)	Sig.	Interpretation
X1 ↔ Y	.386*	.035	Significant positive
X2 ↔ Y	.155	.414	Not significant

The more often alumni use AI, the higher their willingness to speak English. The attitude of accepting technology alone is not enough to encourage the willingness to use English.

Figure 3.1. Scatter plot of the relationship between AI-Assisted English Learning (X1) and Willingness to Use English (Y).

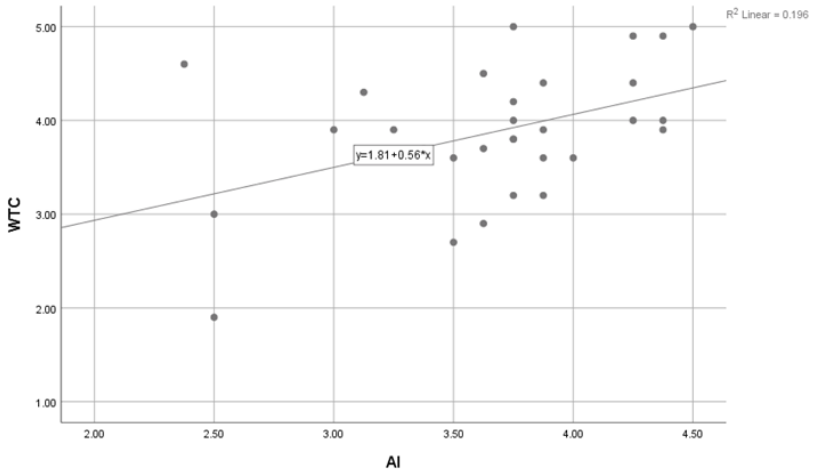
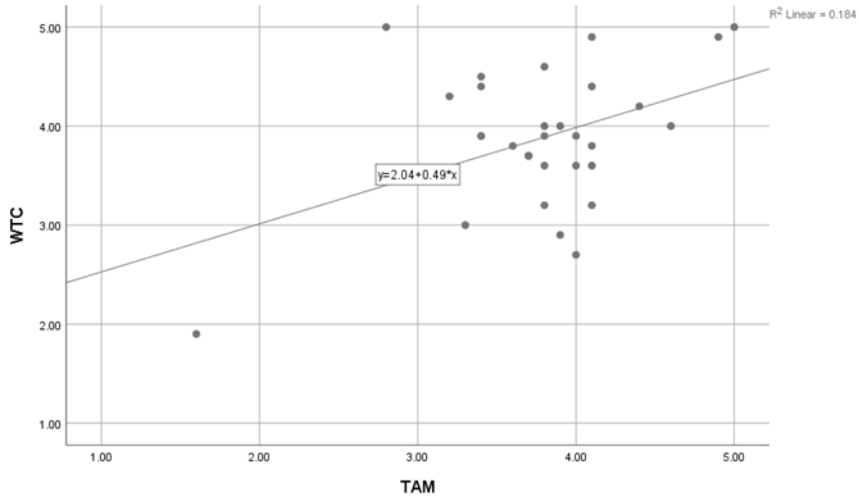


Figure 4.1, data points generally form a positive linear pattern, where participants with higher AI-assisted English learning scores tend to show a higher willingness to use English. The upward slope of the trend line supports the Spearman correlation results, which show a

significant positive association between AI-Assisted English Learning and Willingness to Use English (ρ = .386, p = .035). This shows that the more often alumni practice English with AI tools such as ChatGPT, Grammarly, and translation apps, the more motivated and confident they are to communicate in English in a real-life context. Therefore, AI-assisted learning can be considered a significant contributing factor in increasing the willingness of alumni to use English.

Figure 3.2. Scatter plot of the relationship between Technology Acceptance (X2) and Willingness to Use English (Y)



The point distribution showed a weak and statistically insignificant relationship, according to the correlation results. As shown in Figure 4.2, the dots appear to be spread out more widely and the trend line shows only a small positive slope. This reflects the results of the Spearman correlation which showed a weak and insignificant relationship between Technology Acceptance and Willingness to Use English (ρ = .155, p = .414). Although some respondents with higher levels of technology acceptance showed a higher willingness to use English, this pattern was inconsistent among all participants. Therefore, the acceptance of technology alone cannot be considered a strong factor influencing the willingness of alumni to use English.

Regression Results

To see the simultaneous effect of X1 and X2 on Y, multiple regression is used.

Table 3.5. Model Summary

R	R^2	Adj. R^2
.482	.232	.175

Table 3.6. ANOVA

F	Sig.
4.085	.028

Table 3.7. Coefficients

Variable	β	Sig.	Note
X1	.285	.202	Not significant
X2	.247	.267	Not significant

Multiple regression analysis showed that AI-Assisted English Learning and Technology Acceptance together had a significant influence on English Language Readiness among alumni, as demonstrated by the overall model's significance (F = 4,085, p = .028). This means that when the two predictors are considered together in the same model, they both significantly contribute to explaining the change in willingness to use English.

However, when analyzed separately, neither AI-Assisted English Learning (β = .285, p = .202) nor Technology Acceptance (β = .247, p = .267) showed significant unique contributions to dependent variables. This suggests that the predictive power of each variable is not sufficiently strong on its own, but only becomes meaningful when the two factors operate together. In other words, the willingness of alumni to use English may increase when the use of AI and the acceptance of technology interact or coexist, rather than serving as independent predictors.

These findings suggest that willingness to use English is influenced by interconnected factors. Alumni may become more willing to communicate in English not just because they use AI frequently or find technology useful, but when both conditions are present simultaneously in their learning and communication environments.

DISSCUSSION

The results of this study show that PBI/English Language Education Graduates have high motivation towards the use of English and often use AI (the majority use ChatGPT) as a learning tool. The significant correlation between the use of AI and the willingness to use English suggests that AI can also play a role in the linguistic scaffolding, where AI has instant feedback and there are opportunities for independent practice that help participants increase their confidence in using English. This pattern is consistent with previous findings from

(Zadorozhnyy & Lee, 2023) that digitally mediated learning experiences can increase students' self-confidence, and in turn increase their willingness to communicate in a second language.

Meanwhile, technology acceptance did not show a significant correlation. This means that participants believe that technology is useful, but they do not necessarily want to use English. The real use of AI has an impact on the willingness to speak language rather than just the of technological understanding.

The implications that can be taken include the following.

1) The learning approach should focus on hands-on practice with AI
2) AI is more suitable for communication training in a professional context
3) Similar to mobile-assisted language learning interventions using apps such as Duolingo and HelloTalk both of which have been proven to produce measurable improvements in students' willingness to communicate in English (Zhao et al., 2024). The use and integration of these artificial intelligence tools into alumni development programs can provide better and more authentic opportunities to practice English communication. Alumni development programs that will be able to integrate AI as a medium to learn English communication.

An R^2 value of .232 indicates that the AI-Assisted English Learning and Technology Acceptance variables simultaneously contribute 23.2% to the variation in Willingness to Use English. This means that these two predictors have a role in increasing the willingness of alumni to use English, but there are still other factors that are more dominant in influencing these variables. This shows that there are still other factors besides the willingness to use English to be researched and broadened research on the use of AI, especially among professionals and graduates of English Language Education.

D. CONCLUSION

This study analyzes the correlation between Artificial Intelligence-Assisted English Learning (X1), Technology Acceptance (X2), and Willingness to Use English (Y) among English Language Education alumni of UIN Raden Mas Said Surakarta. Based on the findings, the following conclusions can be drawn:

1) Alumni demonstrated high levels of engagement in artificial intelligence (AI), technology acceptance, and willingness to use English.
   (average scores ranged from 3.68 to 3.88).

This shows that engagement in English language learning andconfidence in communication remain strong after graduation.

2) AI-Powered English Learning is positively and significantly correlated with Willingness to Use English.

   ($\rho = .386$, $p = .035$).

This shows that consistent interaction with AI tools helps alumni increase their confidence and motivation in communicating using English.

3) Technology Acceptance has no significant correlation with Willingness to Use English.

   ($\rho = .155$, $p = .414$)

Although alumni find AI technology useful and easy to use, that perception alone does not automatically increase their willingness to use English.

4) Both X1 and X2 together affect Y significantly.

   ($F = 4.085$, $p = .028$; $R^2 = .232$).

The use of artificial intelligence (AI) and the acceptance of technology become significant when used together, explaining 23.2% variation in willingness to use English. The remaining 76.8% is driven by other factors such as anxiety, motivation, work environment, and language needs.

English language learning with the addition of artificial intelligence (AI) has been one of the biggest contributing factors to the increase in willingness to communicate in English among graduates, especially when combined with positive technological acceptance. Nevertheless, other psychological factors must also be taken into consideration.

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