

The Transformative Power of Technology in Teaching Specific Language Skills

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Abstract

Technology advancement has paved a new way for seamless language education, redesigning instructional strategies, learning paradigms, and assessment initiatives. This research has critically analysed the transformative impact of technology in curating specific language skills through a review of existing literature study and empirical evidence through statistical evaluation. Based on this analysis, Cronbach's Alpha value is 0.834 exploring strong internal consistency across 16 items. This value is higher than the accepted threshold value of Cronbach's Alpha that is 0.70. It enhances the relevance of this research and ensures the credibility of the survey instruments as well.

Keywords: Artificial Intelligence, Language Learning, Digital transformation, Digital technologies, Innovation, Communication, Technological Competencies, Student Engagement

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INTRODUCTION

The rapid growth of technological advancements has revolutionised the prospects of contemporary education, transforming the ways of knowledge being developed, acquired, and conveyed (Miao & Holmes, 2023). Technological adaptation has transformed language education with innovative measures that have altered instruction-based learning into more resilient, reciprocal, and learner-centric. Traditional means of learning are replaced by the widespread availability of internet-sourced equipment such as cloud computing, smartphones, immersive technologies, and Artificial Intelligence (AI). This futuristic approach in language education enables students to attain an opportunity for genuine materials, gain personalised feedback, and be in touch with native speakers (Peña-Acuña & Corga Fernandes Durão, 2024). The progress through technology implication in language education has been tremendously evident over the last five decades.

Language educators use prompting devices to highlight their teaching methods, and digital workshops have assisted learners in reaching their optimum potential. A consistent implementation of Computer-Assisted Language Learning (CALL) has predominantly enhanced usage of controlled grammar practices and guided vocabulary training (Șișianu & Pușcașu, 2024). Digital advancements in learning theories have subsequently formed a more cohesive and structural base for language learners. These practices delve into more collaborative and communicative variants of technology-enabled language learning (TELL), which help students formulate concrete knowledge about language through interacting, problem-solving, and engaging with digital communication.

Around the time of the pandemic, digital transformation took over most segments of education, compelling learners and educators to deal with a complete paradigm shift (Qiao et al. 2025). However, educational institutions resorted to online or blended learning frameworks. Although digital acceleration has numerous advantages, this global transition demonstrated both threats and opportunities with technology-highlighted language instruction. Lack of digital literacy disrupted the continuity of rapid learning, and unequal distribution of technological access showcased the real image of a discriminatory society (Rohayati & Nurjanah, 2026). Despite these issues, digital readiness is no longer an option for language education. It has become an utter necessity to maintain a consistent education system in the language domain. Technology dependence has facilitated consistent interaction and meaningful communication.

The emergence of podcasts and multimedia has supported students gain international exposure. With AI tools, learners' support has been extended with computerised programmes and scoring engines (Karatay & Karatay, 2024). Amidst numerous facilities, technology alone does not secure enhanced language learning outcomes. Along with effective technology implications, there is always a need for intellectual assistance, foundational pedagogical instruction design, institutional support, learner motivation, and teacher competence. Even though the development of Artificial Intelligence improved 55% of positive educational outcomes in language learning, there are requirements for a more cohesive and teacher-assisted learning model that ensures active language learning communities with an effective learning environment (AIPRM, 2026).

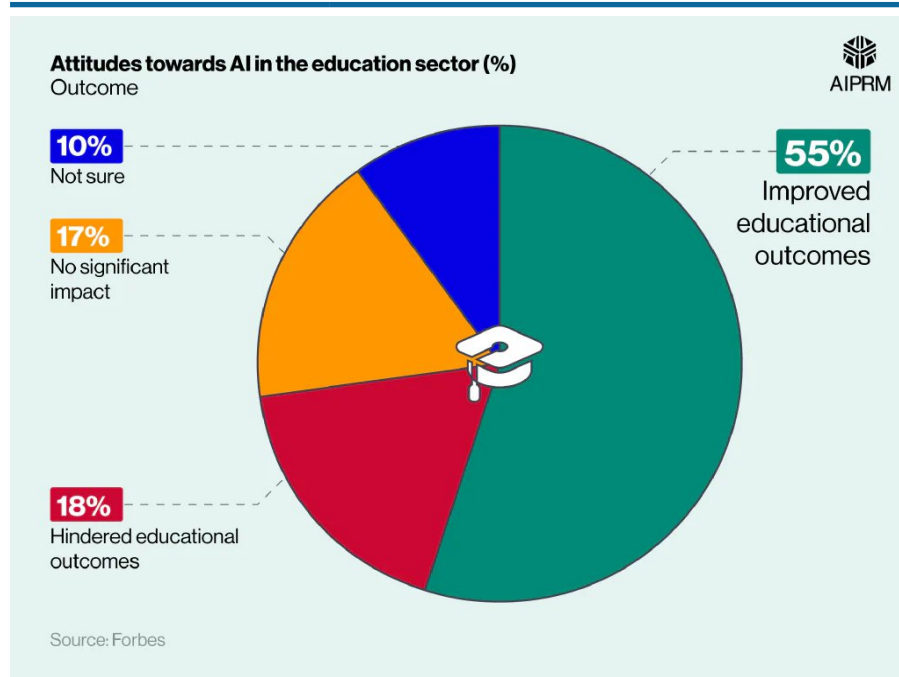


Figure 1: Attitudes towards AI in the Education Sector
(Source: AIPRM, 2026)

Aims and Objectives

Aims

This research intends to evaluate the transformative impact of digital technologies in language learning and analyse their influence on language learning, learner mind development, and pedagogical initiatives. The implementation of cutting-edge technologies has transformed the learning paradigm of language. This research focuses on evaluating theoretical foundations, discussing pedagogical practices and empirical challenges.

Objectives

01: To analyse the impact of digital technologies in learning and teaching language skills such as speaking, writing, reading, grammar, comprehension, and vocabulary

02: To evaluate the influence of artificial intelligence in delivering innovative, communicative, and personalised language instructions

03: To illustrate the contribution of technologies in supporting seamless language learning and digital pedagogy

04: To provide recommendations for the sustainable implication of digital technologies in teaching and learning certain language expertise to enhance learning outcomes and pedagogical initiatives.

This study is expected to offer a strategic illustration of how transformative abilities of digital technologies curate seamless learning models for language learners and teachers. This research evaluates the theoretical foundation and formulates a descriptive analysis to validate the

reviews with empirical evidence related to technology-enabled instruction in comprehension, reading, writing, vocabulary, and grammar.

LITERATURE REVIEW

Theoretical Underpinning

The comprehension of the transformative role of technological advancements in language education requires a complementary theoretical foundation that extends concurrent applications for contextual understanding.

Sociocultural Theory

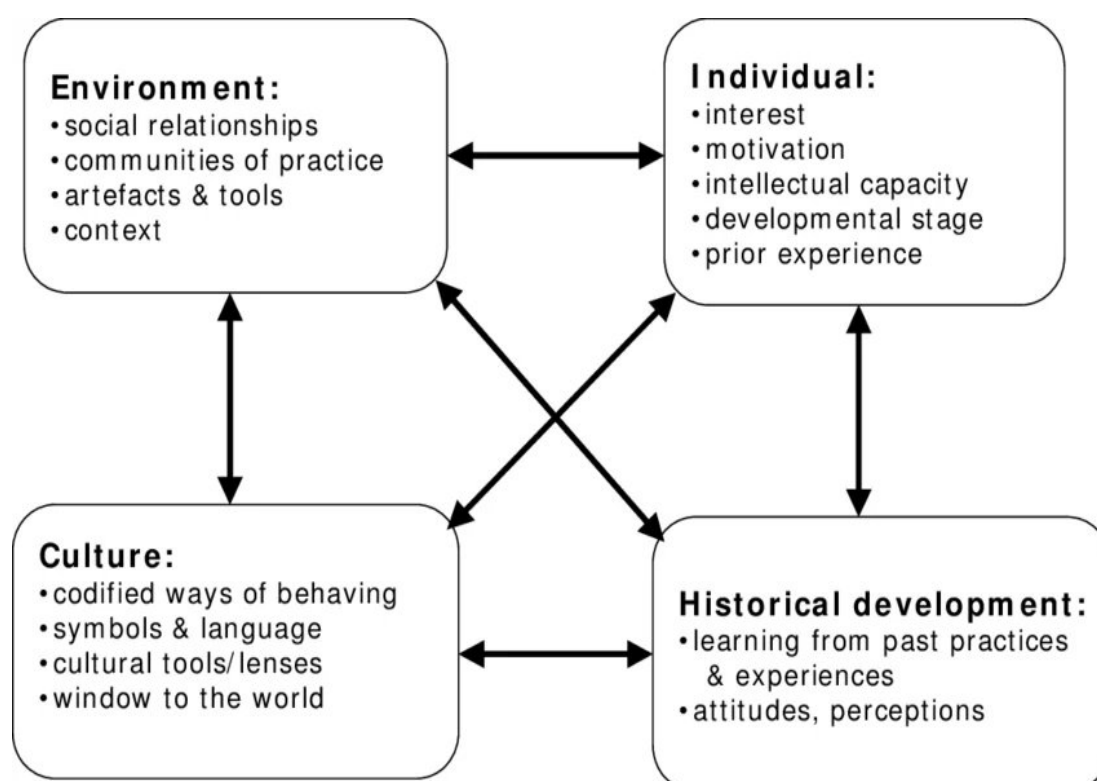


Figure 2: Sociocultural Theory

(Source: Kord et al. 2025)

Sociocultural theory is the most critical theoretical dynamic that supports learning as a fundamental process that is mediated by social contexts. Language is considered a tool that promotes higher-order cognitive development among common people. Digital outreach has transformed language learning with collaborative assistance and facilitated interaction among students, teachers, intellectuals, and professionals (Kord et al. 2025; Law, 2024). The integration of digital competency has enhanced authentic communication and dynamic learning among language learners, which ultimately contributed to greater autonomy. Technology often acts as sociocultural assistance that brings communities together and operationalises consistent interaction despite geographical distance.

The SAMR Model

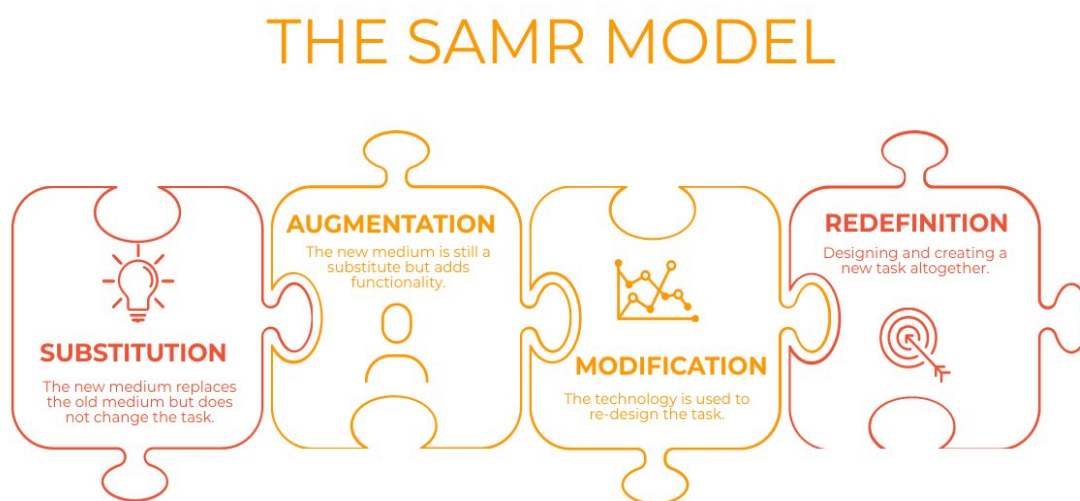


Figure 3: SAMR Model

(Source: Deniz, 2025)

This framework assists in visualising technology implications across four distinct progression levels such as augmentation, substitution, modification, and redefinition. In terms of lower-standard language models, technology does not directly transform traditional means. However, for higher levels, it redesigns the learning profiles to promote a seamless instructional base. Language education is a vital component of modification and redefinition as immersive technologies provide personalised opportunities to learners instead of uniform and conventional strategies (Deniz, 2025).

Contribution of Digital Technologies in Teaching Comprehension Skills

Digital capacity optimization has completely replaced the traditional means of language education. Digital optimisation has reimagined how language skills can be perceived, taught, and evaluated. Listening is one of the major comprehension skills that offer learners an edge to the effective development of linguistic knowledge. The addition of YouTube lectures, predefined podcasts, language-learning applications, and MOOCs has assisted language students to try myriads of accents, critical speech rates, and realistic communicative traits (Aleksieva et al. 2025; Urunbaeva, 2025). Moreover, speech-recognition technologies have altered the phonetic practices for learners, providing an AI-based comparison model that ensures accuracy among native-speakers. Google Speech and AI-powered pronunciation software have helped language students sharpen their listening and speaking comprehension. The integration of Augmented Reality has presented language students with immersive experiences that rejuvenate authentic communication contexts such as classrooms, restaurants, hospitals, and more (Eiene & Brevik, 2025). AI-powered language systems assist learners in following transformative instruction covering professional and academic contexts. The automated chatbots have provided students with speaking fluency by improving pronunciation and confidence.

The growth of collaborative digitalisation, such as Microsoft Teams, Google Meet, and Zoom, has increased the chances for professionals to interact with native speakers and international people through telecommunication, allowing extensive language awareness (Chan, & Sun, 2024). Another significant comprehension skill is reading that enables learners to develop

critical thinking. The progress of the internet has allowed learners to access peer-reviewed materials through journals, digital newspapers, blogs, e-books, and digital libraries (Jiang et al., 2026). Besides that, multimedia features have reshaped reading experiences, offering more ease and comfort like critical hyperlinks, visual annotations, audio narrations, and visual aids. These features offer immediate contextual support to the learners, minimising cognitive overload. Moreover, writing is a well-known language skills that enhance learners' vocabulary skills and mitigate grammatical misconceptions. Technology-focused word-processing systems allow learners to edit, revise, and align texts.

Several cloud-based tools offer learners automated writing assessment systems that accelerate digital writing with more peer-review-based publication. Various collaborative writing tools like Microsoft 365 and Google Docs assist learners with composing write-ups and brainstorming ideas with a facility to revisit histories (Sahayu et al. 2026). Current technological advancements facilitated contextualised language study where learners acquire a stable and adaptive review of grammar and vocabulary. Several mobile applications like Memrise, Duolingo, and Quizlet offer learners assistance for retrieval practice, cyclical training feedback loop analysis, and iterative learning (Çelik et al., 2026). Technology corpora also aligned integrated language learning through CALL, which helped learners correct their linguistics errors and attain instructional support. Many video-supported grammar platforms teach students with animations and visuals aids to help them comprehend concepts better and discover regularities.

Impact of Artificial Intelligence in Offering Personalised Linguistic Education

Artificial Intelligence (AI) has accelerated the language education efficiency by equipping learners with fundamental linguistics knowledge and assistance, and assisting teachers redesign their teaching methods. Traditional teaching approaches in language models enable students to gain static content, but AI-powered models assess learner performance and address strengths and weaknesses while providing concrete materials for real-time practice. The aspect of personalisation shifted the language learning model to an active and individualistic pathway in place of a structural instructional model. Various applications in generative AI, like Claude and ChatGPT, promoted authentic vocabulary learning and presented instant demonstrations for communication and grammatical contexts (Zou et al. 2026). Many generative AI assistants encourage students to engage in active learning with follow-up questions and continuous performance analysis, unlike traditional computer-based grammar education. The assistance from AI comes with structured forms that enable learners to be self-reliant. AI assists students assess their progress, curating SMART goals, seeking personalised feedback, and acknowledging targeted learning.

AI promotes a learner environment that is self-regulated and fosters autonomy for learners (Son et al. 2025; Law, 2024). In formative classrooms, AI-optimised tools enable students to reduce the overload of substantial work, as they provide automated writing assessment, proofreading, summarization, and even calculation. Moreover, AI cannot replace teachers and their pedagogical effectiveness. But AI assistance offers teachers intercultural dynamics, emotional support, and moral reasoning (Boulton & Cobb, 2017). The automated regime assists teachers with routine evaluation and feedback management in administrative positions. Educators place their importance on language simplicity, but through meaningful discussion with AI-assisted bots, teachers construct higher-order schedules and aid broad learner development.

Conceptual Framework

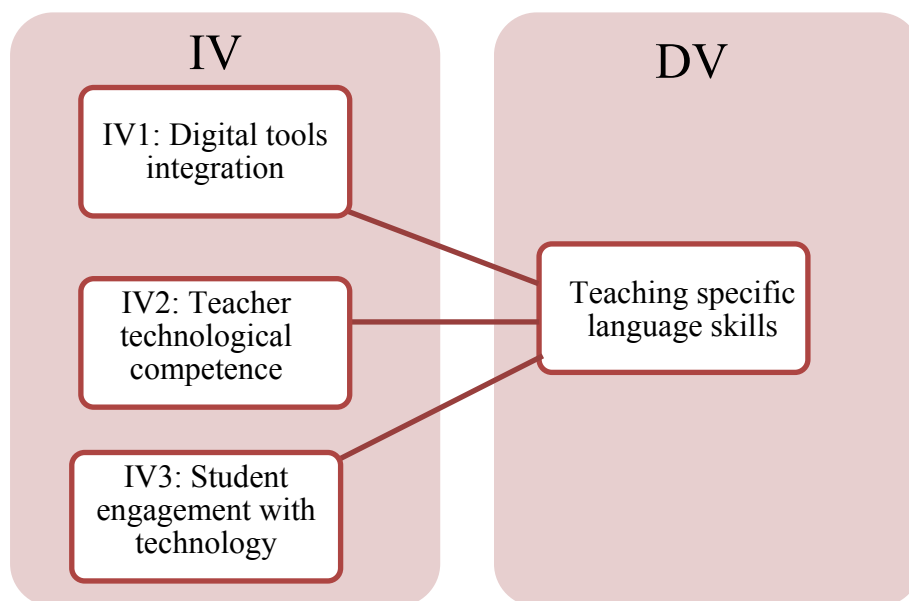


Figure 4: Conceptual Framework
(Source: Self-Developed)

The SPSS model determines Teaching Specific Language Skills as the dependent variable. It is assessed in the DV-A (which includes reading, writing, speaking and listening) and DV-B (including grammar and vocabulary). The independent variables include Digital Tools Integration (IV1), Teacher Technological Competence (IV2) and Student Engagement with Technology (IV3). IV1 relates to applications, multimedia, learning-management systems and artificial intelligence. IV2 is about the digital skills, preparedness and training of teachers. IV3 deals with the interaction, motivation and participation of the learners via technology. The framework thus suggests that these three dimensions are linked with perceived enhancement in particular language abilities. The transformative force of technology is not a distinct statistical variable, but the general topic of the study. Figure 4 is consistent due to the fact that IV1, IV2 and IV3 all tend towards the dependent outcome.

METHODOLOGY

Research Design and Approach

The study in question is a quantitative, cross-sectional study in which the researcher investigates measurable perceptions at a single moment in time (of 101 respondents). The questionnaire provided had structured questions that brought out the respondents in numerical form (language teachers and students). The design is a study of the relationship between Digital Tools Integration, Teacher Technological Competence and Student Engagement with Technology as the independent variables and Teaching Specific Language Skills as the dependent variable. It facilitates descriptive, reliability, correlation and multiple-regression analysis. Due to the self-report nature of responses and use of convenience sampling to collect responses, the design will only determine associations and predictive relationships, and not establish causation.

Sample and Sampling Techniques

Researchers in this study offered a valid interpretation of statistical analysis referring to the perceptions of direct collaborators. The chosen intended population was around 101 participants who belong to pedagogue of language department and language learners. A model questionnaire form was developed with the help of Google Forms. These survey links were circulated on social networking sites and educational institutions. A method of sampling was reported by the investigators that included a convenience strategy where participants were motivated to offer their contribution to this research. This sampling method is cost effective and more ethical as it includes only willing respondents and people who are directly involved in instructional technology related to education.

Tools and Techniques

The study variables were measured using coded statements in the questionnaire. Integration of digital tools was quantified by IV1-A, IV1-B and IV1-C, which are related to digital applications, multimedia, artificial intelligence and authentic technology-based learning. IV2-A, IV2-B and IV2-C measured the Teacher Technological Competence with regards to the digital skills, preparation and training of the teachers. Technology IV3-A, IV3-B and IV3-C were used to measure Student Engagement with Technology and had to do with participation, motivation and interaction with teachers. DV-A and DV-B measured Teaching Specific Language Skills, which are related to reading, writing, speaking, listening, grammar and vocabulary. Substantive items were measured on a five-point scale (strongly agree to strongly disagree). This code corresponds to the SPSS tables and has similarity in the variables classification (Barrett et al., 2026).

Data Collection Procedure

The primary data collection included active participation of people who are directly involved with learning and teaching language. The survey questionnaires were circulated through email, WhatsApp, and other educational platforms. The participants were provided with extensive information regarding the study's objectives. After gathering relevant data, a pilot testing with 10 extra participants was performed to ensure the credibility of this method. Furthermore, the data collection was transferred to Microsoft Excel with IBM SPSS for statistical analysis using ANOVA, regression, and descriptive statistics. The standardised dataset was evaluated to draw the underlying conclusions of this topic.

Methods of Data Analysis

IBM SPSS Statistics version 29 was used to analyse the data. Respondent characteristics and item responses were summarised with frequencies and descriptive statistics. Alpha (Cronbach) was used to measure internal consistency and was not utilized as a regression procedure. Pearson correlation was used to test the relationships between the independent-variable indicators and DV-A and DV-B. Multiple regression was used to test the overall relationship between them and Teaching Specific Language Skills. The dependent outcome was hence Teaching Specific Language Skills, and the set of predictors consisted of the 9 indicators that are classified under IV1, IV2 and IV3, as shown in the table of coefficients. P was evaluated at $p < .05$.

Ethical Considerations

This research ensured credible research conduct that followed ethical standards throughout the process. The participants were provided with prior knowledge regarding the practices, and all the respondents were voluntary. All the responses were voluntary and curated to meet the research objectives on an academic level. This study has not revealed any personal information of respondents. Total anonymity and confidentiality were maintained to ensure complete transparency. This research associated extreme academic integrity standards by managing data with no manipulation or fabrication. The literature review segment was formulated with credible in-text citations to avoid plagiarism.

DATA ANALYSIS

Demographic Profile

Table 1: Demographic Analysis

Statistics					
	Age group	Gender	Educational level	Profession	Frequency of technology use
N Valid	101	101	101	101	101
Missing	0	0	0	0	0
Mean	2.08	1.39	2.47	1.44	1.58
Median	2.00	1.00	2.00	1.00	1.00
Mode	2	1	2	1	1
Std. Deviation	.902	.489	.944	.498	.791
Minimum	1	1	1	1	1
Maximum	4	2	4	2	4

(Source: IBM-SPSS)

Demographic distribution shows an interesting trend in the transformative power of technology to improve specific language teaching skills. The influence of technological integration in learning can be identified through demographic trends. 101 participants are involved in this research; among them, 39.6% of participants are from the 28-37 years age group, 29.7% of respondents belong to the 18-27 age group, and 23.8% of respondents are from the 38-47 age group. 6.9% 48 years and above age group and participated in this research. Involvement of young age groups highlights the relevance of data as provide effective information regarding technology. Young people are more tech-savvy and like to use advanced tools in learning (Zamrudi et al., 2025). Table 1 highlights that the mean value of age group is 2.08 indicates that most participants fall within the 28-37 age category.

Gender distribution is a crucial factor in demographic analysis that involves different perspectives. Based on data 61.4% male and 38.6% female were involved in this study. The mean of the gender distribution is 1.39, highlighting that the majority were male respondents. Significant involvement of males in this research demonstrates the interest of this group in technological management. Educational qualifications, on the other side shows average mean value of 2.47, suggesting predominance of postgraduate learners. Diploma and any equivalent

degree, undergraduate, postgraduate and doctoral are the four groups included in this research. Technological usage among students and teachers involved in higher education is significant. The complexity of studies encourages both teachers and students to use advanced tools to make learning easy (Canonigo, 2024).

56.4% of teachers and 43.6% of students participated in this present research. The mean value of profession is 1.44, suggesting more involvement of teachers. Frequency of technology use averages 1.58, indicating that most respondents use technology daily. In this digital era, advanced tools have become the most important part of the learning process. Teachers use tools like AI and learning platforms to simplify concepts, while students adopt advanced technology to remember concepts (Alam & Mohanty, 2023). This demographic analysis reflects young and educated sample with high knowledge regarding technology usage. It highlights the importance of digital tools and platforms in improving language teaching.

Descriptive Statistics of Identified Variables

Table 2: Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
IV1-A	101	1	5	1.95	1.143
IV1-B	101	1	5	1.90	1.261
IV1-C	101	1	5	1.95	1.252
IV2-A	101	1	5	1.94	1.215
IV2-B	101	1	5	1.84	1.084
IV2-C	101	1	5	2.01	1.360
IV3-A	101	1	5	2.24	1.408
IV3-B	101	1	5	1.78	1.180
IV3-C	101	1	5	1.98	1.233
DV-A	101	1	5	1.90	1.269
DV-B	101	1	5	1.73	1.139
Valid N (listwise)	101				

(Source: IBM-SPSS)

Strongly agree and strongly disagree are coded as 1 and 5, respectively; thus, the lower the means, the higher the agreement. Integration of Digital Tools has a range between 1.90 and 1.95, with the standard deviation of 1.143 to 1.261. There was a general agreement among the respondents that digital tools, artificial intelligence and technology-based platforms aid in language learning. The means range between 1.84 and 2.01, with standard deviations of 1.084 to 1.360, show that there is concurrence that skills, preparedness and training by teachers favour successful digital teaching. The means of Student Engagement with Technology range between 1.78 and 2.24, and standard deviations between 1.180 and 1.408. Participation, motivation and interaction, as expected, were mostly supported by technology, but IV3-A had the highest variance. The means of the dependent indicators were 1.90 and 1.73 for DV-A and

DV-B, respectively, and the standard deviation of 1.269 and 1.139, respectively. In general, the respondents concurred that there are certain language skills that technology can assist.

Internal Consistency

Table 3: Reliability statistics

Reliability Statistics	
Cronbach's Alpha	N of Items
.834	16

(Source: IBM-SPSS)

Reliability analysis can be defined by the value of Cronbach's Alpha. A higher value of Cronbach's Alpha suggests high reliability that is crucial to prove the credibility of the research. a value of 0.834 in this analysis demonstrates strong internal consistency across 16 items. The accepted threshold value of Cronbach's Alpha is 0.70, and the present value exceeds this threshold. The high alpha suggests that variables are well-aligned with research objectives and capture the essence of the transformative power of technology in teaching language skills. This value proves the validity of survey instruments as a dependable measure for academic research.

Correlation Analysis

Table 4: Correlation analysis

Correlations		IV1-A	IV1-B	IV1-C	IV2-A	IV2-B	IV2-C	IV3-A	IV3-B	IV3-C	DV-A	DV-B
IV 1-A	Pearson Correlation	1	.461**	.382**	.307**	.397**	.431**	.399**	.259**	.290**	.334**	.289**
	Sig. (2-tailed)		.000	.000	.002	.000	.000	.000	.009	.003	.001	.003
	N	101	101	101	101	101	101	101	101	101	101	101
IV 1-B	Pearson Correlation	.461**	1	.554**	.192	.157	.380**	.250*	.295**	.288**	.156	.281**
	Sig. (2-tailed)	.000		.000	.055	.118	.000	.012	.003	.003	.119	.004
	N	101	101	101	101	101	101	101	101	101	101	101
IV 1-C	Pearson Correlation	.382**	.554**	1	.268**	.171	.182	.449**	.270**	.239*	.217*	.208*
	Sig. (2-tailed)	.000	.000		.007	.087	.068	.000	.006	.016	.029	.037
	N	101	101	101	101	101	101	101	101	101	101	101
IV 2-A	Pearson Correlation	.307**	.192	.268**	1	.281**	.152	.359**	.409**	.300**	.502**	.342**
	Sig. (2-tailed)	.002	.055	.007		.004	.130	.000	.000	.002	.000	.000
	N	101	101	101	101	101	101	101	101	101	101	101

IV 2-B	Pearson Correlation	.397**	.157	.171	.281**	1	.442**	.411**	.223*	.447**	.621**	.419**
	Sig. (2-tailed)	.000	.118	.087	.004		.000	.000	.025	.000	.000	.000
	N	101	101	101	101	101	101	101	101	101	101	101
IV 2-C	Pearson Correlation	.431**	.380**	.182	.152	.442**	1	.563**	.151	.406**	.453**	.408**
	Sig. (2-tailed)	.000	.000	.068	.130	.000		.000	.132	.000	.000	.000
	N	101	101	101	101	101	101	101	101	101	101	101
IV 3-A	Pearson Correlation	.399**	.250*	.449**	.359**	.411**	.563**	1	.375**	.308**	.472**	.489**
	Sig. (2-tailed)	.000	.012	.000	.000	.000	.000		.000	.002	.000	.000
	N	101	101	101	101	101	101	101	101	101	101	101
IV 3-B	Pearson Correlation	.259**	.295**	.270**	.409**	.223*	.151	.375**	1	.465**	.206*	.373**
	Sig. (2-tailed)	.009	.003	.006	.000	.025	.132	.000		.000	.039	.000
	N	101	101	101	101	101	101	101	101	101	101	101
IV 3-C	Pearson Correlation	.290**	.288**	.239*	.300**	.447**	.406**	.308**	.465**	1	.465**	.324**
	Sig. (2-tailed)	.003	.003	.016	.002	.000	.000	.002	.000		.000	.001
	N	101	101	101	101	101	101	101	101	101	101	101
DV -A	Pearson Correlation	.334**	.156	.217*	.502**	.621**	.453**	.472**	.206*	.465**	1	.438**
	Sig. (2-tailed)	.001	.119	.029	.000	.000	.000	.000	.039	.000		.000
	N	101	101	101	101	101	101	101	101	101	101	101
DV -B	Pearson Correlation	.289**	.281**	.208*	.342**	.419**	.408**	.489**	.373**	.324**	.438**	1
	Sig. (2-tailed)	.003	.004	.037	.000	.000	.000	.000	.000	.001	.000	
	N	101	101	101	101	101	101	101	101	101	101	101

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

(Source: IBM-SPSS)

The Pearson findings indicate that there were mostly positive correlations between the independent indicators and the dependent indicators. IV1-A correlated significantly with DV-A ($r = .334$, $p < .01$) and DV-B ($r = .289$, $p < .01$). IV1-B correlated significantly with DV-B ($r = .281$, $p < .01$), but not with DV-A ($r = .156$, $p = .119$). IV1-C showed significant relationships with DV-A ($r = .217$, $p < .05$) and DV-B ($r = .208$, $p < .05$). The strongest relationships were exhibited in teacher competence. IV2-A correlated with DV-A at $r = .502$ and DV-B at $r = .342$, while IV2-B correlated with DV-A at $r = .621$ and DV-B at $r = .419$; all

were significant at $p < .01$. IV2-C also correlated significantly with DV-A ($r = .453$) and DV-B ($r = .408$). There was a significant positive correlation between IV3-A, IV3-B and IV3-C and each of the dependent indicators. These correlations do not indicate causality.

Regression Analysis

Table 5: Model Summary

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df 1	df 2	Sig. F Change
1	.759 ^a	.576	.534	.867	.576	13.709	9	91	.000

a. Predictors: (Constant), Digital tools integration, Teacher technological competence, Student engagement with technology

(Source: IBM-SPSS)

Multiple regression was used to determine whether Teaching Specific Language Skills could be predicted by a combination of the independent indicators. The model produced $R = .759$, $R^2 = .576$ and adjusted $R^2 = .534$. In this way, predictors accounted for 57.6% of the variation observed in the dependent outcome, and 53.4% of the explanatory power after classification. The mean error was of .867. The ANOVA result confirmed a significant model, $F(9, 91) = 13.709$, $p < .001$.

Table 6: ANOVA Testing

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	92.666	9	10.296	13.709	.000 ^b
	Residual	68.344	91	.751		
	Total	161.010	100			

a. Dependent Variable: Teaching Specific Language Skills

b. Predictors: (Constant), Digital tools integration, Teacher technological competence, Student engagement with technology

(Source: IBM-SPSS)

The above ANOVA testing confirms that this regression model is statistically appropriate for predicting dependent variables. This method is well-suited for aligning the variance of predictors to the dependent variable. This testing showed an F-value of 13.709 with a statistical significance level of 0.000, which is lower than the considered threshold of 0.05. This value directly shows that the independent variables cumulatively influence the dependent variable that is the transformative power of technology. The total regression sum is accounted for as around 92.666, which is greater than the unexplained variance, indicating a considerable share of variability.

Table 7: Coefficient Analysis

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.085	.235		-.363	.718
IV1-A	-.030	.096	-.027	-.315	.754
IV1-B	-.058	.096	-.057	-.601	.549
IV1-C	.013	.096	.013	.136	.892
IV2-A	.367	.083	.352	4.425	.000
IV2-B	.438	.100	.374	4.387	.000
IV2-C	.125	.095	.134	1.321	.190
IV3-A	.124	.093	.138	1.333	.186
IV3-B	-.175	.093	-.162	-1.870	.065
IV3-C	.199	.091	.193	2.180	.032

a. Dependent Variable: Teaching Specific Language Skills

(Source: IBM-SPSS)

The coefficients recognize special contributions in considering the indicators jointly. The strongest significant predictor was IV2-B, which indicates teacher preparedness (beta =.374, $p < .001$), and IV2-A, which indicates the digital skills of teachers (beta =.352, $p < .001$). Student-teacher interaction on collaborative digital platforms (IV3-C) also played an important role (beta =.193, $p = .032$). The other indicators failed to reach the .05 mark. IV1-A, IV1-B and IV1-C were non-significant, with beta values of -.027, -.057 and .013 and p-values of .754, .549 and .892. IV2-C was non-significant (beta = .134, $p = .190$), as were IV3-A (beta = .138, $p = .186$) and IV3-B (beta = -.162, $p = .065$). Thus, the findings endorse a discriminated conclusion: teacher competence and one type of student-teacher engagement were strong predictors, and technology-use indicators did not contribute as strongly to the unique prediction.

DISCUSSION

The results give a homogeneous report of the relationship between the three independent-variable dimensions and Teaching Specific Language Skills. The Alpha of Cronbach was .834 in 16 items reported, which implies high internal consistency in the SPSS output. The means that are below the middle of the scale indicate that respondents mostly agreed that digital tools, competence of teachers and engagement with students are supportive of language learning. This trend is reinforced by correlations, especially in teacher competence, where preparedness was the most significantly associated with DV-A, and teachers' digital skills were also significantly positively correlated with the outcome. This implies that technology will be more helpful in facilitating the development of language skills when teachers are comfortable with technology and when they are able to plan appropriate learning activities.

There is a significant qualification in the regression analysis. Even though the model accounted for 57.6% of the variation in Teaching Specific Language Skills, only three item-level predictors remained significant as the shared relationships were taken into account. Causal claims cannot also be made by the cross-sectional, convenience-sample design. The primary implication is that language-technology integration needs appropriate tools, teacher capacity, active students and proper pedagogy, with teacher capacity being the most impactful in this dataset.

CONCLUSION

This research considered the Teaching Specific Language Skills as dependant outcome and Digital Tools Integration, Teacher Technological Competence and Student Engagement with Technology as independent variables. The descriptive and correlation results indicated generally positive perceptions towards technology-supported language education. The regression model was important, and it explained the outcome variation at 57.6%. Individual predictors were those of teacher preparedness, teacher digital skills and collaborative student-teacher interaction. But it is not technology per se that can be said to have improved, and all indicators of technology use did not have a specific contribution. Sustainable language education thus involves the use of digital tools, competent teachers, motivated learners and pedagogies.

Future Direction

This study is an effective way to determine whether technological advancement is influencing cohesive language learning and teaching. However, a more established theoretical framework can increase the credibility of the study, along with more nuanced analysis of existing literature. A new direction of this study will be generated if investigators could attach multilingual comprehension education and its advancement through technology implications. The qualitative network of data presents a static level of information rather than an imbalanced data characterisation.

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APPENDIX

Survey Questionnaire

IV (Independent variable): Transformative power of technology

IV1: Digital tools integration

IV2: Teacher technological competence

IV3: Student engagement with technology

DV (Dependent variable): Teaching specific language skills

[Age group is marked as 1-4 and in gender, male is referred as 1 while female is denoted as 2. Education level also marked as 1-4, profession of teacher suggested as 1 and student as 2. Frequency of technology use listed as 1-4 while variable based questions follow likert scale. Strongly agree as 1, agree as 2, neutral as 3, disagree as 4 and strongly disagree as 5]

1. Age group

- a. 18-27 years
- b. 28-37 years
- c. 38-47 years
- d. 48 years and above

2. Gender

- a. Male
- b. Female

3. Educational level

- a. Diploma and any equivalent degree
- b. Undergraduate

c. Postgraduate

d. Doctoral

4. Profession

a. Teacher

b. Student

5. Frequency of technology use

a. Daily

b. Weekly

c. Monthly

d. Rarely

6. Do you think that digital tools enhance language learning through apps, multimedia and LMS? (IV1-A)

a. Strongly agree

b. Agree

c. Neutral

d. Disagree

e. Strongly disagree

7. Do you believe that use of AI tools improves learning? (IV1-B)

a. Strongly agree

b. Agree

c. Neutral

d. Disagree

e. Strongly disagree

8. Do you feel that technology-based platforms provide more authentic learning experiences than traditional methods? (IV1-C)

a. Strongly agree

b. Agree

c. Neutral

d. Disagree

e. Strongly disagree

9. Teachers with digital skills deliver more precise language instruction. (IV2-A)

a. Strongly agree

b. Agree

c. Neutral

d. Disagree

e. Strongly disagree

10. Teacher preparedness influences the success of technological involvement in learning. (IV2-B)

a. Strongly agree

b. Agree

c. Neutral

d. Disagree

e. Strongly disagree

11. Teacher training in technology is crucial to improve language pedagogy. (IV2-C)

a. Strongly agree

b. Agree

c. Neutral

d. Disagree

e. Strongly disagree

12. Do you believe that students actively using technology show better participation in learning activities? (IV3-A)

a. Strongly agree

b. Agree

c. Neutral

d. Disagree

e. Strongly disagree

13. Do you think that technology motivates students to practice language more frequently? (IV3-B)

a. Strongly agree

- b. Agree
- c. Neutral
- d. Disagree
- e. Strongly disagree

14. Do you feel that collaborative digital platforms increase student interaction with teachers? (IV3-C)

- a. Strongly agree
- b. Agree
- c. Neutral
- d. Disagree
- e. Strongly disagree

15. Technology in teaching specific language skills can improve skills like reading, writing, speaking and listening. (DV-A)

- a. Strongly agree
- b. Agree
- c. Neutral
- d. Disagree
- e. Strongly disagree

16. Technology-based learning leads to measurable improvement in grammar and vocabulary that is crucial for teaching specific language skills. (DV-B)

- a. Strongly agree
- b. Agree
- c. Neutral
- d. Disagree
- e. Strongly disagree