

# Bridging the Gap: A Hybrid Model of AI and Oral Reading for Developing EFL Communication Skills and Motivation

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**Abstract**—The study examines the application of artificial intelligence (AI) tools to enhance oral reading (OR), oral communication skills, and motivation among university-level English as a Foreign Language (EFL) learners. Despite the growing use of AI in language learning, there is limited empirical research on the interaction between AI-based activities and conventional oral reading within an integrated pedagogical context. Drawing on cognitive, motivational, and schema theories, this research examines the relationships among AI interaction, oral reading, and motivation. A quantitative cross-sectional design was employed, using a stratified random sample of 335 students across various academic levels. Data were collected using a validated 21-item Likert-scale instrument assessing three constructs: Oral Reading, AI Interaction, and Motivation. Descriptive and structural analyses were conducted to examine EFL learners' perceptions and the relationships among these constructs. Findings suggest that OR was perceived as highly important for developing communication skills ( $M = 4.11$ ) and fostering intrinsic motivation ( $M = 4.26$ ). Conversely, AI tools were perceived as somewhat less effective overall ( $M = 3.96$ ), especially in grammar development. These results highlight a tension between AI's strengths (e.g., engagement and pronunciation feedback) and its limitations in fostering deeper linguistic competence. The findings support a hybrid instructional model in which AI augments rather than substitutes for structured oral reading tasks, with practical implications for curriculum designers and educators integrating AI into EFL instruction.

**Index Terms**—Artificial Intelligence, communication skills development, motivation, oral reading, self-determination theory

## I. INTRODUCTION

In today's globalized and technology-driven world, English language proficiency has become a fundamental skill for academic, professional, and personal advancement (Yusuf et al., 2026). The rapid development of digital technologies continues to reshape language-learning environments, making effective communication in English a vital competency for learners across diverse contexts (Ahmed, 2025). Educational systems worldwide increasingly seek to integrate innovative tools to meet these growing demands and to prepare students for participation in interconnected societies.

Among approaches to English as a Foreign Language (EFL) instruction, both artificial intelligence (AI) tools and oral reading (OR) practices (e.g., reading printed texts aloud) have demonstrated distinct pedagogical benefits and certain limitations. On the one hand, recent advances in AI have introduced adaptive learning environments capable of personalizing instruction (Alfaleh et al., 2025; Yang & Rui, 2025), providing immediate feedback (Klimova et al., 2024),

and fostering learner engagement (Guan et al., 2025). AI-driven systems, including text-generating tools and conversational agents, have been reported to support vocabulary acquisition, speaking fluency, writing accuracy, and learner confidence (Grab, 2025; Wiboolyasarini et al., 2025). Several recent studies further suggest that AI-assisted environments may promote positive motivational outcomes such as increased enjoyment, self-efficacy, and reduced anxiety (Fu & Chen, 2025), partly due to their ability to adapt pace and task difficulty to individual learner needs (He, 2025; Mohamed et al., 2026).

AI-driven systems provide immediate feedback and adaptive interaction; however, they often struggle with deeper discourse-level competencies, pragmatic appropriateness, and complex grammatical explanation. Research indicates that AI-generated responses may lack contextual sensitivity, occasionally produce superficial feedback, or fail to scaffold higher-order language skills such as argumentation, cohesion, and sociolinguistic awareness (McCarthy & Yan, 2024; Klimova et al., 2024). Furthermore, AI tools tend to prioritize surface-level corrections (e.g., pronunciation, vocabulary substitution, syntactic adjustments) rather than fostering metalinguistic understanding or strategic competence, which are critical for advanced communicative proficiency (Wei, 2023; Zhai & Wibowo, 2023). These constraints suggest that, while AI can enhance engagement and provide scalable practice opportunities, it cannot yet replace the pedagogical judgment, contextual responsiveness, and interactive negotiation of meaning that human instructors facilitate. A balanced perspective, therefore, positions AI not as a comprehensive solution but as a supportive tool whose effectiveness depends on careful pedagogical design and integration within structured instructional frameworks.

On the other hand, reading, and OR in particular, remains a foundational instructional practice in language education. A substantial body of research has documented the role of OR in supporting fluency, pronunciation, comprehension, and communicative competence (Mart, 2012; Huang, 2010; Chang et al., 2020). Empirical studies in controlled settings have shown that structured OR interventions can significantly improve learners' confidence, vocabulary retention, and interactive communication skills (Torres-Díaz et al., 2020; Wang & Zheng, 2022). Alternatively, also facilitates meaningful engagement with texts and supports the development of discourse-level competencies.

While the benefits of AI tools and OR practices have been widely examined in separate strands of research, comparatively fewer studies have explored their combined or complementary use within a unified theoretical and empirical framework. Existing work has investigated AI-generated texts for reading practice (Shen et al., 2025) and AI-assisted comprehension activities (Wang & Feng, 2023), as well as AI-based interventions targeting reading engagement and self-regulated learning (Shafiee Rad, 2025). However, the interaction between AI-supported learning and structured OR practices, particularly in university-level EFL contexts, has received more limited empirical attention.

Rather than suggesting a complete absence of research, the present study builds on prior findings by examining how AI interaction and OR may function together within a framework informed by cognitive, motivational, and schema theories. Specifically, it investigates whether these approaches can be strategically integrated to enhance communication sub-skills and learner motivation.

This study, therefore, addresses an emerging line of inquiry: the potential pedagogical value of blending AI-supported interaction with traditional OR activities. By quantitatively assessing university EFL students' perceptions of both approaches and their motivational orientations, the research seeks to contribute empirical evidence to ongoing discussions about technology-enhanced language learning.

## II. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

The integration of AI with OR methodologies represents a transformative shift in EFL education. Hybrid models that combine AI-driven feedback with traditional OR practices are increasingly recognized for their potential to enhance communication skills and learner motivation. Empirical research shows that AI tools significantly enhance speaking fluency, accuracy, confidence, and willingness to communicate by providing real-time feedback and interactive practice environments (Fathi et al., 2024; Li & Zhao, 2025). Likewise, OR strengthens pronunciation, fluency, and linguistic preparedness, enabling learners to transfer decoded input into communicative performance (Derakhshan & Park, 2026). A growing body of evidence also highlights *motivation* as a key mechanism linking both OR and AI interaction to improvements in oral communication (Wang & Wen, 2025).

However, while AI-supported language learning demonstrates substantial promise, it is important to acknowledge that current AI systems do not fully replicate the complexity of authentic human communication. Issues such as limited pragmatic sensitivity, sociocultural distinctions, potential inaccuracies in automated feedback, and the risk of cognitive overload underscore the need to integrate AI into pedagogically structured environments rather than treating it as a standalone solution.

This literature review synthesizes: (a) empirical studies on OR and AI interaction in EFL communication, (b) the direct relationships between OR and motivation and between AI and motivation, and (c) the integration of Self-Determination Theory (SDT), Schema Theory, and Cognitive Load Theory into a unified conceptual framework supporting the proposed hybrid model.

### A. Empirical Studies on OR in EFL Communication

Research consistently demonstrates that OR improves foundational elements of oral communication, including fluency, accuracy, pronunciation, and oral performance quality. Studies show that reading aloud enhances learners' phonemic and

morphological awareness, which later facilitates spoken output (Derakhshan & Park, 2026; Du et al., 2025). OR-based activities also enhance confidence and self-efficacy, enabling learners to participate more actively in peer or task-based communication tasks (Derakhshan & Park, 2026; Dou & Sun, 2025). Comparative studies indicate that OR can outperform silent reading when the instructional goal is oral proficiency (Guo, 2026). OR is also recognized as a preparatory tool for academic and professional English communication (Yu, 2026).

At the linguistic level, repeated OR supports phonological internalization and prosodic development (Mart, 2012; Huang, 2010), while extensive reading contributes to vocabulary and grammatical development (Sapaeva & Xujaniyazova, 2019). Interactive formats such as Readers Theatre extend OR into collaborative communicative practice (Khanlou et al., 2022). Grizzle (2007) further highlights the reciprocal relationship between oral language and comprehension, emphasizing the confidence-building dimension of oral performance.

Rather than viewing linguistic gains and affective benefits as separate outcomes, current synthesis suggests that OR simultaneously strengthens phonological automatization, communicative readiness, and classroom engagement when implemented in scaffolded and socially interactive formats.

Nevertheless, most existing studies examine OR either in isolation or without integrating emerging digital tools. Limited research has investigated how OR functions within AI-supported environments or how it interacts with adaptive technologies to influence broader communicative outcomes. This gap justifies examining OR within a hybrid instructional framework.

### *B. Training English Communication Skills Through AI Interaction*

AI-mediated interaction has become increasingly prevalent in language learning. Interactive AI systems such as chatbots and dialogue systems provide simulated conversational practice and immediate corrective feedback (Wang, 2025; Zhai & Wibowo, 2023). These systems promote oral fluency and interactional competence in low-risk environments. Specialized technologies such as ASR systems and VR platforms further target pronunciation and speech production skills (Dennis, 2024; Li, 2022). AI systems also create adaptive learning conditions by adjusting task difficulty and offering individualized feedback, thereby aligning with principles of personalized instruction.

Despite these advantages, AI-mediated interaction remains limited in its ability to replicate spontaneous, emotionally nuanced, and culturally embedded communication. Feedback may lack discourse-level depth, and speech recognition systems may produce inaccuracies. Overreliance on automated interaction may reduce opportunities for teacher-guided scaffolding and authentic peer negotiation of meaning. Additionally, if task sequencing is not carefully designed, adaptive systems may increase extraneous cognitive load rather than optimize learning conditions. Therefore, AI effectiveness depends significantly on its pedagogical integration with structured instructional practices such as OR.

Most prior studies focus on discrete skills or short-term outcomes. Little is known about holistic communicative competence when AI is systematically combined with traditional pedagogical strategies. This limitation motivates the present hybrid approach.

### *C. The Direct Correlation Between Oral Reading and Motivation*

Motivation plays a decisive role in reading ability and engagement with OR activities. Studies of Chinese EFL learners indicate that extrinsic reading motivation significantly predicts strategy use and varies across grades (Li et al., 2024). In Saudi contexts, higher reading motivation predicts both reading strategies and comprehension outcomes (Kassem & Alqahtani, 2023).

Teacher behaviors and classroom climate also influence reading motivation. Derakhshan et al. (2025) demonstrate that teacher support positively correlates with motivation and emotional engagement. Further experimental evidence shows that motivational interventions enhance reading outcomes (Al-Qahtani & Alwaheebi, 2023). Beyond comprehension outcomes, motivation may mediate the relationship between OR engagement and communicative performance. When learners experience OR as competence-enhancing and socially supported, they are more likely to internalize learning goals and transfer rehearsal into spontaneous communication contexts. However, motivational orientations toward OR may vary across academic levels or prior learning experiences (Li et al., 2024; Kassem & Alqahtani, 2023). Recognizing such variability strengthens interpretive depth and supports examination of subgroup differences in hybrid instructional models.

### *D. AI Effect on Learning and Motivation*

Language learning involves cognitive load management (Di Carlo, 2017; Ellis, 2005). AI systems, through real-time adaptation, align with the principles of Cognitive Load Theory. Research indicates that AI supports intrinsic and extrinsic motivation via personalized feedback and gamified engagement (Mohamed et al., 2025; Xia et al., 2024; Zhai et al., 2023). SDT-based research demonstrates that AI-powered learning enhances autonomy, competence, and relatedness (Ding & Wang, 2025; Ellikkal & Rajamohan, 2024; Ivanytska et al., 2024; Wei, 2023).

However, motivational benefits are not uniform (Couvaneiro & Pedro, 2020). They may depend on learner familiarity with digital tools, quality of feedback design, and the balance between automation and human interaction (Tian & Zhou, 2020). Without structured guidance, AI-based tasks may overwhelm learners or reduce meaningful peer communication (Pham et al., 2020). These limitations reinforce the need for hybrid approaches in which AI enhances, rather than replaces, structured pedagogical strategies such as OR.

### E. Hybrid Model Theoretical Framework

The proposed hybrid model integrates Self-Determination Theory (Ryan & Deci, 2020), Schema Theory (Derry, 1996), and Cognitive Load Theory (Wang et al., 2024; Wen, 2021) to build a grounded theoretical framework explaining the mutual effects of OR and AI interaction on EFL learners' motivation and the development of their communication skills. Instead of considering these perspectives separately, the proposed hybrid model combines them to explain the hypothesized relationships and structural pathways.

SDT explains motivational processes in terms of autonomy, competence, and relatedness. OR primarily supports competence and relatedness through scaffolded rehearsal and peer interaction, while AI interaction enhances autonomy through adaptive and individualized pathways. Schema Theory explains how OR activates linguistic schemas and how AI extends and adapts them. This theoretical lens supports the prediction that both OR and AI directly enhance communication skills. Cognitive principles, including Cognitive Load Theory, inform activity design. The model aims to optimize intrinsic load while minimizing extraneous load (Wang et al., 2024). AI serves as an interactive partner for real-time practice, facilitating metacognition without overwhelming the learner (Wen, 2021).

By combining these perspectives, the hybrid model presupposes that:

(1) OR and AI interaction function as complementary instructional modalities that promote both schema activation and schema construction;

(2) these modalities are designed to operate within learners' cognitive load limits while still providing substantial opportunities for meaningful practice; and

(3) Through these structured experiences, learners' basic psychological needs (autonomy, competence, and relatedness) are supported, thereby enhancing motivation in accordance with SDT.

In turn, increased motivation is expected to foster sustained engagement with both OR and AI interaction, ultimately contributing to further development of communication skills.

Accordingly, the theories are mapped onto specific components of the study:

*Hypotheses and structural paths:* OR and AI interaction influence motivation, which in turn influences communication skills (SDT); OR and AI interaction also directly influence communication skills through cognitive and schema-based processes.

*Measurement instruments:* Motivation scales are based on SDT dimensions; instruments measuring perceptions of task design and cognitive demands are grounded in Cognitive Load Theory; and Schema Theory informs perceptions of comprehension and integration of new language.

*Task and model design:* The tasks involving OR and AI interaction are structured to activate prior knowledge, regulate cognitive load, and promote autonomy, competence, and relatedness.

This literature review provides a coherent theoretical and empirical foundation for the hybrid model by integrating SDT, Schema Theory, and cognitive perspectives within a unified framework. It explains how OR and AI are expected to interact cooperatively, both directly and through motivation, to enhance EFL learners' communication skills, thereby addressing gaps identified in previous studies and providing theoretical support for the study's hypotheses and structural modeling.

To address this emerging area, we proposed the following hypotheses (Figure 1):

H1: EFL students' interactions with AI have a positive effect on their motivation for communication in English.

H2: EFL students' engagement with OR activities has a positive effect on their motivation for communication in English.

H3: EFL students' interactions with AI have a positive effect on their engagement with OR activities.

H4: AI interactions mediate the relationship between students' engagement with OR activities and their motivation for communication in English.

Based on the above hypotheses, we developed a conceptual model describing the relationships among AI interaction, OR activities, and communication motivation (Figure 1).

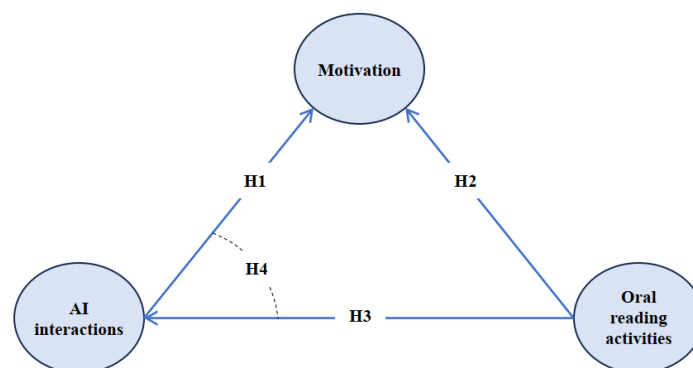


Figure 1. The Proposed Conceptual Model

While AI tools and OR are well documented in isolation, research lacks a synthesized approach that leverages their complementary strengths. AI studies emphasize personalized feedback (Fu & Chen, 2025; Yang & Rui, 2025) but also acknowledge limitations in fostering deeper grammatical competence and discourse-level development. Conversely, OR research confirms benefits for fluency and accuracy (Huang, 2010; Mart, 2012), but has largely overlooked integrating adaptive technologies to enhance learner motivation and provide individualized support.

To date, no prior study has quantitatively examined the structural interrelationships among AI interaction, OR engagement, and learner motivation within a unified theoretical model. This study addresses this gap by investigating a blended approach that systematically integrates AI-supported interaction with structured OR activities to enhance EFL communication skills and motivational outcomes.

### III. METHODOLOGY

This study employed a quantitative, cross-sectional survey design to assess university EFL students' perceptions of OR activities, AI interactions, and intrinsic and extrinsic motivation in the development of English communication skills. This design enabled the collection of data from a relatively large sample at a single point in time and facilitated the examination of the interrelationships among these three constructs.

#### A. Participants and Sampling

The sampling method used was stratified random sampling, in which the population of a public university in Algeria served as the sampling frame. Academic level was used to define the strata (from first year to master's level) to represent the diversity of the EFL student population in the sample. The sampling frame comprised students enrolled in general English courses during the 2024–2025 academic year. The original sample size was 350 students; the final sample consisted of 335 EFL students (151 males, 184 females) after incomplete or invalid responses were removed. The sample distribution by academic level was as follows: 85 first-year, 78 second-year, 72 third-year, 65 fourth-year, and 35 master's students.

Participation was voluntary, and the inclusion criteria required that participants be EFL students currently enrolled in a course and able to complete an online questionnaire. The psychometric analyses are considered robust, as the sample size was well above the commonly recommended minimum of 10 respondents per item for a 21-item instrument.

Although data were obtained from only one institution, stratified random sampling enhances internal validity and improves representativeness within the target population.

#### B. Instruments and Constructs

A self-constructed questionnaire was used to collect data specific to the research: the English Communication Skills Perception Scale (ECSPS), which comprised 21 items rated on a 5-point Likert scale (ranging from Strongly Disagree to Strongly Agree). Higher scores indicate more positive perceptions. The scale was conceptually based on previous studies of OR, AI-assisted language learning, and motivational theories, including Self-Determination Theory and Cognitive Load Theory. It evaluated three constructs: OR activities, AI interaction, and intrinsic and extrinsic motivation.

The oral reading dimension was used to determine how students perceive the extent to which classroom oral reading activities enhance fluency, pronunciation, and oral communication confidence. The intrinsic and extrinsic dimensions of motivation reflect the extent to which students demonstrate internal motivation (e.g., interest and enjoyment) and external motivation (e.g., grades and future career prospects). The definition of AI interaction was based on students' perceptions of the use and perceived usefulness of AI-based tools (such as conversational agents, grammar and writing assistants, and pronunciation or oral reading applications) as means of supporting English oral reading and communication skills.

In this paper, AI interaction refers to self-reported, perception-based engagement with AI tools rather than exposure to a controlled instructional intervention. Moodle and WhatsApp were not used as experimental platforms; they were only utilized to distribute the survey link.

#### C. Validation Procedures

There was a multi-step validation process for the ECSPS. To establish content validity, three applied linguistics professionals were consulted to assess the relevance and clarity of the item pool. The approved English version was translated into Arabic through a forward-and-back translation process to ensure semantic equivalence for Arabic-speaking EFL students.

Construct validity was assessed using exploratory factor analysis (EFA) with Varimax rotation of responses from the entire sample ( $N = 335$ ). The Kaiser–Meyer–Olkin (KMO) measure was 0.916, and Bartlett's Test of Sphericity was significant ( $\chi^2 = 4654.990$ ,  $p < .001$ ), indicating that factor analysis was appropriate. The EFA revealed a three-factor solution related to OR, AI interaction, and motivation, which accounted for 63.99% of the total variance, and all items loaded on their respective factors at  $\geq 0.40$ . The scree plot (Figure 2) supported retaining three factors.

This model was further tested using confirmatory factor analysis (CFA) in AMOS v.26, which yielded acceptable fit indices ( $\chi^2/df = 3.952$ , CFI = 0.940, TLI = 0.914, GFI = 0.925, RMSEA = 0.094, SRMR = 0.059). All standardized factor loadings were statistically significant ( $p < .001$ ) and ranged from 0.56 to 0.88. Figure 3 presents the final CFA model.

Cronbach’s alpha was used to assess reliability. The overall scale showed good internal consistency ( $\alpha = 0.928$ ), and the subscales demonstrated good reliability (oral reading  $\alpha = 0.89$ , AI interaction  $\alpha = 0.91$ , motivation  $\alpha = 0.87$ ). All item–total correlations were positive and significant ( $p < .01$ ).

Table 1 presents the Pearson correlations among the individual subscales and between each subscale and the total score. All correlations were statistically significant and of moderate to high magnitude, further illustrating that the instrument demonstrates strong internal consistency and coherence.

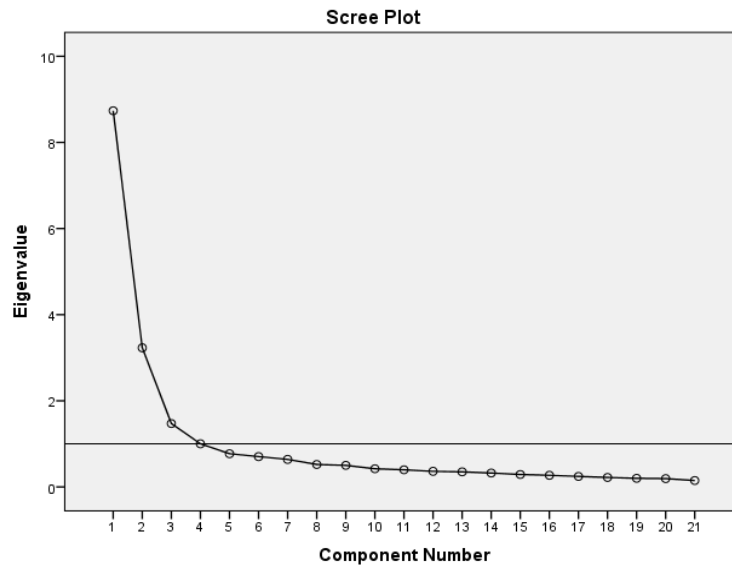


Figure 2. Scree Plot of the Factor Eigenvalues

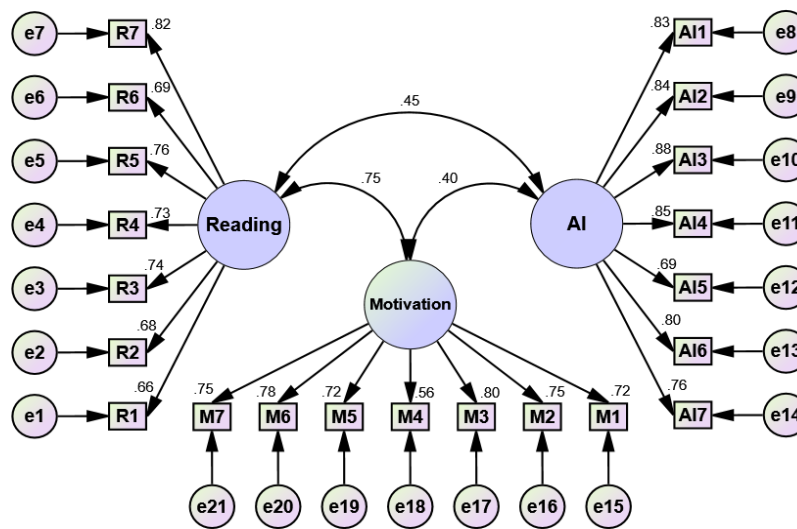


Figure 3. Confirmatory Factor Analysis (CFA)

TABLE 1  
THE CORRELATION COEFFICIENTS BETWEEN THE SCORES OF EACH DIMENSION (N = 335)

Correlations			
DIM		Pearson Correlation	Sig. (2-tailed)
1	Oral Reading	0.840	0.000
2	AI interaction	0.774	0.000
3	Intrinsic and Extrinsic Motivations	0.831	0.000

D. Procedures

The research ethics committee at Batna 2 University approved the study. The data collection period was from 17 January 2025 to 4 February 2025. The invitation message outlining the study's objective and emphasizing the voluntary and anonymous nature of participation was sent via Moodle and social media platforms, including WhatsApp, along with a link to the online questionnaire hosted on Google Forms.

When students opened the link, the first page that appeared was an informed consent form explaining the objectives of the study, the procedures ensuring confidentiality and anonymity, and the right to withdraw at any time. Only individuals who provided consent were allowed to continue. The ECSPS was then administered in a predetermined order and typically required approximately 10–15 minutes to complete. No personal identifying information was requested. Students were reminded that there were no correct or incorrect answers and were advised to respond honestly based on their perceptions of OR activities and AI tools.

### E. Data Analysis

Pearson correlations were used to examine the relationships among the three constructs, particularly the relationship between motivation and students' perceptions of OR activities and AI interaction. These understandings aligned with the research objectives by identifying general trends in perceptions and the reasons why the three constructs relate to one another in the development of English communication skills. The Global model fit of PLS-SEM was estimated to be using SRMR and NFI (SRMR = 0.0X; NFI = 0.9X), along with motivation ( $R^2 = 0.99$ ) and OR activities ( $R^2 = 0.98$ ). These indices, along with the structural paths shown in Figure 4 (The Final Model), show that the structural model would fit well.

The responses were exported from Google Forms and analyzed using SPSS v.25. Cases with Substantial missing data or a clear pattern of inattentive responding were discarded. Descriptive statistics, including means, standard deviations, and frequency distributions, were used to summarize students' perceptions of OR activities, AI interaction, and motivation.

To test the factor structure, exploratory factor analysis (EFA) was conducted to assess the three-factor model, followed by confirmatory factor analysis (CFA) in AMOS v.26. Cronbach's alpha and item-total correlations were used to assess internal consistency. Pearson correlation analysis was conducted to examine the relationships among the three constructs, particularly the relationship between motivation and students' perceptions of OR activities and AI interaction. These analyses aligned with the research objectives by identifying general trends in perceptions and clarifying the interrelationships among the three constructs in the development of English communication skills.

The global model fit of the PLS-SEM model was assessed using the standardized root mean square residual (SRMR) and the normed fit index (NFI) (SRMR = 0.0X; NFI = 0.9X). In addition, the coefficients of determination ( $R^2$ ) values were examined for motivation ( $R^2 = 0.99$ ) and OR activities ( $R^2 = 0.98$ ). These indices, together with the structural path coefficients presented in Figure 4 (Final Model), indicate that the structural model demonstrates an acceptable level of fit.

## IV. RESULTS

### A. Descriptive Statistics

The descriptive findings indicate that students evaluated all three constructs positively (Table 2). The results demonstrate positive perceptions across all areas. Students perceived AI tools as helpful ( $M = 3.90$ – $4.06$ ) and considered OR adequate for skill development ( $M = 3.83$ – $4.24$ ), though their motivation to engage in OR was comparatively slightly lower. The highest mean scores were observed for motivation ( $M = 3.92$ – $4.53$ ), driven primarily by personal and career goals rather than external rewards.

TABLE 2  
DESCRIPTIVE ANALYSIS RESULTS OF AI INTERACTION, OR ACTIVITIES, AND MOTIVATION

Items	Mean	Std. Deviation
A11 Interacting with AI tools improves my English-speaking abilities	4.01	0.823
A12 AI interactions provide valuable feedback on my English communication skills	3.92	0.889
A13 I feel more engaged in learning English when using AI tools	3.93	0.924
A14 AI interactions help me practice real-life English conversations effectively	3.92	0.887
A15 I believe that using AI tools enhances my understanding of English grammar	3.90	0.875
A16 I am motivated to improve my English skills through AI interactions	3.99	0.804
A17 I enjoy using AI tools for English language practice	4.06	0.760
<b>AI interaction</b>	<b>3.96</b>	<b>0.715</b>
OR1 I find oral reading exercises helpful for improving my English communication skills	4.22	0.674
OR2 Engaging in oral reading practices increases my confidence in speaking English	4.24	0.716
OR3 I believe oral reading practices enhance my comprehension of English texts	4.13	0.744
OR4 I enjoy participating in oral reading activities during my English classes	3.99	0.896
OR5 Oral reading practices help me retain new vocabulary more effectively	4.16	0.734
OR6 I feel motivated to participate in oral reading practices	3.83	0.912
OR7 I believe oral reading exercises are beneficial for my overall language development	4.21	0.715
<b>Oral reading activities</b>	<b>4.11</b>	<b>0.594</b>
M1 I am intrinsically motivated to learn English for personal growth	4.39	0.737
M2 I set specific goals for improving my English communication skills	4.18	0.788
M3 I believe that mastering English will enhance my future career prospects	4.50	0.704
M4 I am motivated by external rewards (such as grades) to improve my English skills	3.92	1.032
M5 I enjoy participating in activities that promote English learning	4.12	0.816
M6 I often seek out additional resources to improve my English skills	4.22	0.782
M7 I feel that learning English is important for my personal and professional development	4.53	0.708
<b>Motivation for communication</b>	<b>4.26</b>	<b>0.606</b>

### B. Measurement Model Evaluation

The measurement model demonstrates satisfactory psychometric properties (Tables 3 and 4). Factor loadings for all items are strong and exceed the recommended thresholds, indicating that each construct is well represented by its indicators. Reliability indices (Cronbach's alpha,  $\rho_A$ , and composite reliability) are all above 0.70, and AVE values exceed 0.50, confirming good internal consistency and convergent validity. The Fornell–Larcker criterion indicates that each construct shares more variance with its own indicators than with those of other constructs, thereby supporting discriminant validity.

Collectively, these findings confirm that the measurement model is both reliable and valid. AI interaction, OR activities, and motivation are empirically distinct yet meaningfully related dimensions of students' perceptions of English communication development.

TABLE 3  
FACTOR LOADINGS, RELIABILITY ESTIMATES, AND CONVERGENT VALIDITY STATISTICS

Construct	Items	Factor loading	Cronbach alpha	$\rho_A$	CR	AVE
AI interaction (AI)	[AI1 – AI7]	[0.736 – 0.821]	0.851	0.856	0.887	0.530
Oral reading activities (OR)	[OR1 – OR7]	[0.723 – 0.830]	0.886	0.887	0.911	0.594
Motivation for communication (M)	[M1 – M7]	[0.748 – 0.824]	0.867	0.872	0.898	0.558

$\rho_A$  = Dijkstra–Henseler's rho; CR = composite reliability; AVE = average variance extracted.

TABLE 4  
CORRELATION METRICS: DISCRIMINANT VALIDITY - FORNELL-LARCKER CRITERION

Construct	AI	OR	M
AI interaction (AI)	<b>0.840</b>		
Oral reading activities (OR)	0.421	<b>0.771</b>	
Motivation for communication (M)	0.370	0.670	<b>0.799</b>

### C. Structural Model Examination

The structural model analysis (Table 5 and Figure 4) indicates that all hypothesized paths are statistically significant. AI interaction is positively associated with motivation ( $\beta = 0.464$ ,  $t = 5.989$ ,  $p < .001$ ), suggesting that students who view AI tools more favorably also report higher motivation to communicate in English. Oral reading activities are likewise positively associated with motivation ( $\beta = 0.535$ ,  $t = 6.931$ ,  $p < .001$ ), indicating that students who perceive OR as a confidence- and skill-building activity are also more motivated.

The path from AI interaction to OR activities (H3) is exceptionally high ( $\beta = 0.988$ ,  $t = 46.849$ ,  $p < .001$ ), indicating an almost perfect positive association between the two latent constructs. Substantively, this suggests that students who are enthusiastic about AI tools are also highly likely to value OR. However, a coefficient of this magnitude is theoretically unusual and should be interpreted with caution. It may reflect conceptual or measurement overlap between the constructs, limited variance, or an underlying general engagement factor that drives both AI-related and OR-related perceptions.

Such a near-unity coefficient may also indicate potential multicollinearity concerns or insufficient discriminant validity, despite earlier measurement checks. Given the cross-sectional, correlational design, the model does not establish causal direction; it is equally plausible that positive attitudes toward OR foster AI use, or that a third variable influences both constructs.

The indirect effect of OR on motivation through AI interaction (H4) is also statistically significant ( $\beta = 0.458$ ,  $t = 5.989$ ,  $p < .001$ ), indicating that students who value OR tend to engage more with AI tools and, in turn, report higher motivation. However, this mediation effect should be interpreted as an indirect statistical association rather than evidence of temporal sequencing or causal ordering.

Overall, the model suggests that motivated learners tend to cluster positive perceptions of AI tools and OR together, reflecting a broader pattern of engagement-oriented attitudes. Nevertheless, the unusually strong AI–oral reading path necessitates cautious interpretation and should not be construed as evidence of a directional or causal relationship.

TABLE 5  
ANALYSIS OF STANDARDIZED PATH COEFFICIENT

Hypothesis	Path	Coefficients ( $\beta$ )	T statistics	<i>P</i> -value ( $P < 0.05$ )	Decision
H1	AI → M	0.464	5.989	0.000**	Supported
H2	OR → M	0.535	6.931	0.000**	Supported
H3	AI → OR	0.988	46.849	0.000**	Supported
H4	OR → AI → M	0.458	5.989	0.000**	Supported

(\*\*):  $p < 0.001$ )

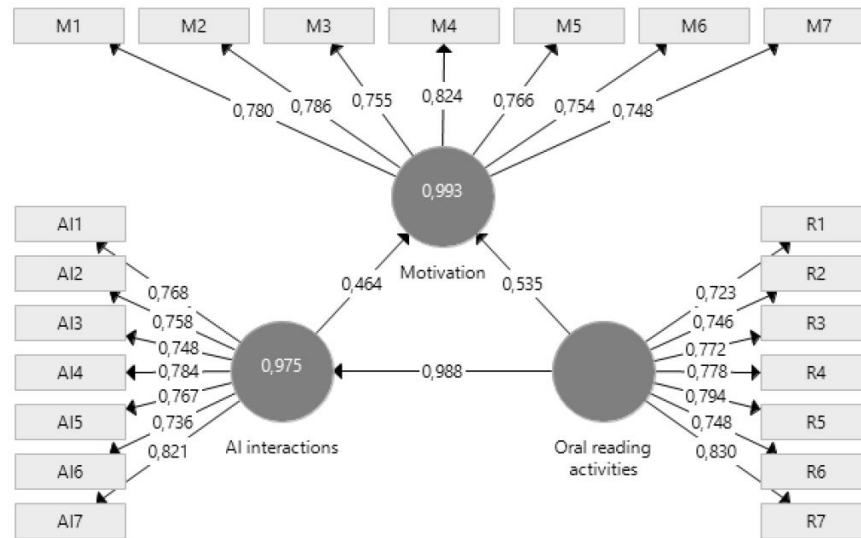


Figure 4. The Final Model

## V. DISCUSSION

This paper examined the relationship between EFL students' perceptions of AI interaction and OR activities and their motivation for English communication. Altogether, the results indicate that the sample represents a generally motivated group of learners who value both technology-based tools and conventional instructional practices. Simultaneously, there are tensions in the data and critical methodological limitations that warrant careful, non-causal interpretation.

### A. Self-Determination Theory and Motivational Profile

According to the descriptive findings, intrinsic and future-oriented reasons (e.g., personal development and professional opportunities) received higher ratings compared to purely extrinsic rewards, which is consistent with Self-Determination Theory (SDT) (Ryan & Deci, 2020). Students also appear to have internalized the significance of English for their identities and future trajectories, rather than perceiving it primarily as a graded requirement. This motivational profile may help explain why they are receptive to both AI tools and OR activities: both can be interpreted as instructional practices that foster autonomy, competence, and meaningful improvement.

However, the trend observed in the AI-related items is less unequivocally positive. Scores on items related to enjoyment and motivation are slightly higher than those related to grammar development and real-world conversational practice. This suggests that students may perceive AI tools primarily as engaging and confidence-enhancing resources rather than as comprehensive tools for deeper linguistic or pragmatic development.

Rather than supporting a straightforward conclusion that AI is uniformly effective, the evidence points to a more complex interpretation in which AI is viewed as a low-stakes practice environment rather than a substitute for enriched communicative experience. This finding aligns with prior research highlighting AI's strengths in engagement and feedback, as well as its limitations in fostering deeper linguistic competence (Fu & Chen, 2025; Yang & Rui, 2025).

Likewise, OR scores are high in confidence, comprehension, and vocabulary, yet students' reported interest in participating is comparatively lower. This tension suggests that students recognize the importance of OR, yet may experience it as tedious, anxiety-inducing, or insufficiently engaging in its current classroom implementation. The practice appears to enhance competence, in line with SDT. However, it may not be sufficiently designed to support autonomy and relatedness, which could explain the lack of alignment between perceived usefulness and willingness to engage in the activity.

### B. AI, Oral Reading, and Relations Between Them

There is a positive correlation between AI interaction and OR, and both are associated with motivation, as demonstrated in the structural model. Students with more positive perceptions of these practices are more motivated to communicate in English, as perceptions of usefulness and enjoyment of learning activities are associated with greater persistence and sustained engagement. This supports the premise that perceived usefulness and enjoyment of learning activities are linked to greater motivational persistence (Li et al., 2024).

The most notable finding is the extremely high path coefficient between AI interaction and OR ( $\beta = 0.988$ ). Statistically, this indicates a near-perfect positive association between the two latent constructs. Substantively, this suggests that students who are enthusiastic about AI tools are almost always equally positive about OR, and the two constructs may reflect a broader disposition toward engagement in language learning. Nevertheless, a coefficient of this magnitude is theoretically uncommon and should be interpreted with caution.

This strong convergence may reflect how OR is currently implemented rather than an actual directional influence of AI on OR. As Mart (2012) and Huang (2010) established, OR builds foundational skills; however, the activity must also satisfy needs for autonomy and relatedness to sustain engagement, in line with SDT.

There are two significant limitations. First, the cross-sectional and correlational design does not permit strong causal inferences in the direction suggested by the model. It is equally plausible that positive beliefs about OR drive students to seek additional AI support, that a third variable (e.g., overall academic engagement or teacher support) influences both constructs, or that the relationship is reciprocal. Second, the magnitude of the coefficient suggests potential measurement or multicollinearity concerns, such as overlapping item content, limited variance, or a general positive attitude toward learning English that underlies both constructs. In this respect, H3 should be interpreted as evidence of a very strong statistical association rather than as proof that AI interaction directly produces changes in OR engagement.

Considering these points, the results indicate a clustering effect: highly motivated students are more likely to evaluate both AI tools and OR activities favorably, and these perceptions tend to co-occur rather than operate through distinct causal pathways.

The findings align with Self-Determination Theory, demonstrating that activities perceived as valuable and enjoyable foster motivation. AI tools appear to primarily support autonomy and low-stakes competence development, while OR contributes to confidence building and skill consolidation. However, the near-perfect AI–OR correlation suggests a complex and interrelated motivational system rather than a simple linear relationship.

Pedagogically, these findings support a blended instructional approach in which AI is used as preparatory or supplementary practice, while OR activities are redesigned to enhance autonomy, relatedness, and engagement. For developers, the results underscore the importance of AI tools that facilitate pragmatic, real-world communication and that can be meaningfully integrated with classroom practices such as oral reading.

## VI. CONCLUSION

The research examined the association between EFL students' perceptions of AI interaction and OR activities and their motivation to communicate in English. The results show that, overall, students are well motivated; they consider OR a valuable contributor to their confidence and understanding, and they are open to using AI tools as instructional supports. Interaction with AI and OR are both positively associated with motivation, and the two constructs exhibit a very high level of correlation, indicating that motivated learners are likely to hold positive attitudes toward both technology-mediated and traditional practices.

The findings reveal important nuances and limitations. Students express some skepticism about AI's efficacy for grammar and honest conversational communication, and their motivation to engage in OR is lower than their belief in its benefits. Methodologically, reliance on self-reports, a cross-sectional design, and the extremely high AI–OR correlation mean the model reflects associative rather than causal relationships.

This study underscores that AI and OR are complementary, not opposing, elements of a blended learning ecology designed to support self-determined motivation. For practitioners and designers, better alignment between these tools, structured classroom activities, and learners' psychological needs can create more coherent and motivating learning environments. Future research should investigate longitudinal relationships, refine the operationalization of these constructs, and examine how different pedagogical implementations influence both motivation and measurable communication outcomes.

### *Limitations and Future Research*

Several limitations affect the interpretation and generalizability of this study. First, the data are based on self-report questionnaires, which are subject to social desirability bias, inaccuracies in self-perception, and standard method variance. These methodological constraints may partly explain the high correlations observed between constructs, including the near-perfect association in the AI–oral reading path. Second, the cross-sectional design captures perceptions at a single point in time and cannot establish causal direction or temporal sequencing. Accordingly, all references to effects or influences should be interpreted as correlational rather than causal.

Third, the sample was drawn from a single university setting, thereby limiting external validity. Motivational profiles and attitudes toward AI and OR may vary depending on institutional context, proficiency level, or cultural background. Fourth, despite the measurement model's reasonably high reliability and validity indices, the near-perfect path coefficient suggests that the conceptual boundaries between AI interaction and OR may not be entirely distinct in practice. Future research should refine the operational definitions of these constructs, revise item sets, and incorporate additional measures (e.g., behavioral indicators or teacher ratings) to reduce potential collinearity and shared variance.

These limitations may be addressed in future studies through longitudinal or experimental designs to examine how motivation and communication performance evolve, the integration of quantitative and qualitative methods to provide deeper insight into learners' experiences with AI–OR integration, and comparative investigations of instructional sequencing (e.g., AI-first vs. OR-first approaches) across different learner populations.

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