

Digital Platforms for ESP Speaking Development: Integrating TikTok and Edlink among Vocational Education Students

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ABSTRACT

Digital platforms are increasingly transforming how vocational students practise English speaking beyond conventional classroom interaction. However, limited empirical attention has been given to how social media-based learning and learning management systems jointly support English for Specific Purposes (ESP) speaking practice in technical education, particularly among Mechanical Engineering students. Addressing this gap, this study examined students' perceptions of TikTok and Edlink as complementary platforms for ESP speaking practice and investigated whether satisfaction with speaking progress predicted their intention to continue using digital speaking platforms. A descriptive quantitative design, supported by students' reflective responses, was employed with 60 Mechanical Engineering students at Banjarmasin State Polytechnic. Data were collected through a 34-item Likert-scale questionnaire and analysed using descriptive percentage analysis, simple linear regression, and ANOVA. The findings showed that students' overall perceptions were predominantly neutral, with only one item, motivation to complete speaking tasks through TikTok compared with traditional classroom activities, reaching a high category. TikTok was perceived as useful for increasing motivation, confidence, and willingness to practise speaking, while Edlink was valued for its structured learning pathway, task organization, feedback, and academic alignment. Regression analysis revealed that satisfaction with ESP speaking progress significantly predicted continuance intention, explaining 58.4% of the variance in students' intention to keep using digital platforms. This study offers an original contribution by positioning TikTok and Edlink not as competing tools but as complementary components of a blended ESP learning ecosystem, with implications for designing more engaging, structured, and sustainable speaking instruction in vocational higher education.

1. Introduction

A technical innovation loses value when its designer cannot explain how it works, why it matters, or how it should be operated. In workplaces, Mechanical Engineering graduates must describe components, explain procedures, communicate safety requirements, present projects, and negotiate solutions. English speaking competence is therefore essential for employability, mobility, international collaboration and knowledge exchange (Paltridge & Starfield, 2013; Riemer, 2002). English for Specific Purposes (ESP) addresses this demand by connecting language learning with disciplinary terminology and occupational practices. Engineering students need fluency, intelligible pronunciation, grammatical

control, technical vocabulary, procedural organization, audience awareness, and disciplinary accuracy (Khalil & Semono-Eke, 2020; Musikhin, 2016), while also valuing relevant content, effective materials, feedback and links with future responsibilities (Inal & Karabulut, 2024).

Despite its importance, speaking remains demanding because students must formulate ideas, retrieve specialized vocabulary, organize information, monitor accuracy, and manage anxiety simultaneously. Conventional instruction often provides limited individual speaking time, especially in large classes (Goh & Burns, 2012), while engagement varies according to task preference, emotion, perceived competence, and confidence

(Phung, 2017). Digital technology can extend practice by allowing learners to rehearse, record, review, revise, submit, and reflect on oral performances, while broadening access, participation, multimodal communication, and language production (Barrot, 2022; Godwin-Jones, 2018; Li et al., 2022). Engineering students respond positively when digital tools support relevant ESP tasks (Ningsih et al., 2024), and video production can strengthen planning and self-monitoring (Tatlı et al., 2022). However, learning depends on alignment, feedback, support, and visible progress (Bond et al., 2020; Galvis & Carvajal, 2022).

TikTok has attracted pedagogical interest because its short-video format combines speech, captions, images, editing, demonstrations, and audience interaction. Students can plan technical responses, consult vocabulary, record repeatedly, and submit preferred performances, potentially reducing live-performance pressure while supporting autonomy and motivation. Studies report benefits for oral participation and motivation when learners produce purposeful content (Albahlal, 2019; Gao et al., 2023; Zaitun et al., 2021). Its audiovisual and interactive features can support communicative tasks (Tan et al., 2022), student-generated learning, creativity, and audience awareness (Conde-Caballero et al., 2024; Escamilla-Fajardo et al., 2021), particularly with clear pedagogical direction (Alazemi et al., 2023). Nevertheless, distraction, privacy concerns, unequal participation, limited academic control, and visual-performance pressures may weaken instructional value (Denojean-Mairet et al., 2024; Manca, 2020; Perez et al., 2023), while most research still concerns general EFL or non-language contexts rather than technical ESP speaking.

Open social media therefore requires formal instructional structure. Learning management systems can centralize materials, sequence tasks, clarify instructions, manage submissions, establish criteria, and deliver feedback (Turnbull et al., 2021). These functions are essential in ESP speaking, where students need vocabulary preparation, model performances, transparent rubrics, feedback, and revision. Edlink may provide this academic architecture, while TikTok supplies a more informal performance space. E-learning research links system quality, information quality, usefulness, support, and organization with satisfaction and continued use (Al-Fraihat et al., 2020; Alzahrani & Seth, 2021), while engagement and learning flow influence LMS continuance (Goh & Yang, 2021). Yet poor integration, delayed feedback, excessive demands, and weak alignment reduce effectiveness (Rasheed et al., 2020), and existing studies emphasize separate

platform use or usability more than whether satisfaction with perceived progress sustains future practice (Dou et al., 2025; Perez et al., 2023).

Addressing these gaps, this study positions TikTok and Edlink as complementary components of a blended ESP speaking ecosystem. TikTok is conceptualized as an affective and performative space for rehearsing, recording, revising, and communicating discipline-specific content, whereas Edlink serves as an instructional and evaluative space for resources, task sequencing, submissions, rubrics, feedback, and participation records. The novelty lies in examining how their distinct affordances may balance engagement and academic control. The study also relocates TikTok research into Mechanical Engineering ESP, where learners describe machine parts, demonstrate tools, explain procedures, and deliver technical presentations. It further connects satisfaction with perceived speaking progress to continuance intention because sustained use depends not merely on initial enjoyment, but on confirmed usefulness for meaningful learning (Dou et al., 2025; Gálvez-Ruiz et al., 2025).

The study is theoretically, pedagogically, curricularly, and institutionally significant. It connects platform affordances, learner perceptions, satisfaction, and continuance intention within discipline-specific language learning. It may help ESP lecturers combine creative video performances with structured instructions, vocabulary preparation, transparent assessment, feedback and reflection. It also reminds vocational institutions that digital transformation requires coherent teaching design and learner support. Accordingly, the study aims to examine students' perceptions of TikTok and Edlink as complementary ESP speaking platforms and determine the extent to which satisfaction with perceived speaking progress predicts continuance intention. These aims concern perceptions, perceived progress, and behavioural intention because the design includes neither experimental groups nor pre-test and post-test measures capable of establishing causal improvement.

The study is guided by two interconnected research questions. The first examines how Mechanical Engineering students perceive TikTok and Edlink as complementary platforms for ESP speaking practice, including motivation, confidence, creativity, speaking opportunities, ease of use, technical relevance, engagement, structure, feedback, assessment, and perceived progress. The second investigates the extent to which satisfaction with perceived ESP speaking progress predicts students' intention to continue using digital platforms. Together, these questions connect platform

experiences with sustainable digital speaking practice while ensuring that conclusions remain consistent with questionnaire and regression evidence. They also distinguish perceived pedagogical value from objectively measured gains in speaking proficiency.

Overall, meaningful digital ESP instruction requires opportunities to perform and structures that make performance academically purposeful. TikTok may offer a creative, flexible, and lower-pressure space for repeated speaking, but it requires technical content, assessment criteria, privacy guidance, and lecturer mediation. Edlink may provide continuity, feedback, documentation, and alignment, although structure alone may not generate sustained motivation and confidence. Their purposeful integration may therefore offer a more comprehensive environment than either platform independently. The study contributes evidence for ESP lecturers, curriculum developers, and vocational institutions designing sustainable blended speaking instruction. More broadly, it frames digital innovation as an instructional ecology in which platform affordances, disciplinary relevance, learner satisfaction, feedback, and continued engagement function coherently, while establishing a basis for future research on technical speaking performance.

2. Method

2.1 Research Design

The present study adopted a descriptive quantitative approach using a Likert-scale questionnaire as the main instrument for data collection and analysis. This approach enabled the researcher to convert students' subjective perceptions into numerical data that could be systematically described and statistically examined (Ningsih et al., 2024). The quantitative component was used to identify the level of students' perceptions toward TikTok and Edlink in ESP speaking practice, while students' reflective responses were used to provide supporting contextual information regarding their learning experience. The design was selected because it allowed the study to capture students' responses to platform-based speaking practice in a structured and measurable way.

The study did not use an experimental or quasi-experimental design. Therefore, it did not compare pre-test and post-test speaking performance scores. Instead, the study focused on students' perceptions, satisfaction with speaking progress, and intention to continue using digital speaking platforms. This clarification prevents overclaiming and keeps the findings aligned with the collected data.

2.2 Research Site and Participants

The study was conducted at Banjarmasin State Polytechnic, involving students from the Mechanical Engineering Department. The participants were selected because they were enrolled in English for Specific Purposes courses that required them to practise technical communication in English. A total of 60 students participated in the study. They came from three classes, consisting of Class A at 26.7%, Class B at 38.3%, and Class C at 35%. These participants represented a relevant group for the study because Mechanical Engineering students are expected to develop speaking competence for explaining machine components, describing technical procedures, and presenting engineering-related ideas in English.

The participant profile was used to provide a descriptive overview of the sample and to contextualize the findings. Since the study focused on one department in one vocational higher education institution, the results should be interpreted within the context of Mechanical Engineering ESP learning and should not be generalized broadly without further comparative research.

2.3 Research Instrument

The main instrument used in this study was a 34-item questionnaire developed in the form of Likert-scale statements. The questionnaire was designed to measure students' perceptions of TikTok and Edlink in relation to ESP speaking practice. The items covered several dimensions, including motivation, confidence, ease of use, speaking practice opportunities, task engagement, feedback, learning structure, perceived progress, satisfaction, and continuance intention. These dimensions were aligned with the purpose of the study, namely to examine students' perceptions of the two platforms and the relationship between satisfaction with speaking progress and intention to continue using digital platforms.

The questionnaire used a five-point Likert scale. A Likert scale is commonly used to measure the attitudes, opinions, and perceptions of individuals or groups toward specific social or educational phenomena. In this study, the measured variables were translated into indicators, and the indicators were then developed into questionnaire items requiring students to express their level of agreement. The response options were arranged as follows:

Table 2.1 Response Category

Response Category	Score
Strongly Agree	5
Agree	4
Neutral	3
Disagree	2
Strongly Disagree	1

In addition to the questionnaire, students' reflective responses were used to support the interpretation of the quantitative findings. These responses helped clarify how students experienced TikTok and Edlink during ESP speaking practice, especially in relation to motivation, confidence, learning structure, and perceived progress.

2.5 Data Collection Procedure

Data collection was conducted after students had experienced ESP speaking activities involving TikTok and Edlink. TikTok was used as a platform for short speaking performances, such as oral explanations, technical descriptions, and video-based speaking practice. Edlink was used to support the formal learning process, including task instructions, learning material distribution, submission management, feedback, and documentation of learning activities. Furthermore, after completing the

platform-based speaking activities, students were asked to complete the Likert-scale questionnaire. The questionnaire was distributed to all 60 participants to obtain their perceptions of the use of TikTok and Edlink in ESP speaking practice. Students were also invited to provide reflective responses regarding their learning experience. The data collection procedure was intended to ensure that students' responses were based on their actual experience of using the platforms in the ESP speaking course.

2.6 Data Analysis

The data were analysed using descriptive percentage analysis and simple linear regression. Descriptive percentage analysis was used to determine the level of students' perceptions for each questionnaire item and aspect. In this analysis, the total score for each item was compared with the ideal score to obtain a percentage score. The percentage score was then interpreted using predetermined criteria. Because the highest possible score for each item was 5 and the lowest possible score was 1, the maximum and minimum percentages were calculated as follows:

$$\text{Maximum percentage} = 5 / 5 \times 100\% = 100\%$$

$$\text{Minimum percentage} = 1 / 5 \times 100\% = 20\%$$

$$\text{Range} = 100\% - 20\% = 80\%$$

$$\text{Interval length} = 80\% / 5 = 16\%$$

Based on this calculation, the interpretation criteria were established as follows:

Table 2.1 Percentage interval

No.	Percentage Interval	Description
1	84% to 100%	Very high
2	68% to less than 84%	High
3	52% to less than 68%	Neutral
4	36% to less than 52%	Low
5	20% to less than 36%	Very low

These criteria were used to interpret each questionnaire item and the overall perception pattern. The total score for each item was divided by the ideal score and then multiplied by 100 to obtain the percentage value. The ideal score was obtained by

multiplying the number of respondents by the highest Likert score. Through this procedure, the study identified whether students' perceptions of each item were categorized as very high, high, neutral, low, or very low.

To examine the predictive relationship between satisfaction and continuance intention, a simple linear regression analysis was conducted. Linear regression is a statistical method used to examine the relationship between a dependent variable and one or more independent variables, allowing researchers to assess the strength of association and predict values based on the observed data (Schneider et al., 2010; Schober et al., 2018). In this study, students' satisfaction with their ESP speaking progress was treated as the independent variable, while their intention to continue using digital platforms for speaking practice after the course was treated as the dependent variable.

The regression analysis was performed using Microsoft Excel, with the level of statistical significance set at $p < 0.05$. The analysis generated several statistical outputs, including Multiple R, R^2 , adjusted R^2 , standard error, ANOVA significance value, regression coefficient, t-statistic, p-value, and confidence interval. These outputs were used to determine the extent to which satisfaction with ESP speaking progress predicted students' continuance intention. The interpretation of the regression model followed the principle that R^2 indicates the proportion of variance in the dependent variable explained by the independent variable, while the significance value indicates whether the predictive relationship is statistically meaningful (Hair et al., 2019).

2.7 Ethical Considerations

The data collection process was conducted with attention to academic ethics. Students were informed that their responses would be used for research purposes and that their participation would not affect their course grades. They were also informed that the data would be presented in aggregate form to protect individual identity. No personal names were reported in the analysis, and the manuscript-maintained anonymity in accordance with academic publication standards. These procedures were applied to ensure voluntary participation, confidentiality, and responsible reporting of student data.

3. Result

This section presents the findings of the study in relation to the research questions. The analysis focuses on students' perceptions of TikTok and Edlink for ESP speaking development and the extent to which satisfaction with speaking progress predicts students' intention to continue using digital platforms. The results are presented objectively through descriptive and inferential evidence, followed by analytical interpretation of the emerging patterns.

3.1 Students' Perceptions of TikTok and Edlink in ESP Speaking Development

The descriptive findings indicate that students' overall perceptions of TikTok and Edlink were generally moderate. From the 34 questionnaire items,

only one item reached the *high* category, while the remaining 33 items were categorized as *neutral*. This response pattern shows that students did not reject the use of digital platforms for ESP speaking practice; however, they also did not express consistently strong agreement across all aspects of the learning experience. The only item categorized as high was related to students' motivation to complete speaking tasks through TikTok compared with traditional classroom activities. This finding is important because it identifies motivation as the most visible strength of the digital platform integration. TikTok appeared to make speaking tasks more engaging and less intimidating for students. Its short-video format, familiar interface, and creative mode of expression may have encouraged students to participate more willingly in speaking activities.

However, the predominance of neutral responses across the other items suggests that students' acceptance of digital platforms remained cautious and selective. The students seemed to appreciate the motivational value of TikTok, but they were less decisive about whether the platforms substantially improved all dimensions of ESP speaking competence. This means that digital platforms were perceived as useful learning supports, but not as complete substitutes for structured classroom instruction.

In the context of ESP speaking, this result is particularly meaningful. Students are not only expected to speak English fluently but also to communicate technical content accurately. Therefore, positive attitudes toward a platform do not automatically indicate that students perceive it as sufficient for developing technical oral communication. The neutral pattern may reflect students' awareness that motivation, confidence, vocabulary accuracy, pronunciation, task clarity, and feedback quality are different dimensions of learning. A platform may support one dimension strongly while producing a more moderate effect on others.

The findings further indicate that TikTok and Edlink served different but complementary functions. TikTok was more strongly associated with motivation, confidence, and willingness to perform speaking tasks. It provided a less formal environment where students could prepare, record, revise, and present oral performances with reduced psychological pressure. This is especially relevant for vocational students who may feel anxious when asked to explain technical content orally in English. Edlink, on the other hand, appeared to function as the academic control system within the learning process. While TikTok supported engagement and oral performance, Edlink provided structure through task organization, material distribution, submission procedures, and feedback management. This distinction suggests that Edlink's strength lies not in creating emotional engagement but in maintaining instructional order and learning accountability.

The contrast between TikTok and Edlink reveals one of the central findings of the study: digital ESP speaking development requires both *engagement* and *structure*. TikTok can stimulate students' willingness to speak, but it needs pedagogical direction to prevent distraction and superficial performance. Edlink can

organize the learning process, but it may need to be supported by more engaging activities to prevent learning from becoming routine and mechanical. Therefore, the most meaningful result is not that one platform is better than the other, but that each platform contributes a different pedagogical value.

Table 3.1 Descriptive Pattern of Students' Perceptions

Response Category	Percentage Interval	Number of Items	Result Interpretation
Very High	84–100%	0	No item showed extremely strong agreement
High	68–84%	1	One item indicated strong positive perception
Neutral	52–68%	33	Most items indicated moderate perception
Low	36–52%	0	No item indicated weak perception
Very Low	20–36%	0	No item indicated very weak perception
Total		34	Overall perception was predominantly neutral

The table 3.1 shows that students' responses were concentrated in the neutral category. This pattern indicates that the implementation of TikTok and Edlink was accepted moderately, with TikTok showing a stronger motivational effect than other measured dimensions.

To clarify the functional contribution of each platform, the following analytical matrix summarizes the main roles of TikTok and Edlink in ESP speaking development.

Table 3.2 Functional Contribution of TikTok and Edlink to ESP Speaking Development

Dimension of ESP Speaking Learning	TikTok Contribution	Edlink Contribution	Analytical Interpretation
Motivation	Encouraged students to complete speaking tasks	Supported task reminders and learning continuity	TikTok stimulated engagement; Edlink sustained the process
Confidence	Reduced pressure through informal video performance	Provided feedback and task documentation	Confidence was supported when performance and feedback were connected
Oral performance	Enabled short speaking practice and repeated recording	Organized submission and evaluation	Speaking practice became more manageable when both platforms were combined
Technical explanation	Allowed students to explain machine-related content visually	Provided materials, instructions, and vocabulary support	Technical speaking required both visual demonstration and structured guidance
Learning control	Risk of distraction from non-academic content	Stronger academic monitoring and assessment	TikTok required control; Edlink supplied that control
Assessment	Limited formal assessment function	Supported scoring, feedback, and documentation	Edlink strengthened the academic validity of platform-based speaking tasks

The matrix in the table 3.2 shows that TikTok and Edlink contributed to different layers of ESP speaking development. TikTok supported the affective and performative aspects of speaking, while Edlink supported the instructional and evaluative aspects. The integration of both platforms therefore created a more balanced learning environment than either platform could provide independently.

A deeper interpretation of the findings shows that the students' neutral responses should not be viewed as a weakness of the study. Instead, they reveal the complexity of digital platform integration in ESP learning. Students may enjoy TikTok and recognize its motivational value, but they may still question whether it fully supports accuracy, technical vocabulary mastery, pronunciation improvement, or professional communication. Similarly, students may value Edlink as an academic platform, but they may not experience it as highly engaging. This explains why the overall response pattern remained neutral even though specific platform functions were perceived positively.

In short, the first research question is answered by showing that students perceived TikTok and Edlink as *moderately useful* for ESP speaking development. TikTok was most effective in increasing motivation and confidence, while Edlink was most useful for structuring and monitoring the learning process. The integration of the two platforms created a complementary model in which engagement and academic control worked together to support ESP speaking practice.

3.2 The Effect of Satisfaction on Students' Continuance Intention to Use Digital Platforms

The second research question examined whether students' satisfaction with their ESP speaking progress predicted their intention to continue using digital platforms for speaking practice. The regression analysis produced a strong and statistically significant result.

The regression summary shows that the value of Multiple R was 0.764, indicating a strong relationship between satisfaction and continuance intention. The R Square value was 0.584, meaning that satisfaction explained 58.4% of the variance in students' intention to continue using digital platforms. The Adjusted R Square value was 0.576, which is very close to the R Square value. This small difference indicates that the model remained stable after adjustment and that the predictive relationship was not substantially weakened by model correction.

The standard error of the estimate was 0.628, indicating that the model's prediction error remained within an acceptable range for behavioral research and demonstrated a reasonable level of predictive accuracy. Overall, the regression results indicate that students' satisfaction with their progress in speaking skills serves as a strong and meaningful predictor of their willingness and intention to continue using digital platforms to support their ongoing language learning.

Table 3.3 Regression Summary for Satisfaction and Continuance Intention

Statistical Indicator	Value	Interpretation
Multiple R	0.764	Strong relationship between satisfaction and continuance intention
R Square	0.584	Satisfaction explained 58.4% of continuance intention
Adjusted R Square	0.576	The model remained stable after adjustment
Standard Error	0.628	Prediction error was moderate and acceptable
Observations	60	The analysis was based on 60 respondents

The ANOVA result further confirms the strength of the model. The regression model produced an F value of 81.26 with a significance value of 1.25462E-12. Since the significance value is far below 0.001,

the model is statistically significant. This means that satisfaction with ESP speaking progress had a meaningful predictive effect on students' intention to continue using digital platforms.

Table 3.4 ANOVA Result of the Regression Model

Source	df	SS	MS	F	Significance
Regression	1	32.01	32.01	81.26	1.25462E-12
Residual	58	22.84	0.39		
Total	59	54.85			

The regression result in table 3.4 provides a key empirical insight: students' intention to continue using digital platforms was not merely shaped by the attractiveness of the technology. Instead, continuance intention was strongly associated with whether students felt satisfied with their speaking progress. This means that digital platform use becomes sustainable when students perceive that it contributes to visible learning improvement.

This finding is important because it shifts the focus from platform adoption to learning experience. Students may initially use TikTok because it is familiar and engaging, and they may use Edlink because it is required by the course. However, their intention to continue using these platforms depends on whether they experience meaningful progress in speaking. Satisfaction therefore functions as a bridge between platform use and long-term engagement.

The result also suggests that satisfaction is not a superficial emotional response. In this context, satisfaction likely reflects students' judgment of whether digital speaking activities helped them become more confident, more fluent, more willing to speak, or more capable of explaining technical content in English. When students feel that platform-based activities produce improvement, they are more likely

to continue using them beyond the immediate course requirement.

From a pedagogical perspective, the regression finding implies that lecturers should not only introduce digital platforms but also design learning experiences that allow students to notice their own progress. This can be achieved through staged speaking tasks, visible performance criteria, revision opportunities, personalized feedback, and reflection activities. If students can compare their earlier and later speaking performances, they may develop stronger satisfaction with their progress, which in turn increases their intention to continue practicing.

The result also strengthens the interpretation of the descriptive findings. Although most questionnaire items were neutral, the regression analysis shows that satisfaction remains a powerful determinant of future platform use. This means that even when students' general perceptions are moderate, their continuance intention can still be strengthened if they experience clear progress. Therefore, the success of TikTok and Edlink integration depends less on novelty and more on whether the platforms are used to produce measurable and personally meaningful speaking development.

Table 3.5 the Relationship Between Platform Use, Satisfaction, and Continuance Intention

Learning Process	Immediate Function	Student Experience	Long-Term Outcome
TikTok-based speaking tasks	Motivation, confidence, oral performance	Students feel more willing to speak	Increased engagement
Edlink-based learning management	Structure, feedback, assessment	Students understand tasks and progress	Increased learning control
Combined platform use	Balanced engagement and structure	Students perceive speaking improvement	Higher satisfaction
Satisfaction with progress	Positive evaluation of learning outcome	Students believe the platforms are useful	Stronger continuance intention

This table 3.5 illustrates the main empirical interpretation of the findings. TikTok and Edlink contribute differently to the learning process, but their combined use can strengthen students' satisfaction

when the activities are well designed. Satisfaction then becomes the strongest factor influencing students' intention to continue using digital platforms for ESP speaking practice.

3.3 Integrated Summary of Results

The findings show that students' perceptions of TikTok and Edlink were predominantly neutral, indicating moderate acceptance of digital platforms in ESP speaking instruction. However, one item reached the high category, showing that TikTok had a particularly strong effect on students' motivation to complete speaking tasks. This finding highlights motivation as the clearest positive outcome of TikTok use.

The analysis also shows that TikTok and Edlink contributed different strengths. TikTok supported motivation, confidence, and informal oral performance, while Edlink supported organization, feedback, assessment, and learning continuity. The two platforms therefore worked best as complementary tools rather than as independent or competing systems.

The regression result provides the strongest statistical evidence in the study. Satisfaction with ESP speaking progress explained 58.4% of students' continuance intention. This means that students were more likely to continue using digital platforms when they felt that the platforms helped them improve their speaking ability. The model was statistically significant, confirming satisfaction as a central predictor of continued platform use.

Overall, the results indicate that the integration of TikTok and Edlink can support ESP speaking development when each platform is assigned a clear pedagogical role. TikTok should be used to increase engagement and speaking confidence, while Edlink should be used to provide structure, feedback, and assessment. The key to sustainable digital platform use is not merely technological familiarity, but students' satisfaction with visible and meaningful speaking progress.

4. Discussion

This study yielded three main findings on integrating TikTok and Edlink into Mechanical Engineering ESP speaking practice. First, 33 of the 34 questionnaire items were neutral, while only motivation to complete TikTok-based speaking tasks rather than conventional classroom activities reached the high category. This pattern indicates cautious acceptance rather than rejection or strong endorsement. Second, the platforms served complementary functions: TikTok supported motivation, confidence, creativity, repeated recording, and willingness to perform, whereas Edlink supported materials, task organisation, submissions, feedback, assessment, and curricular alignment. Third, satisfaction with perceived speaking progress strongly predicted continuance intention ($R = .764$, $R^2 = .584$, adjusted $R^2 = .576$, $F(1, 58) = 81.26$, $p < .001$), accounting for 58.4% of the variance in intended future use.

Because the study included no control group, standardised assessment, or pre-test and post-test comparison, these findings do not demonstrate objectively measured speaking improvement. They show students' evaluations and the association between satisfaction with perceived progress and future-use intention. The results therefore represent perceived pedagogical value and behavioural intention, not causal gains in fluency, pronunciation, grammatical accuracy, technical vocabulary, or discourse organisation.

4.1 TikTok as a Motivational and Performance-Oriented Speaking Space

The strongest descriptive finding was students' motivation to complete TikTok-based speaking tasks. Technology-supported language activities can increase motivation through flexible participation, familiar formats, multimodal resources, and less intimidating production (Ahmadi, 2018; Klimova & Pikhart, 2020; S. Wang & Vásquez, 2012; Zou et al., 2018). Social media can also extend participation and informal language use, although its value depends on pedagogical design rather than novelty (Barrot, 2022; Li et al., 2022; Perez et al., 2023). TikTok may have made technical speaking manageable by allowing students to plan, rerecord, edit, and select their preferred performance. Its brevity, audiovisual integration, and familiarity can encourage participation and creative expression (Conde-Caballero et al., 2024; Denojean-Mairet et al., 2024; Tan et al., 2022).

Self-Determination Theory helps explain this motivational response because engagement increases when activities support autonomy, competence, and relatedness (de la Fuente et al., 2022; Urhahne & Wijnia, 2023). TikTok may foster autonomy through presentation choices, competence through rehearsal and refinement, and relatedness through audience-oriented performance. Purposeful TikTok tasks have been associated with stronger motivation and oral participation (Gao et al., 2023; Gálvez-Ruiz et al., 2025), while structured social-media activities can strengthen willingness to communicate, engagement, and emotional involvement (Alazemi et al., 2023). These affordances benefit Mechanical Engineering students, who must coordinate disciplinary knowledge, specialised vocabulary, pronunciation, organisation, and confidence. Repeated recording may reduce pressure by enabling them to monitor, reorganise, consult terminology, and correct weaknesses before submission.

This controlled production process may explain TikTok's perceived contribution to confidence and willingness to speak. Digital environments can reduce classroom speaking anxiety and extend practice opportunities (Ningsih et al., 2025; Riemer, 2002), while student-generated videos have shown potential for oral participation, motivation, and perceived

speaking development when learners create rather than passively consume content (Erydani et al., 2025; Gao et al., 2023). Nevertheless, these outcomes remain perceived affordances because the present study did not measure behavioural changes or speaking performance directly.

The predominance of neutral responses also qualifies TikTok's motivational value. Neutrality may reflect ambivalence, limited experience, uncertainty, reluctance to choose an extreme response, or recognition of both advantages and disadvantages (Chyung et al., 2017; Nowlis et al., 2002; Sullivan & Artino, 2013). Students may have enjoyed the tasks while remaining uncertain about gains in grammar, terminology, pronunciation, professional register, or spontaneous interaction. Since engagement, satisfaction, and achievement are distinct outcomes (Bond et al., 2020), neutrality indicates measured uncertainty rather than failure or unequivocal approval.

TikTok should consequently be treated as a supported performance space, not a complete instructional solution. Its open environment may encourage distraction, fragmented attention, imitation without understanding, privacy concerns, and excessive emphasis on visual appeal. Social-media learning depends on task alignment, theoretical grounding, lecturer mediation, and assessment rather than platform popularity alone (Barrot, 2022; Manca, 2020; Perez et al., 2023). Tasks involving components, tools, operating sequences, safety procedures, or projects require focused prompts, language preparation, time limits, ethical guidance, rubrics, feedback, and reflection. Without these structures, attractive content may not systematically develop professional communication.

4.2 Edlink as a Structured Space for Scaffolding, Feedback, and Assessment

In contrast to TikTok's affective and performative role, Edlink provided the formal structure surrounding speaking activities by organising materials, clarifying requirements, documenting submissions, delivering feedback, and connecting tasks with course objectives. This function reflects scaffolding, through which learners receive structured support before performing independently (Vygotsky, 1978). Students may need models, vocabulary, pronunciation resources, outlines, and prompts before progressing from naming components to explaining procedures, reporting malfunctions, and presenting technical information.

Learning management systems are most effective when they make outcomes, activities, resources, expectations, and feedback coherent rather than merely storing files (Mella-Norambuena et al., 2025). Information quality, usefulness, self-efficacy, engagement, and organisation can also influence

satisfaction and continued LMS use (Alzahrani & Seth, 2021; Goh & Yang, 2021). Edlink's principal value was the infrastructure clarifying each TikTok task's purpose, assessed features, deadline, and use of feedback for later performances.

Edlink also strengthened assessment and accountability by documenting submissions, revisions, responses to instructions, and achievement of intended outcomes (Martell & Calderon, 2005). Evidence may include videos, scores, comments, peer responses, reflections, and successive performances. In vocational ESP, such documentation helps distinguish technical and linguistic accuracy, pronunciation, fluency, organisation, visual support, and audience awareness.

The platform may further support formative feedback that identifies current performance, clarifies the expected standard, and specifies actions for improvement (I. Lee, 2008; Shute, 2008). Lecturers can address technical pronunciation, procedural grammar, sequencing, professional vocabulary, and visual clarity before revision. System quality, support, usefulness, and satisfaction are central to meaningful e-learning (Al-Fraihat et al., 2020), but this study measured perceptions of feedback support rather than its frequency, content, uptake, or effect. Further performance evidence is needed to establish whether Edlink-facilitated feedback improved subsequent speaking.

Edlink's role also reflects constructive alignment, in which outcomes, activities, and assessments address the same competencies (Biggs, 1996). Technical videos should not be assessed only for grammar, and vocabulary instruction should connect directly with required performances. Edlink can align technical-speaking outcomes with materials, TikTok tasks, rubrics, feedback, and reflection, thereby supporting progressive rather than disconnected learning (Newmann et al., 2001). Effective blended learning similarly requires alignment among pedagogy, technology, support, assessment, and institutional organisation (Galvis & Carvajal, 2022; Martin et al., 2020; Rasheed et al., 2020; Turnbull et al., 2021).

4.3 Complementary Platform Functions, Research Gaps, and Novelty

The study's central pedagogical interpretation is that digital ESP speaking requires both engagement and structure. TikTok can increase willingness to speak, whereas Edlink clarifies the purpose, requirements, assessment, and improvement of each performance. Conversely, Edlink can organise learning but may not provide the creativity, familiarity, or emotional accessibility needed to encourage hesitant speakers. They are complementary layers of blended instruction: TikTok supports oral production, while Edlink maintains continuity and accountability.

This interpretation accords with blended-learning research showing that integration depends on deliberately distributing complementary functions across environments (Cavanaugh & Jacquemin, 2015; Galvis & Carvajal, 2022; Rasheed et al., 2020). It also supports local evidence that digital platforms and videos can extend language practice and flexible engagement (Nasrullah et al., 2021; Ningsih, 2020; Saputra et al., 2021). However, students did not value all functions equally. TikTok's motivational appeal coexisted with uncertainty about wider instructional effectiveness, while Edlink's organisational value coexisted with limited emotional appeal. These different forms of value must therefore be coordinated through purposeful design.

The study addresses four related gaps. Social-media language research has largely focused on general EFL rather than discipline-specific ESP communication (Barrot, 2022). TikTok studies commonly examine motivation, engagement, acceptance, or single-platform use, with fewer connecting short-video performance to an LMS-based sequence (Conde-Caballero et al., 2024; Gao et al., 2023; Gálvez-Ruiz et al., 2025). LMS research has also emphasised adoption, usability, and continuance without sufficiently examining how formal systems complement public social media for technical speaking (Goh & Yang, 2021; Mella-Norambuena et al., 2025). More broadly, engagement and structure are rarely examined as interdependent.

Accordingly, the study's novelty lies in its dual-platform, discipline-specific, and post-adoption orientation. It positions TikTok as a creative performance space and Edlink as the structure for preparation, submission, assessment, feedback, and reflection, while linking perceived-progress satisfaction to continuance intention. This contribution remains conceptual and perception-based because the design cannot establish that integrated use is more effective than TikTok-only, Edlink-only, or conventional instruction.

4.4 Satisfaction as a Predictor of Continuance Intention

The regression produced the strongest inferential evidence. Satisfaction with perceived speaking progress was strongly related to continuance intention ($R = .764$) and explained 58.4% of its variance ($R^2 = .584$; adjusted $R^2 = .576$). The significant model, $F(1, 58) = 81.26$, $p < .001$, predicted intention more effectively than an intercept-only model. Satisfaction was therefore an important predictor within this sample, although the analysis does not establish causation or exclude other influences (Hair et al., 2019; Schober et al., 2018).

This result aligns with the Expectation-Confirmation Model and extensions of the Technology Acceptance Model, which propose that

continued use follows confirmation of expectations, perceived usefulness, and satisfaction (Bhattacharjee, 2001; Roca et al., 2006). Technology Continuance Theory similarly distinguishes post-adoption use from initial acceptance (Liao et al., 2009). Students may initially use TikTok because it is familiar and Edlink because it is required, but continued use appears to depend on whether they perceive meaningful speaking progress. Earlier research likewise links usefulness, satisfaction, quality, and confirmation to sustained use (Lee, 2010; Lin et al., 2005; Ramírez-Correa et al., 2015;).

Recent studies also identify satisfaction, confirmation, usefulness, engagement, system quality, and self-efficacy as predictors of continued use of LMSs, MOOCs, and language technologies (Alzahrani & Seth, 2021; Dou et al., 2025; Goh & Yang, 2021; Rekha et al., 2023). Thus, moderate overall perceptions can coexist with strong continuance intention when learners recognise specific progress. The descriptive analysis covered many platform functions, whereas the regression examined the narrower relationship between progress satisfaction and intended future use.

Pedagogically, satisfaction should reflect competence development rather than enjoyment alone. Relevant tasks, visible improvement, repeated recordings, clear criteria, feedback, and comparisons between early and later work can help students recognise learning progress.

The regression nevertheless relies on self-reported predictor and outcome variables collected from the same participants, possibly at the same time. Common-method variance, response style, reverse directionality, and omitted variables may have inflated the association. The standard error of .628 requires fuller scale and distribution information, while unusual confidence intervals should be checked for coding errors, influential cases, instability, or unmet assumptions. Diagnostics should examine residual normality, linearity, homoscedasticity, influential cases, and scale construction (Field, 2013; Laake & Fagerland, 2015; Roustaei, 2024; Schneider et al., 2010). The finding should therefore be reported as a strong predictive association, not proof that satisfaction causes continuance intention.

4.5 Implications, Study Boundaries, and Future Research

The dual-platform experience is best explained through complementary theories. Self-Determination Theory accounts for TikTok's support of autonomy, competence, and relatedness (de la Fuente et al., 2022; Urhahne & Wijnia, 2023), while scaffolding and constructive alignment explain Edlink's guidance, feedback, progression, and assessment (Biggs, 1996; Vygotsky, 1978). The Expectation-Confirmation Model and Technology Acceptance Model explain

how usefulness and satisfaction influence continued use (Bhattacharjee, 2001; Roca et al., 2006). Sustainable digital ESP learning therefore depends on motivational affordances, instructional structure, perceived competence, and satisfaction.

Pedagogically, TikTok should support short technical performances, while Edlink provides instructions, vocabulary, models, rubrics, submission procedures, feedback, and reflection. Preparation in Edlink, performance through TikTok, and subsequent feedback, revision, and reflection can preserve engagement and standards. Tasks should assess measurable outcomes such as pronunciation, technical vocabulary, discourse organisation, comprehensibility, and professional presentation. Technology becomes educationally meaningful when pedagogy, learner support, organisation, feedback, and assessment operate coherently (Al-Fraihat et al., 2020; Galvis & Carvajal, 2022; Martin et al., 2020).

Institutionally, platform access alone does not constitute digital transformation. Vocational institutions need policies for privacy, consent, visibility, intellectual property, accessibility, and alternative submission, alongside lecturer development in video design, speaking assessment, feedback, and distraction management. Effective blended learning requires access, lecturer competence, institutional support, transparent expectations, and ethical implementation (Rasheed et al., 2020; Turnbull et al., 2021).

The study is limited by its 60 participants from one department and institution, self-reported data, and cross-sectional, non-experimental design. It did not compare TikTok-only, Edlink-only, integrated, and conventional instruction, and 41.6% of continuance-intention variance remained unexplained. Future experimental, quasi-experimental, and longitudinal studies should use larger, more diverse samples, validated speaking rubrics, and additional predictors such as usefulness, feedback quality, self-efficacy, anxiety, autonomy, and digital familiarity. Learning analytics, interviews, stimulated recall, and video analysis could further examine platform use, feedback uptake, technical communication, and sustained speaking development.

5. Conclusions

This study highlights the pedagogical potential of combining TikTok and Edlink as complementary digital platforms for ESP speaking practice among Mechanical Engineering students. The key findings indicate that students' overall perceptions were predominantly neutral, suggesting that the platforms were viewed as useful but not yet fully established as strong instructional tools for speaking development. Among the questionnaire items, TikTok was most clearly associated with increased motivation to complete speaking tasks compared with traditional

classroom activities, while its broader value was perceived in relation to confidence, creativity, and willingness to practise speaking in a less formal environment. Edlink, in contrast, contributed through its structured learning pathway, task organization, feedback support, and academic alignment. Regression analysis further showed that students' satisfaction with their ESP speaking progress significantly predicted their intention to continue using digital speaking platforms, explaining 58.4% of the variance in continuance intention. The novelty of this study lies in positioning TikTok and Edlink not as competing tools but as complementary components of a blended ESP learning ecosystem that balances engagement with structure.

The implication is that ESP lecturers in vocational higher education should integrate social media-based speaking tasks with formal learning management systems through clear instructions, rubrics, feedback, and discipline-specific speaking activities. Future research should examine actual speaking performance through experimental or quasi-experimental designs and expand the context to other vocational fields, such as Civil Engineering, Electrical Engineering, Informatics, Nursing, Tourism, and Business Administration, to test whether this complementary digital platform model can support sustainable ESP speaking instruction across disciplines.

References

- Ahmadi, M. R. (2018). The use of technology in English language learning: A literature review. *International Journal of Research in English Education*, 3(2), 115–125. <https://doi.org/10.29252/ijree.3.2.115>
- Alazemi, A. F. T., Gheisari, A., & Patra, I. (2023). The consequences of task-supported language teaching via social media on academic engagement, emotion regulation, willingness to communicate, and academic well-being from the lens of positive psychology. *Asian-Pacific Journal of Second and Foreign Language Education*, 8, Article 47. <https://doi.org/10.1186/s40862-023-00220-6>
- Albahlal, F. S. (2019). The impact of YouTube on improving secondary school students' speaking skills: English language teachers' perspectives. *Journal of Applied Linguistics and Language Research*, 6(2), 1–17.
- Al-Fraihat, D., Joy, M., Masa'deh, R., & Sinclair, J. (2020). Evaluating e-learning systems success: An empirical study. *Computers in Human Behavior*, 102, 67–86. <https://doi.org/10.1016/j.chb.2019.08.004>
- Alzahrani, L., & Seth, K. P. (2021). Factors influencing students' satisfaction with

- continuous use of learning management systems during the COVID-19 pandemic: An empirical study. *Education and Information Technologies*, 26(6), 6787–6805. <https://doi.org/10.1007/s10639-021-10492-5>
- Barrot, J. S. (2022). Social media as a language learning environment: A systematic review of the literature (2008–2019). *Computer Assisted Language Learning*, 35(9), 2534–2562. <https://doi.org/10.1080/09588221.2021.1883673>
- Bhattacharjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly*, 25(3), 351–370. <https://doi.org/10.2307/3250921>
- Biggs, J. (1996). Enhancing teaching through constructive alignment. *Higher Education*, 32(3), 347–364. <https://doi.org/10.1007/BF00138871>
- Bond, M., Buntins, K., Bedenlier, S., Zawacki-Richter, O., & Kerres, M. (2020). Mapping research in student engagement and educational technology in higher education: A systematic evidence map. *International Journal of Educational Technology in Higher Education*, 17, Article 2. <https://doi.org/10.1186/s41239-019-0176-8>
- Cavanaugh, C., & Jacquemin, S. J. (2015). A large sample comparison of grade-based student learning outcomes in online versus face-to-face courses. *Online Learning*, 19(2), 25–32. <https://doi.org/10.24059/olj.v19i2.454>
- Chyung, S. Y., Roberts, K., Swanson, I., & Hankinson, A. (2017). Evidence-based survey design: The use of a midpoint on the Likert scale. *Performance Improvement*, 56(10), 15–23. <https://doi.org/10.1002/pfi.21727>
- Conde-Caballero, D., Castillo-Sarmiento, C. A., Ballesteros-Yáñez, I., Rivero-Jiménez, B., & Mariano-Juárez, L. (2024). Microlearning through TikTok in higher education: An evaluation of uses and potentials. *Education and Information Technologies*, 29(2), 2365–2385. <https://doi.org/10.1007/s10639-023-11904-4>
- de la Fuente, J., Martínez-Vicente, J. M., Santos, F. H., Sander, P., Fadda, S., Karagiannopoulou, E., Boruchovitch, E., & Kauffman, D. F. (2022). Advances on self-regulation models: A new research agenda through the SR versus ER behavior theory in different psychology contexts. *Frontiers in Psychology*, 13, Article 861493. <https://doi.org/10.3389/fpsyg.2022.861493>
- Denojean-Mairet, M., López-Pernas, S., Agbo, F. J., & Tedre, M. (2024). A literature review on the integration of microlearning and social media. *Smart Learning Environments*, 11, Article 46. <https://doi.org/10.1186/s40561-024-00334-5>
- Dou, K., Abdul Halim, H., & Mohd Saad, M. R. (2025). Factors determining the continuance intention to use mobile English learning applications: An application and extension of expectation confirmation model in the mobile-assisted language learning context. *European Journal of Education*, 60(2), Article e70082. <https://doi.org/10.1111/ejed.70082>
- Dou, K., Halim, H. A., & Saad, M. R. M. (2025). Factors determining the continuance intention to use mobile English learning applications: An application and extension of the expectation confirmation model in the mobile-assisted language learning context. *European Journal of Education*, 60(2), Article e70082. <https://doi.org/10.1111/ejed.70082>
- Erydani, V. A. C., Fitriati, S. W., Widhiyanto, W., Mujiyanto, J., & Madjdi, A. H. (2025). Exploring TikTok's impact on ESP students' speaking engagement. *Jurnal Ilmiah Peuradeun*, 13(2), 847–876. <https://doi.org/10.26811/peuradeun.v13i2.1700>
- Escamilla-Fajardo, P., Alguacil, M., & López-Carril, S. (2021). Incorporating TikTok in higher education: Pedagogical perspectives from a corporal expression sport sciences course. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 28, Article 100302. <https://doi.org/10.1016/j.jhlste.2021.100302>
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics* (4th ed.). SAGE.
- Gálvez-Ruiz, P., López-Carril, S., Watanabe, N. M., & Lara-Bocanegra, A. (2025). TikTok as a learning tool in higher education: Validation of a scale. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 36, Article 100548. <https://doi.org/10.1016/j.jhlste.2025.100548>
- Galvis, Á. H., & Carvajal, D. (2022). Learning from success stories when using eLearning and bLearning modalities in higher education: A meta-analysis and lessons towards digital educational transformation. *International Journal of Educational Technology in Higher Education*, 19, Article 23. <https://doi.org/10.1186/s41239-022-00325-x>
- Gao, S.-Y., Tsai, Y.-Y., Huang, J.-H., Ma, Y.-X., & Wu, T.-L. (2023). TikTok for developing learning motivation and oral proficiency in MICE learners. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 32, Article 100415. <https://doi.org/10.1016/j.jhlste.2022.100415>
- Godwin-Jones, R. (2018). Chasing the butterfly effect: Informal language learning online as a complex system. *Language Learning & Technology*, 22(2), 8–27. <https://doi.org/10.64152/10125/44643>

- Goh, C. C. M., & Burns, A. (2012). *Teaching speaking: A holistic approach*. Cambridge University Press.
- Goh, T.-T., & Yang, B. (2021). The role of e-engagement and flow on the continuance with a learning management system in a blended learning environment. *International Journal of Educational Technology in Higher Education*, 18, Article 49. <https://doi.org/10.1186/s41239-021-00285-8>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage.
- İnal, S., & Karabulut, R. (2024). Exploring EFL learners' experiences and perspectives: Insights into ESP learning. *i-manager's Journal on English Language Teaching*, 14(3), 1–17. <https://doi.org/10.26634/jelt.14.3.21017>
- İnal, S., & Karabulut, R. (2024). Exploring EFL learners' experiences and perspectives: Insights into ESP learning. *i-manager's Journal on English Language Teaching*, 14(3), 1–17. <https://doi.org/10.26634/jelt.14.3.21017>
- Khalil, L., & Semono-Eke, B. K. (2020). Appropriate teaching methods for general English and English for specific purposes from teachers' perspectives. *Arab World English Journal*, 11(1), 253–269. <https://doi.org/10.24093/awej/vol11no1.19>
- Khalil, L., & Semono-Eke, B. K. (2020). Appropriate teaching methods for general English and English for specific purposes from teachers' perspectives. *Arab World English Journal*, 11(1), 253–269. <https://doi.org/10.24093/awej/vol11no1.19>
- Klimova, B., & Pikhart, M. (2020). Utilization of linguistic aspects of blogging for second language learning. *Education Sciences*, 10(3), Article 54. <https://doi.org/10.3390/educsci10030054>
- Laake, P., & Fagerland, M. W. (2015). Statistical inference. In P. Laake, H. B. Benestad, & B. R. Olsen (Eds.), *Research in medical and biological sciences: From planning and preparation to grant application and publication* (2nd ed., pp. 379–430). Academic Press. <https://doi.org/10.1016/B978-0-12-799943-2.00011-2>
- Lee, I. (2008). Understanding teachers' written feedback practices in Hong Kong secondary classrooms. *Journal of Second Language Writing*, 17(2), 69–85. <https://doi.org/10.1016/j.jslw.2007.10.001>
- Lee, M.-C. (2010). Explaining and predicting users' continuance intention toward e-learning: An extension of the expectation-confirmation model. *Computers & Education*, 54(2), 506–516. <https://doi.org/10.1016/j.compedu.2009.09.002>
- Li, F., Fan, S., & Wang, Y. (2022). Mobile-assisted language learning in Chinese higher education context: A systematic review from the perspective of the situated learning theory. *Education and Information Technologies*, 27(7), 9665–9688. <https://doi.org/10.1007/s10639-022-11025-4>
- Liao, C., Palvia, P., & Chen, J.-L. (2009). Information technology adoption behavior life cycle: Toward a technology continuance theory. *International Journal of Information Management*, 29(4), 309–320. <https://doi.org/10.1016/j.ijinfomgt.2009.03.004>
- Lin, C.-P., Wu, S., & Tsai, R. J. (2005). Integrating perceived playfulness into expectation-confirmation model for web portal context. *Information & Management*, 42(5), 683–693. <https://doi.org/10.1016/j.im.2004.04.003>
- Manca, S. (2020). Snapping, pinning, liking or texting: Investigating social media in higher education beyond Facebook. *The Internet and Higher Education*, 44, Article 100707. <https://doi.org/10.1016/j.iheduc.2019.100707>
- Martell, K., & Calderon, T. G. (2005). Assessment of student learning in business schools: What it is, where we are, and where we need to go next. In K. Martell & T. G. Calderon (Eds.), *Assessment of student learning in business schools: Best practices each step of the way* (Vol. 1, pp. 1–22). Association for Institutional Research.
- Martin, F., Sun, T., & Westine, C. D. (2020). A systematic review of research on online teaching and learning from 2009 to 2018. *Computers & Education*, 159, Article 104009. <https://doi.org/10.1016/j.compedu.2020.104009>
- Mella-Norambuena, J., Chiappe, A., & Badilla-Quintana, M. G. (2025). Theoretical and empirical models underlying the teaching use of LMS platforms in higher education: A systematic review. *Journal of Computers in Education*, 12(3), 997–1023. <https://doi.org/10.1007/s40692-024-00336-9>
- Musikhin, I. A. (2016). English for specific purposes: Teaching English for science and technology. *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, III-6, 29–35. <https://doi.org/10.5194/isprs-annals-III-6-29-2016>
- Nasrullah, Rusmanayanti, A., Rosalina, E., & Ningsih, R. P. (2021). Putting Edmodo into the classroom: Portraying learning management system manifestation. *Journal of English Education and*

- Teaching*, 5(3), 317–329.
<https://doi.org/10.33369/jeet.5.3.317-329>
- Newmann, F. M., Smith, B., Allensworth, E., & Bryk, A. S. (2001). Instructional program coherence: What it is and why it should guide school improvement policy. *Educational Evaluation and Policy Analysis*, 23(4), 297–321.
<https://doi.org/10.3102/01623737023004297>
- Ningsih, R. P. (2020). Balancing fluency and accuracy practices: Model of instruction from a private English course. *TEFLA Journal*, 2(2), 6–13.
<https://doi.org/10.35747/tefla.v2i2.1046>
- Ningsih, R. P., Amelia, R., Nurfitriah, N., Susilawati, S., Khalid, A., & Fitria, F. (2024). Implementing flipped classroom method using Edpuzzle and Quizlet in an ESP course from the viewpoint of engineering students. *AIP Conference Proceedings*, 3048(1), Article 020019.
<https://doi.org/10.1063/5.0202167>
- Ningsih, R. P., Rosalina, E., Kustini, S., Nasrullah, N., & Umar, V. (2025). Bridging language and technology: Innovating English for specific purposes through an automotive engineering e-module. *REiLA: Journal of Research and Innovation in Language*, 7(2), 176–184.
<https://doi.org/10.31849/sddt0c57>
- Nowlis, S. M., Kahn, B. E., & Dhar, R. (2002). Coping with ambivalence: The effect of removing a neutral option on consumer attitude and preference judgments. *Journal of Consumer Research*, 29(3), 319–334.
<https://doi.org/10.1086/344431>
- Paltridge, B., & Starfield, S. (Eds.). (2013). *The handbook of English for specific purposes*. Wiley-Blackwell.
<https://doi.org/10.1002/9781118339855>
- Perez, E., Manca, S., Fernández-Pascual, R., & McGuckin, C. (2023). A systematic review of social media as a teaching and learning tool in higher education: A theoretical grounding perspective. *Education and Information Technologies*, 28(9), 11921–11950. <https://doi.org/10.1007/s10639-023-11647-2>
- Phung, L. (2017). Task preference, affective response, and engagement in L2 use in a US university context. *Language Teaching Research*, 21(6), 751–766.
<https://doi.org/10.1177/1362168816683561>
- Ramírez-Correa, P. E., Arenas-Gaitán, J., & Rondán-Cataluña, F. J. (2015). Gender and acceptance of e-learning: A multi-group analysis based on a structural equation model among college students in Chile and Spain. *PLOS ONE*, 10(10), Article e0140460.
<https://doi.org/10.1371/journal.pone.0140460>
- Rasheed, R. A., Kamsin, A., & Abdullah, N. A. (2020). Challenges in the online component of blended learning: A systematic review. *Computers & Education*, 144, Article 103701.
<https://doi.org/10.1016/j.compedu.2019.103701>
- Rekha, I. S., Shetty, J., & Basri, S. (2023). Students' continuance intention to use MOOCs: Empirical evidence from India. *Education and Information Technologies*, 28(4), 4265–4286.
<https://doi.org/10.1007/s10639-022-11308-w>
- Riemer, M. J. (2002). English and communication skills for the global engineer. *Global Journal of Engineering Education*, 6(1), 91–100.
- Roca, J. C., Chiu, C.-M., & Martínez, F. J. (2006). Understanding e-learning continuance intention: An extension of the technology acceptance model. *International Journal of Human-Computer Studies*, 64(8), 683–696.
<https://doi.org/10.1016/j.ijhcs.2006.01.003>
- Roustaei, N. (2024). Application and interpretation of linear-regression analysis. *Medical Hypothesis, Discovery & Innovation in Ophthalmology*, 13(3), 151–159.
<https://doi.org/10.51329/mehdiophthal1506>
- Saputra, R. R., Ningsih, R. P., & Rahmah. (2021). Keefektifan penggunaan media video berbasis ekonomi kreatif dalam pembelajaran menulis cerpen pada siswa kelas XI SMA Sabila Muhtadin Banjarmasin. *Neraca: Jurnal Pendidikan Ekonomi*, 7(1), 64–71.
<https://doi.org/10.33084/neraca.v7i1.2891>
- Schneider, A., Hommel, G., & Blettner, M. (2010). Linear regression analysis: Part 14 of a series on evaluation of scientific publications. *Deutsches Ärzteblatt International*, 107(44), 776–782.
<https://doi.org/10.3238/arztebl.2010.0776>
- Schober, P., Boer, C., & Schwarte, L. A. (2018). Correlation coefficients: Appropriate use and interpretation. *Anesthesia & Analgesia*, 126(5), 1763–1768.
<https://doi.org/10.1213/ANE.0000000000002864>
- Shute, V. J. (2008). Focus on formative feedback. *Review of Educational Research*, 78(1), 153–189.
<https://doi.org/10.3102/0034654307313795>
- Sullivan, G. M., & Artino, A. R., Jr. (2013). Analyzing and interpreting data from Likert-type scales. *Journal of Graduate Medical Education*, 5(4), 541–542. <https://doi.org/10.4300/JGME-5-4-18>
- Tan, K. H., Rajendran, A., Muslim, N., Alias, J., & Yusof, N. A. (2022). The potential of TikTok's key features as a pedagogical strategy for ESL classrooms. *Sustainability*, 14(24), Article 16876.
<https://doi.org/10.3390/su142416876>

- Tatlı, Z., Saylan, E., & Kokoç, M. (2022). Digital storytelling in an online EFL course: Influences on speaking, vocabulary, and cognitive load. *Participatory Educational Research*, 9(6), 89–112. <https://doi.org/10.17275/per.22.130.9.6>
- Turnbull, D., Chugh, R., & Luck, J. (2021). Transitioning to e-learning during the COVID-19 pandemic: How have higher education institutions responded to the challenge? *Education and Information Technologies*, 26(5), 6401–6419. <https://doi.org/10.1007/s10639-021-10633-w>
- Turnbull, D., Chugh, R., & Luck, J. (2021). Transitioning to e-learning during the COVID-19 pandemic: How have higher education institutions responded to the challenge? *Education and Information Technologies*, 26(5), 6401–6419. <https://doi.org/10.1007/s10639-021-10633-w>
- Urhahne, D., & Wijnia, L. (2023). Theories of motivation in education: An integrative framework. *Educational Psychology Review*, 35(2), Article 45. <https://doi.org/10.1007/s10648-023-09767-9>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Wang, S., & Vásquez, C. (2012). Web 2.0 and second language learning: What does the research tell us? *CALICO Journal*, 29(3), 412–430. <https://doi.org/10.11139/cj.29.3.412-430>
- Zaitun, Z., Hadi, M. S., & Indriani, E. D. (2021). TikTok as a media to enhancing the speaking skills of EFL students. *Jurnal Studi Guru dan Pembelajaran*, 4(1), 89–94. <https://doi.org/10.30605/jsgp.4.1.2021.525>
- Zou, D., Xie, H., & Wang, F. L. (2018). Future trends and research issues of technology-enhanced language learning: A technological perspective. *Knowledge Management & E-Learning*, 10(4), 426–440. <https://doi.org/10.34105/j.kmel.2018.10.026>