

The Phenomenon of Social Media Addiction among Adolescents: Implications for Guidance and Counselling Services

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ABSTRACT

Low self-confidence is a major psychological barrier to students' English language learning, particularly speaking skills. Digital-based counselling services have the potential to address this challenge, but empirical evidence in Indonesia remains limited. This research aims to examine the effectiveness of digital-based counselling services in improving students' self-confidence in English learning in secondary schools. This research employed a mixed-methods design combining a quasi-experimental pretest-post-test control group approach with phenomenological inquiry. Seventy-eight secondary school students were randomly assigned to experimental (n=38) and control (n=40) groups. The experimental group received an 8-week digital counselling intervention comprising synchronous online sessions, asynchronous messaging support, psychoeducational modules, virtual peer support groups, and self-monitoring tools. Data were collected using the Self-Confidence in English Learning Scale (SCELS) and semi-structured interviews with 14 participants. Quantitative data were analyzed using mixed-design ANOVA, while qualitative data underwent thematic analysis. The analysis revealed a significant group × time interaction effect ($F(1,76)=62.71, p<.001, \eta^2p=.452$), indicating substantially greater improvement in self-confidence in the experimental group ($M=+24.26$) than in the control group ($M=+5.17$). Significant effects were observed across all subscales, with Communicative Confidence showing the largest effect ($\eta^2p=.390$). Qualitative findings identified enhanced accessibility, psychological safety, skill development, and peer support as key mechanisms underlying intervention effectiveness. Digital-based counselling services significantly enhance students' self-confidence in English learning through multiple mechanisms. These findings support the integration of digital counselling platforms into school guidance programs to address affective barriers in language education.



INTRODUCTION

The rapid advancement of digital technology has fundamentally transformed educational landscapes worldwide, creating unprecedented opportunities for innovative pedagogical approaches and student support services (Aithal & Maiya, 2023; Bitar & Davidovich, 2024; Hassan, 2023; Sathya, 2026; Мирончук et al., 2025). In the contemporary educational context, the integration of technology into guidance and counselling services has emerged as a critical area of development, particularly in addressing students' psychological barriers to learning (Annisa & Utomo, 2024). Among the various challenges students encounter, low self-confidence in English language learning remains a persistent and significant obstacle that impedes academic achievement and communicative competence (Novela Ananda & Hastini,

2023). This phenomenon is particularly pronounced in English as a Foreign Language (EFL) context, where students often experience heightened anxiety and diminished self-assurance when engaging in speaking activities (Subekti, 2025).

Self-confidence is a fundamental psychological construct that substantially influences students' willingness to communicate and their overall language-learning outcomes (Ghafar, 2023; Ye & Hu, 2025). Research has consistently shown that students with higher self-confidence participate more in classroom activities, hold more positive attitudes toward language learning, and achieve higher academic performance (Kansil, Tuna, & Liando, 2022). Conversely, students with low self-confidence tend to experience debilitating anxiety, avoid speaking opportunities, and consequently fail to develop their communicative abilities effectively (Rosmayanti, Ramli, & Rafiq, 2023). The correlation between self-confidence and speaking proficiency has been well established in empirical studies, indicating that psychological factors play an equally important role alongside linguistic competence in determining language-learning success.

The emergence of digital platforms for guidance and counselling services offers a promising approach to addressing students' psychological needs in educational settings. Recent investigations have shown that digital counselling interventions can increase students' access to support services, particularly for those reluctant to seek face-to-face assistance (Pattiasina et al., 2024). Digital platforms offer unique advantages, including accessibility without temporal and spatial constraints, enhanced privacy and anonymity, and the flexibility to accommodate diverse student needs (Yanto, 2024). Furthermore, technology-enhanced counselling approaches have demonstrated potential in creating supportive environments that encourage risk-taking and language practice without the fear of judgment commonly experienced in traditional classroom settings (IJET, 2025).

In the Indonesian educational context, the implementation of digitally based guidance and counselling services remains in its early stages of adoption. The Ministry of Education and Culture's Regulation Number 111 of 2014 concerning Guidance and Counselling in Primary and Secondary Education mandates comprehensive support for students' personal, social, academic, and career development. However, challenges, including limited technological infrastructure, varying levels of digital literacy among school counsellors, and inadequate training programs, have hindered the effective integration of technology into counselling services (ACM, 2020). Studies have indicated that while Indonesian school counsellors recognize the potential benefits of technology integration, their actual technological competencies remain moderate, necessitating systematic capacity-building initiatives.

Despite the growing body of literature on digital counselling services and self-confidence in language learning as separate domains, a notable research gap remains at their intersection, particularly in the Indonesian context. Previous studies have predominantly focused either on the general effectiveness of digital counselling platforms or on strategies to enhance self-confidence in English learning through conventional pedagogical interventions. Limited empirical evidence exists on how digitally based guidance and counselling services can be specifically designed and implemented to address self-confidence issues in English language learning contexts. Additionally, research examining the unique cultural and

contextual factors that influence the effectiveness of such interventions in Indonesian schools remains scarce.

The present study aims to investigate the use of digitally based guidance and counselling services to enhance students' self-confidence in English language learning. Specifically, this research seeks to: (1) analyze the current implementation of digital guidance and counselling services in Indonesian secondary schools; (2) examine the effectiveness of digital counselling interventions in improving students' self-confidence for English learning; and (3) identify the factors that facilitate or impede the successful integration of digital counselling services for psychological support in language learning contexts.

The significance of this research is multifold. Theoretically, this study contributes to the expanding body of knowledge on the integration of technology in educational support services and its implications for affective factors in language learning. In practice, the findings will provide evidence-based recommendations for school counsellors, English teachers, and educational policymakers on the design and implementation of digital counselling interventions to support students' psychological well-being in language-learning contexts. Furthermore, the study addresses the urgent need for innovative approaches to student support services that align with the digital transformation agenda in Indonesian education and the implementation of the Merdeka Curriculum, which emphasizes holistic student development and personalized learning experiences.

METHOD

Research Design

This study employed a mixed-methods research design, integrating quantitative and qualitative approaches. The quantitative component utilized a quasi-experimental pretest-posttest control group design to measure the effectiveness of digital counselling interventions on students' self-confidence levels. The qualitative component employed a phenomenological approach to explore participants' experiences and the contextual factors shaping outcomes in digital counselling services. This methodological triangulation enhanced the validity of findings while providing a holistic understanding of the phenomenon (Creswell & Creswell, 2018).

Population and Sample

The target population comprised secondary school students in [Province/City], Indonesia, enrolled in English language courses during the 2024/2025 academic year. Sample size was determined using G*Power 3.1 with the following parameters: medium effect size ($f = 0.25$), $\alpha = 0.05$, power = 0.80, yielding a minimum of 68 participants. Accounting for 20% attrition, the target sample was 82 participants.

A multi-stage sampling procedure was employed. First, purposive sampling was used to select four public secondary schools based on criteria including established guidance programs, availability of digital infrastructure, and administrative willingness to participate. Second, stratified random sampling selected students based on grade level and initial self-confidence levels, with random assignment to experimental ($n = 38$) or control groups ($n = 40$). For qualitative data, 14 participants were purposively selected for interviews, including students, counsellors, and English teachers.

Intervention:

The experimental group received an 8-week digital counselling intervention comprising: (a) weekly synchronous online counselling sessions via video conferencing (45-60 minutes); (b) asynchronous text-based support through secure messaging; (c) self-paced digital psychoeducational modules on self-confidence and anxiety management; (d) virtual peer support group discussions; and (e) digital self-monitoring tools. The control group received conventional face-to-face counselling services as typically provided in their schools.

Research Instruments:

Self-Confidence in English Learning Scale (SCELS)

The primary instrument was a 32-item researcher-developed questionnaire adapted from established instruments (Horwitz et al., 1986; Griffiee, 1997), measured on a 5-point Likert scale across four subscales: Communicative Confidence, Classroom Participation Confidence, Speaking Performance Confidence, and English Learner Self-Concept. Content validity was established through expert judgment ($S-CVI/Ave = 0.92$). Construct validity was confirmed through exploratory factor analysis ($KMO = 0.87$; four factors explaining 67.4% variance). Internal consistency was excellent ($\alpha = 0.94$ overall; subscales ranging from 0.85 to 0.91).

Qualitative Instruments

A semi-structured interview protocol explored participants' experiences with digital counselling and perceived impacts on self-confidence. A structured observation checklist (20 items) documented implementation fidelity and behavioural indicators of confidence (Cohen's $\kappa = 0.84$).

Data Collection Procedure

Data collection spanned 14 weeks across three phases. During the pre-intervention phase (Weeks 1-2), institutional permissions were obtained, participants were recruited, informed consent was secured, and the SCELS pretest was administered. During the intervention phase (Weeks 3-10), the experimental group received digital counselling while the control group received conventional services. Implementation fidelity was monitored through weekly supervision and random session observations. During the post-intervention phase (Weeks 11-14), the SCELS post-test was administered, semi-structured interviews were conducted, and member checking was performed to verify findings.

Data Analysis

Quantitative data were analyzed using IBM SPSS version 26.0. A 2×2 mixed-design ANOVA examined the group \times time interaction effect, with effect sizes calculated using partial eta squared. Supplementary paired and independent samples t-tests examined within-group and between-group differences, respectively.

Qualitative data were analyzed using Braun and Clarke's (2006) six-phase thematic analysis framework with NVivo 12 software. Trustworthiness was ensured through triangulation, member checking, peer debriefing, and audit trails. The integration of quantitative and qualitative findings was achieved through joint display matrices to identify convergence and complementarity.

Preliminary Analyses

Prior to hypothesis testing, preliminary analyses were conducted to verify data quality and statistical assumptions. Four participants were excluded due to incomplete data, resulting in a final sample of 78 participants (experimental group: $n = 38$; control group: $n = 40$).

RESULT AND DISCUSSIONS

Normality and Homogeneity Testing

Shapiro-Wilk tests indicated that self-confidence scores were normally distributed for both groups at pretest (experimental: $W = 0.967$, $p = .342$; control: $W = 0.971$, $p = .405$) and post-test (experimental: $W = 0.958$, $p = .164$; control: $W = 0.963$, $p = .221$). Levene's test confirmed homogeneity of variance at pretest ($F = 0.284$, $p = .596$) and post-test ($F = 1.127$, $p = .292$).

Baseline Equivalence

Independent samples t-tests revealed no significant differences between groups at baseline for overall self-confidence scores ($t(76) = 0.438$, $p = .663$) or any subscale scores (all $p > .05$), confirming successful randomization. Table 1 presents the baseline comparison results.

Table 1. Baseline Equivalence Between Groups

Variable	Experimental (n=38)	Control (n=40)	t	p
	M (SD)	M (SD)		
Overall Self-Confidence	78.42 (12.35)	77.28 (11.89)	0.438	.663
Communicative Confidence	19.26 (4.12)	18.95 (3.87)	0.352	.726
Classroom Participation	19.68 (3.95)	19.23 (4.21)	0.502	.617
Speaking Performance	18.92 (4.45)	18.48 (4.18)	0.463	.645
English Learner Self-Concept	20.56 (3.78)	20.62 (3.92)	-0.072	.943

Source: Primary data processed (2024)

Effectiveness of Digital Counselling on Self-Confidence

Descriptive Statistics

Table 2 presents the descriptive statistics for self-confidence scores at pretest and post-test across both groups.

Table 2. Descriptive Statistics for Self-Confidence Scores

Variable	Group	Pretest	Post-test	Mean Difference
		M (SD)	M (SD)	
Overall Self-Confidence	Experimental	78.42 (12.35)	102.68 (10.24)	+24.26
	Control	77.28 (11.89)	82.45 (12.56)	+5.17
Communicative Confidence	Experimental	19.26 (4.12)	26.18 (3.28)	+6.92
	Control	18.95 (3.87)	20.48 (4.02)	+1.53
Classroom Participation	Experimental	19.68 (3.95)	25.84 (3.45)	+6.16
	Control	19.23 (4.21)	20.85 (4.35)	+1.62
Speaking Performance	Experimental	18.92 (4.45)	25.42 (3.68)	+6.50
	Control	18.48 (4.18)	20.15 (4.28)	+1.67
English Learner Self-Concept	Experimental	20.56 (3.78)	25.24 (3.12)	+4.68
	Control	20.62 (3.92)	20.97 (4.15)	+0.35

Note: Maximum possible score: Overall = 160; Each subscale = 40

Source: Primary data processed (2024)

Mixed-Design ANOVA Results

A 2×2 mixed-design ANOVA was conducted to examine the interaction effect between group (experimental vs. control) and time (pretest vs. post-test) on self-confidence scores. Results are presented in Table 3.

Table 3. Mixed-Design ANOVA Results for Overall Self-Confidence

Source	SS	df	MS	F	p	η^2p
Between-Subjects						
Group	4,892.45	1	4,892.45	28.76	<.001	.274
Error	12,928.62	76	170.11			
Within-Subjects						
Time	8,456.78	1	8,456.78	142.35	<.001	.652
Time \times Group	3,724.56	1	3,724.56	62.71	<.001	.452
Error	4,514.82	76	59.41			

Source: Primary data processed with SPSS version 26.0 (2024)

The analysis revealed a significant main effect of time ($F(1, 76) = 142.35, p < .001, \eta^2p = .652$), indicating that self-confidence scores increased significantly from pretest to post-test across both groups. A significant main effect of group was also found ($F(1, 76) = 28.76, p < .001, \eta^2p = .274$).

Critically, the interaction effect between time and group was statistically significant ($F(1, 76) = 62.71, p < .001, \eta^2p = .452$), indicating that the change in self-confidence scores over time differed significantly between the experimental and control groups. The large effect size ($\eta^2p = .452$) suggests a substantial practical significance of the digital counselling intervention.

Subscale Analysis

Table 4 presents the mixed-design ANOVA results for each self-confidence subscale.

Table 4. Mixed-Design ANOVA Results for Self-Confidence Subscales

Subscale	Effect	F	df	p	η^2p
Communicative Confidence	Time	89.42	1, 76	<.001	.541
	Group	24.18	1, 76	<.001	.241
	Time \times Group	48.56	1, 76	<.001	.390
Classroom Participation	Time	78.65	1, 76	<.001	.508
	Group	18.92	1, 76	<.001	.199
	Time \times Group	38.74	1, 76	<.001	.338
Speaking Performance	Time	82.34	1, 76	<.001	.520
	Group	21.45	1, 76	<.001	.220
	Time \times Group	42.18	1, 76	<.001	.357
English Learner Self-Concept	Time	45.67	1, 76	<.001	.375
	Group	15.28	1, 76	<.001	.167
	Time \times Group	32.45	1, 76	<.001	.299

Source: Primary data processed with SPSS version 26.0 (2024)

Significant time \times group interaction effects were observed for all four subscales (all $p < .001$), with effect sizes ranging from medium to large ($\eta^2p = .299$ to $.390$). The largest

interaction effect was found for Communicative Confidence ($\eta^2p = .390$), followed by Speaking Performance Confidence ($\eta^2p = .357$).

Within-Group and Between-Group Comparisons

Paired samples t-tests examined within-group changes from pretest to post-test. Independent samples t-tests compared post-test scores between groups. Results are presented in Table 5.

Table 5. Within-Group and Between-Group Comparisons

Variable	Within-Group (Paired t-test)		Between-Group Post-test
	Experimental		Control
	t (37), p, d		t(39), p, d
Overall Self-Confidence	12.45, <.001, 2.02		2.86, .007, 0.45
Communicative Confidence	10.28, <.001, 1.67		2.12, .041, 0.34
Classroom Participation	9.56, <.001, 1.55		2.34, .024, 0.37
Speaking Performance	9.82, <.001, 1.59		2.28, .028, 0.36
English Learner Self-Concept	7.45, <.001, 1.21		0.58, .565, 0.09

Note: d = Cohen's d effect size

Source: Primary data processed with SPSS version 26.0 (2024)

The experimental group demonstrated significant improvements across all variables with large effect sizes ($d = 1.21$ to 2.02). The control group showed significant but smaller improvements in overall self-confidence and three subscales ($d = 0.34$ to 0.45), with no significant change in English Learner Self-Concept ($p = .565$). Post-test comparisons revealed significantly higher scores for the experimental group across all variables with large effect sizes ($d = 1.23$ to 1.84).

Qualitative Findings

Thematic analysis of interview data from 14 participants (8 students, 4 counsellors, 2 English teachers) yielded four main themes related to the utilization of digital counselling services and their impact on self-confidence.

Theme 1: Enhanced Accessibility and Comfort

Participants reported that digital platforms increased accessibility to counselling services and provided a comfortable environment for self-expression. Table 6 presents the frequency of sub-themes.

Table 6. Theme 1: Enhanced Accessibility and Comfort

Sub-theme	Frequency (n=14)	Illustrative Quote
24/7 availability	12 (85.7%)	"I could reach my counsellor anytime I felt anxious about English class" (S3)
Reduced embarrassment	11 (78.6%)	"It was easier to share my fears online than face-to-face" (S5)
Privacy and anonymity	10 (71.4%)	"I felt my problems were kept confidential" (S2)
Flexible scheduling	9 (64.3%)	"I didn't have to miss class to see the counsellor" (S7)

Source: Primary data processed from in-depth interviews with 14 participants (2024)

Theme 2: Skill Development for Confidence Building

Participants identified specific skills and strategies acquired through digital counselling that contributed to confidence enhancement.

Table 7. Theme 2: Skill Development for Confidence Building

Sub-theme	Frequency (n=14)	Illustrative Quote
Anxiety management techniques	13 (92.9%)	"I learned breathing exercises before speaking" (S1)
Positive self-talk strategies	11 (78.6%)	"The modules taught me to replace negative thoughts" (S6)
Goal-setting skills	10 (71.4%)	"Setting small targets helped me feel accomplished" (S4)
Self-monitoring awareness	9 (64.3%)	"The dashboard showed my progress clearly" (S8)

Source: Primary data processed from in-depth interviews with 14 participants (2024)

Theme 3: Peer Support and Social Connection

Participants highlighted the value of virtual peer interactions in normalizing their experiences and building confidence.

Table 8. Theme 3: Peer Support and Social Connection

Sub-theme	Frequency (n=14)	Illustrative Quote
Shared experiences	12 (85.7%)	"Knowing others had similar fears made me feel normal" (S2)
Mutual encouragement	11 (78.6%)	"We motivated each other in the group chat" (S5)
Practice opportunities	8 (57.1%)	"We practiced speaking English together online" (S3)
Reduced isolation	8 (57.1%)	"I realized I wasn't alone in struggling" (S7)

Source: Primary data processed from in-depth interviews with 14 participants (2024)

Theme 4: Challenges and Limitations

Participants also identified challenges encountered during the digital counselling intervention.

Table 9. Theme 4: Challenges and Limitations

Sub-theme	Frequency (n=14)	Illustrative Quote
Technical difficulties	9 (64.3%)	"Sometimes the internet connection was unstable" (S4)
Limited non-verbal cues	7 (50.0%)	"It was harder to express emotions through text" (C2)
Screen fatigue	6 (42.9%)	"Too much screen time was tiring" (S6)
Initial adaptation period	5 (35.7%)	"It took time to get comfortable with the platform" (S1)

Source: Primary data processed from in-depth interviews with 14 participants (2024)

Integration of Quantitative and Qualitative Findings

Table 10 presents the joint display matrix integrating quantitative and qualitative findings.

Table 10. Joint Display Matrix: Integration of Findings

Quantitative Finding	Qualitative Finding	Integration
Significant increase in overall self-confidence ($\eta^2p = .452$)	Participants reported feeling more confident after learning anxiety management and positive self-talk	Convergent: Both data sources confirm intervention effectiveness
Largest effect on Communicative Confidence ($\eta^2p = .390$)	Enhanced accessibility reduced embarrassment in seeking help for communication fears	Complementary: Qualitative data explains mechanism of change
Significant improvement in Speaking Performance ($\eta^2p = .357$)	Peer support groups provided safe practice opportunities	Complementary: Social support facilitated speaking practice
Control group showed minimal change in English Learner Self-Concept ($d = 0.09$)	Digital modules specifically targeted self-perception as English learner	Explanatory: Intervention component absent in control condition
Large between-group differences at posttest ($d = 1.23-1.84$)	Technical challenges noted but did not prevent overall positive outcomes	Expanded understanding: Barriers existed but were overcome

Source: Researcher's synthesis of quantitative and qualitative data (2024)

Implementation Fidelity

Implementation fidelity data indicated high adherence to the intervention protocol. Average session attendance was 87.5% (range: 75-100%). Platform engagement metrics showed that 89.5% of participants completed all four psychoeducational modules, and the average response time for asynchronous messaging was 18.4 hours. Observation data confirmed that 94.2% of counselling sessions adhered to the standardized protocol.

Note: S = Student participant; C = Counsellor participant; T = Teacher participant

The findings of this study demonstrate that digital-based guidance and counselling services significantly enhance students' self-confidence in English language learning, as evidenced by the substantial interaction effect between group and time ($F(1, 76) = 62.71, p < .001, \hat{\eta}^2p = .452$). The experimental group exhibited a mean increase of 24.26 points in overall self-confidence scores, compared to only 5.17 points in the control group. This differential improvement underscores the unique contribution of digital counselling interventions beyond conventional face-to-face services.

These findings align with the growing body of evidence supporting the effectiveness of digital mental health interventions for student populations. A recent meta-analysis by PMC (2024) examining 20 studies with 30,639 participants revealed significant effect sizes (Hedges' g : 0.80-0.88) for digital interventions targeting psychological well-being among college and university students. Similarly, the present study's large effect size ($\hat{\eta}^2p = .452$) corroborates research by Jeong (2025), who found that technology-assisted counselling training significantly increased self-efficacy among participants, with sustained effects observed post-intervention. The substantial improvements observed in the experimental group are also consistent with research demonstrating that AI-enhanced e-counselling platforms can more than double baseline self-efficacy measurements among students receiving digital support (IJIRSS, 2025).

The implications of these findings are significant for educational practitioners and policymakers. First, the results provide empirical support for integrating digital counselling platforms into school guidance programs as a viable complement to traditional services.

Given the documented shortage of school counsellors in Indonesian schools and the increasing psychological demands faced by students in English-language learning contexts, digital solutions offer a scalable approach to expanding access to services (Anggrisia & Robah, 2023). Second, the magnitude of the effect suggests that digital counselling is not merely a substitute for face-to-face services but may offer unique therapeutic benefits, particularly for students who experience barriers to seeking traditional counselling support.

However, several limitations warrant consideration. The 8-week intervention duration, while sufficient to detect significant effects, may not capture the long-term sustainability of confidence gains. Additionally, the study was conducted in schools with adequate digital infrastructure, which may limit generalizability to resource-constrained settings. Future research should employ longitudinal designs with extended follow-up periods to examine the durability of intervention effects. Furthermore, comparative effectiveness studies examining different digital counselling modalities (synchronous vs. asynchronous, individual vs. group) would provide valuable guidance for optimizing intervention design.

Qualitative findings revealed that enhanced accessibility and psychological safety emerged as primary mechanisms underlying the effectiveness of digital counselling services. The majority of participants (85.7%) valued the 24/7 availability of support, while 78.6% reported reduced embarrassment in seeking help through digital platforms. These findings illuminate the process through which digital counselling facilitates confidence enhancement beyond what outcome measures alone can capture.

The accessibility theme aligns with contemporary literature emphasizing the potential of digital platforms to overcome traditional barriers to counselling services. Research has consistently demonstrated that students, particularly adolescents, often hesitate to seek face-to-face counselling due to concerns about stigma, privacy, and scheduling conflicts (Taylor et al., 2024). The present findings corroborate Pattiasina et al. (2024), who reported that digital counselling platforms significantly increase students' access to guidance services, especially for those reluctant to engage in face-to-face interactions. Similarly, Chen et al. (2024) found that counselling students' self-efficacy increased substantially after online counselling skills training, with participants reporting enhanced confidence in utilizing digital approaches effectively.

The psychological safety afforded by digital platforms appears particularly salient for students experiencing English learning anxiety. Foreign language anxiety has been extensively documented as a debilitating factor that undermines linguistic self-confidence and impedes communicative performance (Horwitz, 2001; Zhang, 2019). The present study's finding that students felt more comfortable sharing their fears online than face-to-face resonates with research by Glasheen et al. (2016), who observed that students perceive online counselling as less threatening and more conducive to self-disclosure. This reduced psychological barrier may facilitate deeper engagement with counselling content and greater receptivity to confidence-building strategies.

These findings carry important implications for the design and implementation of digital counselling services. Platforms should be designed to maximize perceived privacy and anonymity while maintaining appropriate safeguards for student welfare. Features such as secure messaging, confidential progress tracking, and options for anonymous participation in peer support activities may enhance user comfort and engagement. Additionally, counsellors

should receive training in establishing therapeutic rapport through digital media, as the quality of the counsellor-student relationship remains central to counselling effectiveness regardless of delivery modality.

The limitations of these findings include the possibility that students who volunteered for the study may have been predisposed toward favourable attitudes toward digital services, which could have inflated reported benefits. Furthermore, the qualitative sample, while diverse, may not fully represent the experiences of students who disengaged from the intervention or found it unhelpful. Future research should employ purposive sampling strategies that deliberately include non-responders and dropouts to capture a fuller range of experiences. Comparative studies examining student preferences for digital versus face-to-face counselling across different presenting concerns would also inform service delivery decisions.

The qualitative findings highlighted the significance of peer support and social connection in the digital counselling intervention. Participants reported that shared experiences with peers (85.7%), mutual encouragement (78.6%), and practice opportunities (57.1%) contributed meaningfully to their development of confidence. These findings underscore the value of social learning components within digital counselling frameworks.

The importance of peer support in confidence development is well-established in educational psychology literature. According to social cognitive theory, vicarious experiences observing similar others successfully perform tasks constitute a powerful source of self-efficacy (Bandura, 1997). The virtual peer support groups in the present intervention provided structured opportunities for students to witness peers confronting and overcoming similar challenges, thereby normalizing their experiences and modelling effective coping strategies. This mechanism aligns with research by Afzalimir and Safa (2021), who found that cooperative learning environments more effectively support improvements in speaking capability and self-confidence, particularly among less proficient learners.

The finding that peer interactions in digital environments facilitated speaking practice opportunities corresponds with emerging research on technology-enhanced language learning. Studies have demonstrated that digital platforms can simulate authentic communicative contexts while reducing the performance anxiety typically associated with face-to-face interactions (Toboula, 2023). Furthermore, research by *Frontiers in Education* (2025) found that mobile language learners' self-efficacy increased significantly after using generative AI for conversation practice, suggesting that technology-mediated interaction can effectively substitute for human interlocutors in building communicative confidence.

The practical implications of these findings suggest that digital counselling programs should intentionally incorporate peer learning components. Moderated discussion forums, collaborative goal-setting activities, and structured peer feedback exchanges can leverage social learning principles while maintaining the accessibility and privacy benefits of digital platforms. Counsellors should be trained to facilitate online group dynamics and to manage potential challenges, such as unequal participation or negative interactions.

However, the present findings also revealed that not all participants benefited equally from peer support components. Some students reported a preference for individual counselling, suggesting individual differences in receptivity to group-based interventions. A limitation of this study is the inability to identify characteristics that predict responsiveness to

peer support versus individual counselling modalities. Future research should examine moderating variables such as introversion/extroversion, social anxiety levels, and prior group experience to develop personalized intervention recommendations. Additionally, comparative studies examining optimal group sizes, facilitation strategies, and activity structures for virtual peer support would inform evidence-based practice guidelines.

Despite the overall positive outcomes, the study identified several technical challenges that warrant attention in implementing digital counselling services. Participants reported difficulties, including unstable internet connectivity (64.3%), limited non-verbal cue transmission (50.0%), screen fatigue (42.9%), and initial adaptation periods (35.7%). These challenges, while not negating the intervention's effectiveness, highlight important considerations for program design and implementation.

The technical challenges identified in this study reflect broader concerns documented in the literature on digital mental health interventions. Research has consistently noted that technological barriers, including connectivity issues and platform usability, can impede engagement with digital services, particularly in developing country contexts (UNESCO, 2023). The finding that Indonesian students experienced connectivity challenges aligns with national data indicating persistent gaps in digital infrastructure, particularly in rural and underserved areas (UNDP, 2023). Similarly, concerns about limited nonverbal communication in digital counselling have been raised by practitioners, who emphasize the importance of body language and facial expressions in therapeutic interactions (Nagarajan & Yuvaraj, 2023).

The challenge of screen fatigue has gained increasing attention in the post-pandemic educational landscape. Extended exposure to digital screens can produce physical discomfort, attention difficulties, and reduced engagement (JMIR, 2025). The present study's finding that 42.9% of participants experienced screen fatigue suggests the need for careful consideration of session duration, frequency, and format in the design of digital counselling. Incorporating varied interaction modalities (text, audio, video), scheduled breaks, and offline reflection activities may mitigate fatigue effects.

These findings have important implications for the scalable implementation of digital counselling services in Indonesian schools. First, a technical infrastructure assessment should precede program implementation to identify and address connectivity limitations. Schools lacking reliable internet access may require hybrid models that combine digital and face-to-face components. Second, counsellor training should include troubleshooting skills and contingency planning for technical disruptions. Third, platform design should prioritize user-friendliness and incorporate onboarding support to minimize adaptation challenges.

The limitations of these findings include reliance on participant self-reports of technical challenges without objective verification of connectivity quality or platform performance. Additionally, the study did not systematically examine associations between technical difficulties and intervention outcomes, precluding conclusions about whether challenges moderated effectiveness. Future research should incorporate objective technical metrics and examine dose-response relationships between platform engagement and confidence outcomes. Implementation science frameworks examining barriers and facilitators across diverse school contexts would also inform scale-up strategies.

The joint display analysis revealed convergence between quantitative and qualitative findings, suggesting that digital counselling effectiveness operates through identifiable

mechanisms, including skill development, accessibility enhancement, and social support. Importantly, the integration of findings illuminated how counselling services can be effectively coordinated with English language instruction to address affective barriers to learning.

The present study contributes to an emerging body of research at the intersection of guidance and counselling and language education. Traditionally, these domains have operated relatively independently, with counsellors addressing general psychological concerns and teachers focusing on linguistic skill development. However, the documented influence of affective factors on language learning outcomes including anxiety, motivation, and self-efficacy suggests the need for integrated approaches (Dewaele & MacIntyre, 2014). The significant improvements observed in the present study support the value of collaboration between counsellors and English teachers in addressing the psychological dimensions of language learning.

This integrative approach aligns with recent calls for comprehensive student support models that transcend disciplinary boundaries. Research by Li et al. (2024) demonstrated that self-efficacy interventions embedded within English instruction produced significant improvements in learner confidence and academic achievement, suggesting the feasibility of classroom-based psychological support. Similarly, studies on technology-enhanced language learning have shown that digital tools can simultaneously address linguistic and affective learning objectives (Zhang, 2022; Wei, 2023). The present findings extend this literature by demonstrating the effectiveness of counsellor-delivered digital interventions specifically targeting confidence in English learning contexts.

The implications for practice suggest the value of establishing formal mechanisms for collaboration between guidance counsellors and English teachers. Joint planning sessions, shared student progress monitoring, and coordinated intervention strategies can ensure that psychological support is contextually relevant and reinforces instructional objectives. English teachers can refer students exhibiting confidence difficulties to digital counselling services, while counsellors can incorporate language-specific content into their interventions.

A significant limitation of the present study is the focus on general self-confidence in English learning rather than specific linguistic competencies. While confidence gains were substantial, the study did not directly assess whether these translated into improved English proficiency or performance outcomes. Future research should examine the mediating role of confidence in the relationship between digital counselling and objective language learning outcomes. Longitudinal studies tracking students' English achievement trajectories following counselling interventions would provide valuable evidence regarding the practical significance of confidence enhancement.

Despite its contributions, this study has several limitations that should be acknowledged and addressed in future research.

First, the quasi-experimental design, while practical and ethical, does not permit definitive causal inferences. Random assignment was conducted within rather than across schools, potentially introducing school-level confounds. Future research employing cluster-randomized designs with schools as the unit of randomization would strengthen causal claims.

Second, reliance on self-report measures introduces potential biases, including social desirability bias, memory inaccuracies, and subjective interpretation of scale items. A multi-

method assessment incorporating behavioural observations, teacher ratings, and performance-based measures would enhance measurement validity.

Third, the 8-week intervention duration and immediate post-test assessment limit conclusions about long-term sustainability. Confidence gains may diminish over time without ongoing support, or conversely, may consolidate and generalize as students apply learned strategies. Extended follow-up assessments at 3-month, 6-month, and 12-month intervals would clarify temporal dynamics.

CONCLUSION

This study concluded that digital-based guidance and counselling services are effective in increasing students' confidence in learning English. The results of the quantitative analysis showed a significant increase in the experimental group ($M=+24.26$) compared to the control group ($M=+5.17$) with a large interaction effect ($\eta^2p=0.452$). The effectiveness of the intervention was evident in all aspects of self-confidence, with the highest increase in Communicative Confidence ($\eta^2p=0.390$). Qualitative findings reveal that increased service accessibility, psychological security, development of anxiety management skills, and peer support are key mechanisms that explain the success of digital counselling interventions. Thus, the integration of digital-based counselling services into guidance programs in schools is the right strategy to overcome affective barriers in English language learning, especially in the context of secondary education in Indonesia. Based on the findings of the research, several suggestions can be formulated. For school counsellors, it is recommended to adopt a digital counselling platform as a complement to face-to-face services, taking into account key components such as psychoeducation modules, peer support, and self-monitoring. For English teachers, collaboration with counsellors needs to be improved through an integrated referral system to identify students with confidence barriers early on. For policy makers in the Education Office and schools, digital infrastructure support, counsellor training in technology competencies, and policy development that facilitates the integration of digital counselling services into the independent curriculum are needed. For the next researcher, it is recommended to conduct a longitudinal study to test the sustainability of the effects of interventions, explore the effectiveness of various digital counselling modalities (synchronous vs asynchronous, individual vs group), and examine the relationship between confidence increase and achievement of English language competence objectively.

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