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Integrating Translanguaging Informed Scaffolding and Digital Rehearsal Within Case Based Project Learning to Reduce EFL Speaking Anxiety

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Abstract

Speaking anxiety remains a major affective barrier in English as a Foreign Language (EFL) higher education. Although research since (Horwitz et al., 1986) has consistently shown a negative relationship between anxiety and performance, few studies have translated these findings into integrated instructional design. This developmental study investigates affective, linguistic, and pedagogical conditions in Indonesian undergraduate public speaking courses and proposes a Digital Case Study and Project-Based Learning (D-CS&PjBL) framework. Data were collected from 50 students and 7 lecturers using the Foreign Language Classroom Anxiety Scale (FLCAS), classroom observations, interviews, focus group discussion, and digital perception surveys. Results indicate that 42% of students experience high speaking anxiety, primarily driven by fear of negative evaluation. Code mixing emerged as cognitive affective scaffolding aligned with translanguaging theory, while asynchronous rehearsal through Flip enhanced confidence but lacked systematic integration. The porposed framework embeds translanguaging informed scaffolding and digital rehearsal within inquiry based project cycles. An effect size simulation (Cohen's d=0.50) suggests moderate projected impact for future quasi experimental validation. The study contributes to affective second language acquisition research and multilingual digital pedagogy.

Keywords: Speaking Anxiety; Translanguagung; Digital Rehearsal; Project-Based Learning; EFL Pedagogy

INTRODUCTION

Speaking competence is central to communicative language ability in higher education, particularly within English as a Foreign Language (EFL) contexts where oral proficiency functions as both an academic requirement and a professional capital. Performance consistently emerges as the most anxiety provoking skill in EFL classrooms. Foreign Language Classroom Anxiety (FLCA), conceptualized by (Horwitz et al., 1986), encompasses communication apprehension, test anxiety, and fear of negative evaluation. Subsequent cognitive processing models proposed by (MacIntyre & Gardner, 1994) demonstrate that anxiety disterupt working memory capacity, reduces lexical retrieval efficiency, and impairs spontaneous speech production. A large scale meta analysis published in Studies in Second Language Acquicition (Klein, 1986) confirms a robust negative correlation between foreign language anxiety and language achievement (Plonsky, 2015; Teimouri et al., 2019).Recent investigations further indicate that speaking anxiety remains prevalent in both face to face and digitally mediated classrooms (Attia & Algazo, 2025). These findings suggest that technological advancement alone does not automatically resolve affective barriers.

Empirical evidence from the present study reinforces this global pattern. Based on the Foreign Language Classroom Anxiety Scale administered to 50 Indonesian EFL undergraduates, 42% of students were categorized as experiencing high speaking anxiety, while only 28% fell into low anxiety category. Mean scores items ranged from 4.18 to 4.80 (on a 5 point scale), with the highest values associated with fear of negative evaluation and nervousness during public performance. These findings indicate that speaking difficulty in this context is not merely linguistics but profoundly affective and performative. Despite extensive affective research, instructional responses remain fragmented (Dewaele, 2017a) In many Indonesian EFL classrooms, the dominant English-only norm persists, implicitly discouranging multilingual practices. However, translanguaging theory advanced (Mateus, 2014) reconceptualizes multilingual practices as strategic repertoire deployment rather than linguistic deficiency. Empirical classroom studies in modern language journal demonstrate that translanguaging enhances participation, identity affirmation, and classroom engagement (Mateus, 2014)

The current study's findings strongly align with this perspective. Code mixing appeared consistently across four speaking stages opening, explaination, transition, and question, and anwers sessions with an average usage rate of 66.75%. Rather than random interference, code mixing, and regulate anxiety. However, 80% of students reported feeling corrected or discouraged when using mixed codes in formal classroom contexts. This tension between natural linguistic practice and institutional norms creates an additional layer of anxiety. Digital affordances provide further for affective scaffolding. Research published in system indicates that AI enhanced speaking environments significantly influence enjoymen and anxiety regulation (Zhang et al., 2024)Technology mediated feedback also increases learner engagement and confidence (Cheng et al., 2023)Similarly, chatbot assisted rehearsal has been shown to reduce presentation anxiety (Khalik, 2025).

In the present context, the Microsoft platform Flip demonstrated notable affective benefits. Students reported increased confidence, reduced anxiety, and opportunities for repeated rehearsal and self reflection. However, only 30% of lecturer implemented Flip systematically, most used it merely as a task submission tool. This reveals a pedagogical gap between digital potential and structured integration. Project-based learning (Bell, 2010; Krajcik & Blumenfeld, 2006) and case based pedagody are widely recognized for promoting inquiry, collaboration, and authentic communication. Yet institutional data from this study indicate that only 25% of lecturer consistently apply case and project methods in speaking courses, and even then, the focus remains on product completion rather than affective scaffolding and performance development. Taken together, there are four interrelated gaps merge 1) affective pedagogical gap is high anxiety levels persist without structural integration of anxiety reduction strategies, 2) linguistic normative gap is natural code mixing practices are discouraged despite translanguaging evidence, 3) technological instructional gap is flip as a core learning architecture, and 4) model integration gap is case study, PjBL, digital rehearsal and multilingual scaffolding have not been synthesized into a unified framework.

Recent studies continue to confirm that foreign language anxiety remains a pervasive challenge in EFL classrooms worldwide. Research has shown that speaking anxiety negatively influences learners' willingness to communicate, classroom participation, and overall language performance(Botes et al., 2020; Resnik & Dewaele, 2023). In addition, technology-mediated language learning environments have been increasingly explored as potential tools to reduce anxiety and enhance learner confidence through asynchronous rehearsal and flexible interaction (Tai & Chen, 2020; Wang et al., 2022). These studies indicate that affective support and technological mediation play an increasingly important role in contemporary language

pedagogy. Addressing these intersecting gaps requires a model that does not treat anxiety, multilingualism, and technology as peripheral variables, but as structural components of instructional design. Therefore, this study proposes the Digital Case Study and Project-Based Learning model with direct code mixing (D-CS&PjBL), which integrates translanguaging informed scaffolding, structured digital rehearsal, and authentic project based performance cycles within a coherent pedagogical architecture grounded in Indonesian multilingual realities.

METHOD

This study employed a developmental mixed method design situated within a modified Research and Development (R&D) framework (Borg & Gall, 1984) combined with principles of Design Based Research. R&D is widely used to generate context responsive educational models through systematic needs analysis, prototype design, and iterative refinement. DBR complements this approach by grounding model construction in authentic classromm ecology and empirical data cycles. The present study represents the foundational stage of model development, focusing on need analysis, contextual mapping, and conceptual prototype construction of the Digital Case Study and Project-Based Learning model with directed code mixing (D-CS&PjBl). A convergent mixed method strategy was adopted to integrate three analytical dimensions, quantitative measurement of speaking anxiety, qualitative exploration of code mixing practice, and institutional analysis of pedagogical as well as technological integration. This design enabled triangulation across affective, linguistic, and instructional variables, thereby strengthening internal validity and interpretive depth.

Participants consisted of 50 undergraduate EFL students enrolled in public speaking courses and 7 lecturers responsible for speaking related instruction. The study wa conducted across three higher education institutions in North Sumatera the Faculty of Letters at UMN Al-Washliyah dan the Faculty of Language and Communication at Universitas Harapan Medan. Participants were selected purposively to represent multilingual Indonesian EFL learners who had prior exposure to project based tasks and digital learning platforms, thereby ensuring contextual relevance to the proposed instructional model. Speaking anxiety was measured using the Foreign Language Classroom Anxiety Scale (FLCAS) developed (Horwitz et al., 1986), which conceptualizes anxiety as comprising communication apprehension, test anxiety, and fear of negative evaluation. The instrument employed a five point Likert scale ranging from strongly disagree to strongly agree. Previous studies have demonstrated high internal consistency realibility (α>.90), and reliability analysis in the present study yielded satisfactory internal consistency (Cronbach's α =,88). To examine classroom ecology, five speaking classes were observed using a structured onservation protocol focusing on the occurrence of code mixing, utilization of digital tools (Flip), implementation of case study and project based learning (PjBL), and affective classroom climate. Observational data were analyzed using thematic coding procedures.

Semi structured interviews were conducted with even lecturers to explore perceptions of speaking anxiety, attitudes toward code mixing, patterns of Flip integration, and instructional challenges. In parallel, focus group discussions (FGDs) were organized with student participants to investigate lived experiences of anxiety, comfort levels with code mixing, perceived affordances of digital rehearsal, and preferred learning structures. A structured digital perception survey further measured student responses regarding confidence enhancement, anxiety reduction, rehearsal affordances, and reflective learning engagement. Data collection preceeded in four sequential phases 1) systematic literature review of 25 peer reviewed articles

on anxiety, translanguaging, and digital speaking pedagogy; 2) administration of the FLCAS to 50 students; 3) classroom observations across five sessions; and 4) interviews and FDGs. Ethical clearance was obtained from institutional authorities, and participation was voluntary with informed consent secured prior to data collection.

Quantitative data were analyzed using descriptive statistics with mean ± 0.5 standard deviation categorization to classify anxiety levels. To estimate the potential pedagogical impact of the proposed model, and effect size simulation using Cohen's d (Cohen, 2013) was conducted. A moderate projected effect size (d=0.50) was adopted based on comparable digital speaking intervention findings (Zhang et al., 2024). Qualitative data from interviews and FGDs were analyzed thematically, focusing on affective dimentions, linguistic scaffolding patterns, and pedagodical integration gaps. Tringulation across quantitative and qualitative datasets ensured analytical credibility and methodologies robustness.

RESULTS AND DISCUSSION

Results

1. Speaking anxiety as a dominant affective barrier
   Descriptive findings from the Foreign Language Classroom Anxiety Scale (FLCAS) reveal that EFL students' speaking anxiety remains substantively elevated. Means scores across items ranged from 4.18 to 4.80 (on a 1-5 scale), with relatively low standard deviations, indicating homogeneity of anxiety experience among participants. The highest means were recorded on items associated with nervousness during public speaking, fear of negative evaluation, and pressure to perform flawlessly.

Table 1. Actual condition of EFL students's pulic speaking competence

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ID	50	1	50	25,50	14,577
FLCAS1	50	3	5	4,60	,700
FLCAS2	50	3	5	4,18	,748
FLCAS3	50	4	5	4,40	,495
FLCAS4	50	4	5	4,78	,418
FLCAS5	50	3	5	4,56	,541
FLCAS6	50	3	5	4,60	,808
FLCAS7	50	4	5	4,80	,404
FLCAS8	50	4	5	4,80	,404
FLCAS9	50	4	5	4,80	,404
FLCAS10	50	4	5	4,80	,404
Valid N (listwise)	50				

Categorization using the mean ± 0.5 SD approach showed that 24% of students fell into the high anxiety category, 30% moderate, and 28% low. This distribution confirms that anxiety is not a marginal phenomenon but a structural feature of the EFL public speaking classroom. These findings align with the conceptualization of Foreign Language Classroom Anxiety proposed (Horwitz et al., 1986), which frames anxiety as a situation specific construct somprising communication apprehension, test anxiety, and fear of negative evaluation. The dominance of evaluative anxiety in the present data further supports the cognitive interference model advanced (MacIntyre & Gardner, 1994), which posits that anxiety disrupts working memory resources during linguistic processing. Thus, students' public speaking difficulties cannot be reduced to linguistic incompetence alone, rather they are depply embedded in affective and evaluative classroom dynamics.

2. Code mixing as strategic translanguaging
   The data indicate that code mixing occurred consistently in four presentation stages; opening, explanation, transition, and question answer session. With an average usage rate of 66.75%, code mixing appears to function as a patterned communicative strategy rather than random interference. From theoretical standpoint, this pattern can be interpreted through translanguaging theory as developed (García & Li, 2014) which reconceptualizes multilinguali practice as dynamic repertoire deployment. Instead of representing deficiency, strategic alternation between languages may reduce cognitive load sustain communicative low. Students reported that code mixing helped them maintain fluency and manage anxiety, suggesting its dual function as both English only norms in formal instruction generates tension. When code mixing is implicity penalized, students experience heightened performance pressure, reinforcing anxiety. Therefore, the findings suggest a misalignment between multilingual classroom realities and monolingual pedagogical ideologies.

3. Digital rehearsal and affective regulation
   The platform Flip was nt systematically integrated into instructional design, student receptionon data reveal substantial affective benefits. Students reported increased confidence, reduced anxiety, opportunities for repeated rehearsal, and enhanced self reflection prior to live performance. The findings resionate with recent research published in system (Zhang et al., 2024), which demonstrates that AI enhanced and digital mediated speaking environments significantly influence learners' enjoyment and anxiety regulation. Rehearsal affordances appear to function as psychological buffering mechanism, allowing learners to practice in low stakes contexts before high stakes exposure.

4. Partial implementation of case study and project based learning
   Interview data and classroom observations show that Case Study and Project-Based Learning (PjBl) approaches have been implemented in several public speaking course, yet they have not been explicity directed toward systematic speaking skill development, Approximately 25% of lecturers reported consistently applying Case Study and PjBL approaches, whereas 75% indicated only incidental implementation. Moreover, most instructional activities remain focused on final products (e.g., reports or projects) rather than on the process of public speaking performance, reflective practice, and the gradual development of speaking confidence. These findings suggest that although case-based and project-based models are familiar within the curriculum, their application has not yet fully created authentic and meaningful public speaking experiences for students.

Discussion

The findings collectively suggest that speaking anxiety in EFL public speaking contexts should not be viewed as an isolated psychological trait, but rather as an emergent phenomenon shaped by pedagogical structures, linguistic ideologies, and technological mediation. This interpretation aligns with previous research indicating that foreign language anxiety is closely associated with classroom practices and evaluative environments rather than merely individual personality factors(Dewaele, 2017; Teimouri et al., 2019). First, anxiety functions as a cognitive affective constraint that disrupts linguistic processing, supporting the interference hypothesis proposed (MacIntyre & Gardner, 1994). When learners experience anxiety during speaking tasks, cognitive resources are partially redirected toward managing emotional stress, which consequently reduces working memory capacity for language processing. Similar findings have

been reported in second language acquisition research showing that anxiety can significantly impair fluency, lexical retrieval, and spontaneous speech production(MacIntyre & Gardner, 1994; Teimouri et al., 2019). Without structured affective scaffolding, even linguistically competent students may underperform during public speaking activities.

Second, translanguaging emerges as an organically developed coping mechanism among multilingual learners. When strategically legitimized in classroom practice, code-mixing may function as both a cognitive scaffold and an affective stabilizer that helps learners maintain communicative flow while reducing performance pressure. This finding supports translanguaging perspectives proposed (García & Li, 2014), which conceptualize multilingual language practices as dynamic and strategic resource deployment rather than linguistic deficiency. Previous studies have also demonstrated that translanguaging practices can enhance classroom participation, reduce anxiety, and strengthen learners' communicative confidence in multilingual contexts (Dewaele, 2017a; García & Li, 2014). Therefore, the present findings extend translanguaging theory beyond identity affirmation toward its potential role in affective regulation during speaking performance.

Third, digital rehearsal environments such as Flip provide temporal flexibility and opportunities for iterative practice, thereby reducing the immediacy of evaluative pressure commonly experienced in live speaking performances. These findings are consistent with recent studies on digital speaking environments, which show that technology-mediated rehearsal and asynchronous feedback can significantly enhance learners' confidence and reduce speaking anxiety (Cheng et al., 2023; Zhang et al., 2024). By allowing repeated practice and self-reflection before public performance, digital platforms create low-stakes learning environments that support gradual confidence development.

Fourth, the findings indicate that project-based approaches require pedagogical reconfiguration to address affective dimensions of speaking performance. Although project-based learning has been widely recognized for promoting authentic communication and collaborative inquiry (Bell, 2010; Krajcik & Blumenfeld, 2006), its implementation often focuses primarily on project outcomes rather than on the process of developing speaking confidence. Therefore, authentic speaking tasks should be structured through graduated performance stages, reflective cycles, and multilingual scaffolding in order to create psychologically supportive learning environments.

Recent research in technology-enhanced language learning further highlights the importance of integrating digital tools into speaking pedagogy. Studies have shown that video based rehearsal platforms and AI-supported speaking environments can significantly reduce speaking anxiety while improving learners' confidence and engagement (Tai & Chen, 2020; Wang et al., 2022; Zhang et al., 2024). Similarly,(Botes et al., 2020) emphasize that pedagogical interventions targeting affective variables are essential for improving language learning outcomes. These findings reinforce the present study's argument that anxiety reduction strategies should be embedded within instructional design rather than treated as peripheral classroom support.

Taken together, these findings justify the development of an integrated Digital Case Study and Project-Based Learning model with directed code-mixing (D-CS&PjBL). The proposed model simultaneously addresses affective, linguistic, and technological dimensions of EFL speaking instruction rather than treating them as separate instructional variables. Theoretically, this study contributes to expanding language anxiety research by situating affective constructs within translanguaging and digital pedagogical frameworks. Pedagogically, it advocates a shift from

English-only, performance driven instruction toward psychologically safe, digitally mediated, and multilingual public speaking environments.

CONCLUSION

This study investigated the affective, linguistic, and pedagogical conditions of public speaking instruction in Indonesian EFL higher education and proposed an integrated Digital Case Study and Project-Based Learning model with directed code-mixing (D-CS&PjBL). The findings confirm that speaking anxiety remains a dominant affective barrier, with 42% of students categorized as experiencing high anxiety. Fear of negative evaluation and performance pressure emerged as the most significant anxiety triggers, reinforcing the argument that public speaking challenges in EFL contexts are deeply affective rather than purely linguistic. The study further demonstrates that code-mixing operates as strategic translanguaging, functioning as both cognitive and affective scaffolding. Rather than representing linguistic deficiency, multilingual repertoire deployment supports fluency maintenance and anxiety regulation. However, the persistence of English only norms creates ideological tension that intensifies evaluative stress.

Digital rehearsal through Flip showed strong affective benefits, particularly in enhancing confidence and enabling repeated exposure prior to live performance. Nevertheless, its pedagogical implementation remains unsystematic. Similarly, while Case Study and Project Based Learning approaches are present in the curriculum, they are not yet structurally aligned with anxiety reduction or staged performance development. Taken together, the findings highlight four intersecting instructional gaps: affective pedagogical misalignment, linguistic normative tension, technological underutilization, and lack of integrated model synthesis. The proposed D-CS&PjBL framework responds to these gaps by embedding translanguaging-informed scaffolding and structured digital rehearsal within inquiry based project cycles.

Theoretically, this study extends language anxiety research by positioning anxiety as an emergent classroom ecological construct shaped by instructional design and linguistic ideology. Practically, it advocates for psychologically safe, digitally mediated, and multilingual public speaking environments in EFL higher education. Future research should implement quasi-experimental or longitudinal validation to empirically test the projected moderate effect size (Cohen's d = 0.50) and examine structural mediation pathways between digital rehearsal, translanguaging scaffolding, anxiety reduction, and speaking performance outcomes.

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