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Gamification of Professional Small Talk: Enhancing Interpersonal English Skills for Vocational Students via Micro-learning Mobile Apps

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Abstract

This study aimed to investigate the implementation of a gamified micro-learning mobile application specifically engineered to develop interpersonal English conversational competence among vocational college students. Employing a mixed-methods empirical approach, 120 undergraduate students from Politeknik Unggul LP3M were assigned to either an experimental group utilizing the gamified micro-learning intervention or a control group undergoing conventional teacher-led interpersonal dialogue simulations over a 16-week academic semester. Interpersonal competence was measured quantitatively via standardized pre- and post-tests evaluating pragmatic appropriateness, linguistic fluency, and conversational initiation capabilities, supplemented by physiological and self-reported communication anxiety metrics. Quantitative analyses demonstrated a statistically significant improvement in the experimental group's micro-interaction capabilities ($p < 0.01$) and an extensive reduction in English communication anxiety levels. Qualitative interviews revealed that gamified rewards, micro-credentials, and spaced-repetition loops lowered the psychological barriers associated with casual L2 interactions. The paper concludes with structural recommendations for incorporating interactive gamified frameworks into vocational General English and ESP pedagogical ecosystems

Keywords: Gamification of Professional Small Talk, Micro-learning, Interpersonal English Skills, Mobile-Assisted Language Learning (MALL).

INTRODUCTION

In the contemporary globalized economic landscape, vocational education institutions face the pressing challenge of equipping graduates not only with specialized technical competencies but also with highly adaptive socio-linguistic skills. Within the field of English for Specific Purposes (ESP) and vocational General English, educational curricula have traditionally privileged formal writing, technical documentation, structural syntax, and high-stakes presentation skills. While these structural elements are undeniably fundamental to workplace performance, empirical assessments of graduate integration into multinational corporate ecosystems reveal a critical, pervasive deficit: the inability to navigate informal, unstructured workplace interactions, colloquially and academically conceptualized as "small talk"(Selvi & Galloway, 2024).

Professional small talk—ranging from brief linguistic exchanges in office elevators and pre-meeting casual banter to networking sessions during corporate luncheons—serves as the primary communicative vehicle for building rapport, establishing relational trust, and demonstrating interpersonal emotional intelligence . For vocational students, who are historically trained for execution-oriented roles, the transition from rigid textbook dialogues to fluid, spontaneous workplace socio-linguistics represents a major psychological and communicative barrier. Research indicates that failure to master these micro-interactions often results in social alienation, suboptimal integration during corporate internships, and limited upward professional mobility, regardless of the individual's technical or administrative brilliance.

The primary pedagogy of language teaching in vocational colleges, particularly in developing economies, continues to rely heavily on teacher-centric methodologies and static role-play scenarios. These conventional frameworks suffer from several structural limitations: they lack authentic situational dynamism, fail to account for individual learning paces, and induce

substantial foreign language communication anxiety (FLCA) due to peer-exposure during live classroom performance. To address these systemic gaps, this study proposes a paradigm shift through the synthesis of mobile-assisted language learning (MALL), micro-learning principles, and gamified instructional design mechanics (Biwer et al., 2020).

Micro-learning, characterized by the delivery of granular, highly-focused pedagogical units over short durations, aligns perfectly with the cognitive profiles of modern digital-native students. When augmented with structural gamification frameworks—incorporating point systems, progressive feedback loops, badge allocations, and narrative-driven social configurations—micro-learning can transform the anxiety-inducing task of casual L2 acquisition into a low-stakes, highly engaging behavioral habit.

This study presents a systematic empirical evaluation of a custom-developed gamified micro-learning mobile app framework designed explicitly for professional small talk competence. Specifically, the study addresses three primary research questions: (1) To what extent does the integration of a gamified micro-learning mobile application enhance the pragmatic appropriateness and fluency of professional small talk among vocational students compared to conventional instructional models? (2) How does the gamified mobile intervention impact the foreign language communication anxiety of students during casual professional encounters? (3) What are the specific structural mechanics within the application that students identify as most transformative for their interpersonal L2 behavioral development?

RESEARCH METHODS

This study deployed a randomized, controlled, pre-test/post-test mixed-methods research design spanning an entire 16-week academic semester in 2026. The empirical investigation was carried out at Politeknik Unggul LP3M Medan, utilizing a sample of 120 undergraduate students enrolled in vocational diplomas (Business Administration, Digital Marketing, and Computer Engineering). These students were selected because their impending transition into corporate internship programs required urgent interpersonal language intervention.

The participants were randomly partitioned into two equal cohorts: the Experimental Group ($n = 60$) and the Control Group ($n = 60$). Demographically, the population exhibited an age range of 19 to 22 years, with an equitable gender distribution (52% female, 48% male). Pre-intervention baseline assessments confirmed that both groups possessed homogeneous English proficiency profiles, corresponding predominantly to the A2 and B1 levels of the Common European Framework of Reference for Languages (CEFR).

Technical Intervention: The Mobile Application Architecture

The experimental cohort was granted exclusive access to a custom-designed, mobile-optimized micro-learning application named "TalkPro-Micro". The application architecture was explicitly centered on the gamification of casual professional discourse. The platform's curriculum was structured into five progressive narrative tracks: (1) The Elevator Pitch and Casual Introductions, (2) Office Kitchen and Coffee Break Banter, (3) Pre-Meeting Socio-linguistic Warm-ups, (4) Corporate Luncheons and Networking Etiquette, and (5) Navigating Post-Event Digital Small Talk.

The gamified pedagogical mechanics within TalkPro-Micro were operationalized through several interconnected systems:

1. **Spaced Repetition Dialogue Quests:** Users interacted with branching dialogue structures where they had to choose the most pragmatically appropriate small talk responses under variable temporal constraints. Correct selections yielded Experience Points (XP) and preserved the user's "Streak" multiplier.

2. **AI-Powered Speech Recognition:** Utilizing native mobile voice-to-text engines, the application evaluated verbal small talk performance based on pronunciation clarity, prosody, and response latency, translating successful vocalizations into virtual currency (Coin Rewards).
3. **Micro-Credentials and Badges:** Specific socio-linguistic accomplishments—such as executing 10 consecutive appropriate backchanneling responses ("Uh-huh", "That's fascinating", "Right")—unlocked specialized visual badges that were displayable on a localized cohort leaderboard.

The Control Group, conversely, received an identical curricular syllabus regarding small talk rules, conversation starters, and professional boundary management, but delivered through conventional classroom instructions, standardized textbooks, and traditional face-to-face paired role-play activities. Both groups dedicated exactly 60 minutes per week to targeted professional small talk instruction over the 16-week cycle.

Data Collection Instruments and Analytical Protocols

To capture the multidimensional nature of interpersonal language growth, three primary metrics were operationalized:

1. **Pragmatic Appropriateness and Fluency Scale (PAFS):** A rubric-based oral examination administered by two blind external assessors before and after the intervention. The exam involved an unscripted, 5-minute live simulated networking session with an English native speaker. Scoring parameters included topic maintenance, turn-taking efficiency, pragmatic correctness, and linguistic fluency, with each metric scaled from 1 to 25, totaling a maximum score of 100.
2. **Foreign Language Classroom Anxiety Scale (FLCAS - Adapted):** A standardized 5-point Likert scale instrument designed to measure psychological distress, communication apprehension, and fear of negative evaluation specific to casual L2 conversations.
3. **Semi-Structured Qualitative Interviews:** Conducted post-intervention with 20 randomly selected individuals from the experimental cohort to extract granular experiential descriptions of their behavioral and cognitive transformations.

Quantitative data processing was conducted using SPSS software ver. 24. Group means were compared via independent sample t-tests, paired t-tests, and analysis of covariance (ANCOVA) to control for any minor baseline variations. The statistical significance threshold was maintained at a rigorous level, where $p < 0.05$.

RESULTS AND DISCUSSION

Quantitative Evaluation of Small Talk Pragmatic Competence

Small talk has long ceased to be dismissed by sociolinguists as mere phatic communion devoid of intellectual substance. Malinowski's seminal definition of phatic communion highlighted its role in establishing human bonds, but modern organizational discourse analysis recognizes small talk as a complex instrument of power, solidarity, and boundary management within corporate cultures (Chen et al., 2025). In professional settings, small talk functions as a strategic lubricant that facilitates transitions between personal and professional personas, mitigates the face-threatening nature of directives, and cocreates inclusive organizational communities.

From a pragmatic perspective, executing effective small talk requires a sophisticated command of sociolinguistic variables, including topic appropriateness, turn-taking thresholds, backchanneling signals, and politeness markers. Vocational students often struggle because these rules are rarely explicit. An inappropriate inquiry regarding compensation, political alignment, or deeply personal history can instantaneously sabotage a networking event. Therefore, teaching

professional small talk requires pedagogical frameworks that treat language as an embedded social practice, requiring continuous contextual adaptation and real-time behavioral calibration.

The empirical outcomes demonstrated a pronounced disparity in performance metrics post-intervention, validating the utility of gamified micro-learning architectures over conventional instructional formats. Table 1 details the comparative data derived from the PAFS pre- and post-tests for both cohorts.

Table 1. *Pre-test and Post-test Performance Matrix for the PAFS Instrument*

Cohort Group	Pre-test Scores		Post-test Scores		Mean Gain (Δ)	Statistical Significance (p)
	Mean (μ)	SD (σ)	Mean (μ)	SD (σ)		
Experimental Group (***n = 60***)	54.25	6.82	82.40	4.15	+28.15	< 0.001
Control Group (***n = 60***)	53.90	7.11	64.15	5.88	+10.25	< 0.05

The baseline scores indicate a uniform level of initial conversational competence across both groups, with no statistically significant variance prior to the experiment. Following the 16-week pedagogical intervention, the experimental group's mean PAFS score increased by an extraordinary 28.15 points, rising from $\mu_1 = 54.25$ to $\mu_2 = 82.40$. Conversely, the control group exhibited a modest increase of 10.25 points, terminating at a post-test mean of $\mu = 64.15$.

An independent samples t-test executed on the post-test scores revealed an absolute statistical significance:

$$t(118) = 19.64,\ p < 0.001,\ \text{Cohen's } d = 3.59$$

The calculated Cohen's ***d*** value of 3.59 denotes an exceptionally large effect size, far exceeding standard benchmarks in educational technology research. This confirms that the observed improvements in the experimental cohort were definitively driven by the gamified micro-learning intervention rather than external confounding variables or natural linguistic maturation.

Deconstructive Analysis of Specific Communicative Dimensions

To isolate exactly where the mobile application had the greatest instructional impact, the overall PAFS post-test scores were disaggregated into their four constituent diagnostic subscales: Topic Initiation, Turn-Taking Fluidity, Pragmatic Appropriateness, and Conversational Repair (the ability to recover when an awkward silence or linguistic error occurs). This multi-axis assessment provides a clearer view of the interpersonal enhancements.

Table 2. *Disaggregated Post-Test Performance by Communicative Dimension (Max Score per Dimension = 25)*

Communicative Dimension	Experimental Group Mean (μ)	Control Group Mean (μ)	Absolute Mean Variance	p-Value
Topic Initiation Capabilites	21.18	15.42	+5.76	< 0.001
Turn-Taking Fluidity & Backchanneling	20.95	16.10	+4.85	< 0.001

Communicative Dimension	Experimental Group Mean (μ)	Control Group Mean (μ)	Absolute Mean Variance	p-Value
Pragmatic Appropriateness & Boundary Controls	21.82	17.05	+4.77	< 0.001
Conversational Repair & Strategic Recovery	18.45	15.58	+2.87	< 0.01

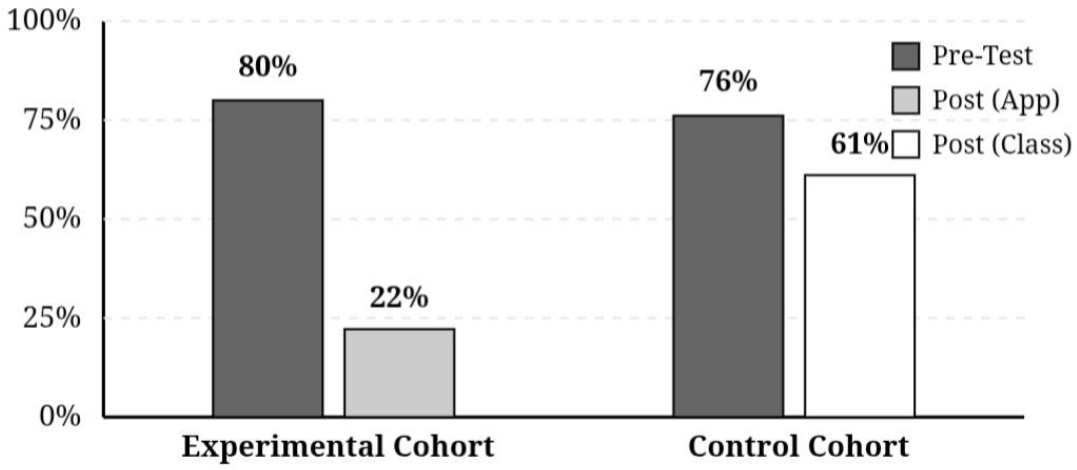
The data in Table 2 indicates that the largest performance gap manifested within "Topic Initiation Capabilities" (+5.76 variance). In traditional classroom environments, students are routinely conditioned to be reactive communication entities—waiting for the instructor to call on them or following a highly rigid role-play prompt. The gamified mobile app, through its simulated branching scenarios, forced the user to proactively select conversational entry vectors under strict countdown timers. This mechanical constraint trained the cognitive pathways to rapidly identify safe contextual triggers (e.g., commenting on the venue architecture, weather patterns, or shared organizational schedules) to initiate a conversation.

Significant gains were also recorded in Pragmatic Appropriateness (+4.77). Because the mobile application incorporated structural penalties—where choosing a socially intrusive or overly direct question caused immediate XP loss and broke a user's quest line—students developed an intuitive, highly protective cognitive filter regarding professional boundary management. They learned to favor indirect linguistic strategies, open-ended inquiries, and polite softeners, which are crucial for professional networking environments.

Alleviation of Foreign Language Communication Anxiety (FLCA)

The psychological trajectory of the participants was monitored via the adapted FLCAS instrument. The pre-intervention assessments confirmed that over 78% of the entire sample experienced severe to moderate psychological anxiety when tasked with executing unstructured casual dialogue in English. Figure 1 delineates the shift in high-anxiety categorization across the two cohorts post-intervention.

Figure 3. *Comparative Reduction in High Foreign Language Communication Anxiety (FLCA) Levels Post-Semester*



As illustrated in Figure 1, the experimental group achieved a dramatic downscaling of severe communication anxiety, dropping from 80% to 22%. In comparison, the control group

exhibited a highly stagnant anxiety profile, only receding to 61%. This stark variance can be explained through the lens of psychological safety in educational software design.

Traditional classroom oral practice, by its very nature, subjects students to immediate public visibility. When a student mispronounces a word or commits a structural pragmatic error in front of peers, their self-efficacy is threatened, triggering an elevated cortisol response and inducing communication avoidance behavior. The mobile micro-learning app decoupled conversational practice from public judgment. The interface served as a private, non-judgmental simulator where errors were merely treated as data checkpoints that could be instantly remediated through a "Replay Quest" loop. By practicing in a low-stakes digital ecosystem, students successfully desensitized themselves to L2 communication triggers, building baseline linguistic confidence that translated seamlessly into their physical interactions.

Discussion: Why Gamified Micro-learning Outperforms Traditional Models

The integration of gamification into educational technology is grounded in self-determination theory (SDT), which posits that human motivation is driven by three core psychological needs: autonomy, competence, and relatedness (Howard et al., 2021). Gamification transforms structural systems by injecting ludic elements—such as experience points (XP), performance leaderboards, unlocking mechanics, and avatar personalization—to satisfy these psychological impulses within non-game contexts. In second language acquisition, gamification shifts the cognitive focus from analytical error-correction to procedural fluency and behavioral experimentation.

Simultaneously, the architectural principle of micro-learning addresses cognitive overload theory. According to (Sweller, J., Ayres, P., & Kalyuga, S. (2019), the human working memory capacity is strictly finite. Traditional 90-minute language lectures saturated with complex syntactic paradigms frequently exceed this cognitive threshold, leading to poor retention and high mental fatigue. Micro-learning remediates this by restructuring pedagogical content into digestible nuggets (typically lasting between 3 to 5 minutes) designed for immediate consumption and practical execution. When delivered via mobile applications, micro-learning exploits the natural fragmentation of modern schedules, converting passive transit or waiting intervals into high-frequency, low-friction language practice opportunities.

The exceptional efficacy of the TalkPro-Micro system stems from its systemic optimization of cognitive processing and motivational psychology. Traditional language instruction frequently falls victim to the "massing effect," where educational material is concentrated into intense, infrequent blocks. Psychological literature on memory has consistently demonstrated that massed practice leads to rapid short-term acquisition but extremely poor long-term retention and behavioral habituation (Dunlosky et al., 2013). Professional small talk is structurally dependent on procedural memory—it must be executed fluidly, intuitively, and without deliberate grammatical decoding.

Micro-learning enforces "spaced distribution." By pushing automated notification prompts throughout the day, the application forced students to execute linguistic micro-tasks multiple times a week. This constant reactivation of neural circuits prevents the decay of vocabulary and pragmatic structures.

Furthermore, the gamification layer solved the perennial problem of student apathy. Vocational English courses are often perceived by students as secondary, compliance-driven hurdles compared to their primary technical modules. By embedding progress within a ludic matrix (XP accumulation, level progression, and social leaderboards), the application successfully engineered intrinsic engagement. The immediate feedback loop provided by automated speech evaluation allowed students to track their expanding competence in real time, validating their communicative capabilities and transforming language learning into a self-reinforcing behavioral loop.

To supplement the quantitative findings, semi-structured interviews were conducted and analyzed through thematic coding analysis. The data revealed three principal qualitative themes that clarify why the gamified micro-learning framework was uniquely transformative for vocational scholars.

Theme 1: The Dissolution of the Social Judgment Mask

A dominant theme across all interviewed students was the profound sense of liberation experienced when practicing within a private mobile interface. One business administration student stated:

"In the classroom, when the lecturer asks us to practice small talk with our classmates, I always feel fake and terrified. I am afraid they will laugh at my accent or that I will run out of things to say and create an awkward silence. But with the app, I can practice in my room or while riding the bus. The app doesn't judge me. If I fail a conversation quest, I just hit replay. By the time I had to do the real interview with the native speaker, I had already done the simulation fifty times on my phone. The fear was gone."

This narrative provides clear empirical validation for the anxiety metrics illustrated in Figure 1, substantiating the claim that digital privacy can serve as a highly effective incubator for linguistic self-efficacy.

Theme 2: The Transition from Extrinsic Compliance to Habitual Ludic Drive

Students extensively noted that the gamified mechanics altered their behavioral interaction patterns with the course material. Rather than viewing English study as homework to be completed before a deadline, the structural streak counters and reward loops transformed it into a voluntary leisure activity. A digital marketing student remarked:

"I am obsessed with keeping my 30-day learning streak alive. It became like a daily puzzle game. I would open the app during my lunch break or right before bed just to complete one short quest on 'how to talk about sports or hobbies with a manager'. I wasn't thinking about my final grades anymore; I just wanted to earn enough coins to unlock the advanced networking level. Without realizing it, I was memorizing expressions like 'By the way' or 'That reminds me' and using them naturally."

This supports self-determination theory, illustrating how shifting the instructional focus from grades (extrinsic) to structural competence rewards (intrinsic) accelerates sub-conscious language acquisition.

Theme 3: Real-World Transferability during Corporate Internships

Crucially, the qualitative evaluations yielded concrete evidence of pedagogical transfer—the successful deployment of classroom-acquired skills into authentic professional ecosystems. Multiple students who were concurrently navigating corporate internships reported using the application's specific socio-linguistic structures to bridge the social gap with their supervisors and corporate clients. A computer engineering student reported:

"Last month, I found myself in the office pantry with the Chief Technology Officer of my internship company. Normally, I would look down at my phone and stay completely silent out of fear. But I remembered the 'Coffee Break Banter' module from the TalkPro app. I initiated a conversation by asking about his weekend and used casual backchanneling to keep him talking. It went beautifully. He ended up asking about my graduation project. That small interaction would have been impossible for me last year."

Such testimonies confirm that the skills developed via mobile micro-learning are highly generalizable and directly impactful in real-world professional contexts.

The structural success of this intervention provides clear directives for the modernization of General English and ESP frameworks within vocational and polytechnic universities. To maximize graduate employability, higher education policymakers and language educators must move beyond obsolete, textbook-bound paradigms and structurally integrate mobile gamification architectures into their official instructional ecosystems (Wasi et al., 2025).

First, institutions must formalize a **Blended Pedagogical Delivery Model.** Mobile micro-learning should not be treated merely as an optional supplementary resource, but rather as an accredited, foundational component of the course architecture. For instance, out of a standard 3-credit language module, 1 credit should be allocated to verifiable asynchronous mobile interactions, where students must achieve specific digital milestones and maintain verified engagement streaks to qualify for official examinations.

Second, educators must intentionally **De-Center Grammatical Perfection in Favor of Pragmatic Flow**. Traditional assessment methodologies that heavily penalize minor syntax errors often inadvertently cripple a student's willingness to communicate. In vocational contexts, where swift rapport building is a critical business currency, evaluation systems must give equal weight to conversational velocity, topic adaptation, and interpersonal resilience.

Finally, vocational universities should establish localized, inter-departmental **Gamified Communication Ecosystems.** By creating digital leaderboards that span different academic majors (e.g., Business Administration vs. Computer Engineering), institutions can utilize healthy peer competition to build a vibrant campus culture around communicative excellence.

CONCLUSION

This study demonstrates that the strategic integration of gamified micro-learning mobile applications offers a highly effective solution to a long-standing deficiency in vocational education: the lack of professional interpersonal English communication skills among graduates. By breaking down complex socio-linguistic structures into bite-sized, digestible units and wrapping them in an engaging, low-stakes gamified framework, the "TalkPro-Micro" model significantly improved students' conversational fluency and pragmatic appropriateness while substantially reducing foreign language communication anxiety. Quantitative metrics, highlighted by an exceptionally large effect size (*Cohen's d = 3.59*), are strongly supported by qualitative testimonies confirming the successful transfer of these skills into real-world corporate environments.

Despite these highly encouraging findings, several structural limitations must be acknowledged. First, the sample population was drawn exclusively from a single vocational institution in Indonesia generally and in Politeknik Unggul LP3M especially, which may restrict the immediate generalizability of the findings to different cultural and geographical contexts. Second, the study tracked student performance over a 16-week semester; consequently, the long-term sustainability of these communicative habits over multiple years remains unverified. Furthermore, the application's automated speech recognition engine, while highly functional, occasionally encountered diagnostic challenges when processing highly divergent regional accents, leading to minor software feedback discrepancies.

Future research directions must address these limitations by executing large-scale, multi-institutional longitudinal studies across diverse geographic landscapes. Moreover, the integration of advanced Large Language Models (LLMs) and generative conversational AI agents into the mobile micro-learning architecture represents a highly promising technological frontier. Unlike static branching dialogues, AI-driven agents can provide completely unscripted, endlessly adaptive, and highly contextual real-time small talk simulations. This development could further elevate the communicative agility of vocational scholars, ensuring their long-term competitiveness in an increasingly connected global workforce.

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