

The Social Presence Paradox: How Reduced Social Visibility Enhances Student Involvement and Reduces Pressure in SCMC English Learning

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Abstract—Despite widespread adoption of Synchronous Computer-Mediated Communication (SCMC) in English as a foreign language (EFL) education, the relationship between social presence and learning outcomes remains poorly understood. This study examined the impact of social presence on student involvement and psychological pressure among Saudi EFL learners, challenging assumptions that higher social presence universally enhances engagement. A mixed-method, cross-sectional survey investigated perceptions of 183 female Saudi secondary and intermediate students (aged 14-19) using questionnaires with Likert-scale items and open-ended questions to assess involvement and anxiety across different social presence configurations in SCMC environments. Findings revealed a significant inverse relationship between social presence and student involvement, with 77% reporting enhanced participation when temporal control decreased immediate social pressure, and 61% experiencing reduced anxiety through visual anonymity. Students valued “limited social presence” (61.6% positive response), enabling comfortable participation without fear of judgment. Qualitative data showed that reduced social presence created a “safe environment”, encouraging language experimentation and risk-taking behaviour essential for EFL development. This study challenges educational assumptions by demonstrating that strategic reduction of social presence simultaneously increases meaningful involvement and decreases counterproductive pressure. We introduce an optimal social presence threshold model enabling effective SCMC learning when connections are sufficient for interactions but reduced enough to minimise anxiety's inhibiting effects. In culturally conservative EFL contexts, reduced social presence provides culturally sensitive solutions to foreign-language anxiety while maintaining educational effectiveness, offering essential guidance for designing SCMC platforms that prioritise psychological safety alongside pedagogical goals.

Index Terms—social presence, EFL anxiety, student participation, computer-mediated language learning

I. INTRODUCTION

The rapid digitalisation of language education has fundamentally altered how students interact in English as a foreign language (EFL) learning environments. While Synchronous Computer-Mediated Communication (SCMC) technologies offer unprecedented opportunities for real-time language practice (Zeng, 2017), the implementation of these technologies has revealed unexpected patterns that challenge traditional pedagogical assumptions. Social presence, defined as “the degree of salience of the other person in the conversation and the consequent salience of the interpersonal relationship” (Short et al., 1976, p. 65), is central to understanding the impact of SCMC. Traditional theories posit that a higher social presence enhances learning through increased connection and engagement (Gunawardena & Zittle, 2009). However, emerging evidence suggests a paradoxical relationship between social presence and student participation. Van Le et al.'s (2018) groundbreaking study of Vietnamese EFL learners found that reduced social presence increased spontaneous English use and willingness to communicate. The students demonstrated greater linguistic risk-taking in environments that involved low social presence (text and audio only) compared to high-presence video interactions, thereby challenging assumptions that visible social connections enhanced engagement. This suggests that optimal engagement for anxiety-prone learners may occur when social pressure is strategically minimised.

This paradox is particularly significant for EFL learners in culturally conservative contexts in which the use of a foreign language carries additional social risks. In Saudi Arabia, learning English occurs within a complex sociocultural framework that is characterised by concerns about cultural preservation, the maintenance of religious identity, and resistance to foreign linguistic influences (Al-Saraj, 2014; Al-Seghayer, 2014). These factors may amplify the anxiety-inducing effects of high social presence and make the benefits of reduced social visibility more pronounced.

Saudi EFL learners encounter unique challenges that compound typical foreign-language anxiety. Research has documented widespread concerns that learning English may undermine Arabic proficiency and the Islamic cultural identity (Mahboob & Elyas, 2014). In addition, the limited daily use of English means that classroom participation

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represents the students' primary opportunity to practice the target language, thus intensifying the psychological performance stakes.

The COVID-19 pandemic created an unprecedented natural experiment in the manipulation of social presence. The Saudi Ministry of Education rapidly implemented the Madrasati platform integrated with Microsoft Teams, thereby enabling 98% of six million students to access digital environments (Aldossry, 2021; World Bank, 2022). Students suddenly experienced learning English across dramatically different social presence configurations ranging from anonymous text chats to full video conferencing, thus providing unique opportunities to examine how varying levels of social presence affected anxiety and willingness to participate.

Our study addressed a critical gap in the literature by systematically examining how social presence affected student involvement and psychological pressure amongst Saudi EFL learners in SCMC environments to answer the following research question:

How does social presence affect Saudi EFL learners' involvement and the psychological pressure that they experience in SCMC English-language learning environments?

The aim of our study was to determine the optimal social presence configurations that enhance meaningful participation while reducing the inhibiting effects of anxiety, thus contributing to more effective and culturally responsive EFL approaches.

II. LITERATURE REVIEW

The relationship between social presence and student engagement in online learning has become increasingly important in research on educational technology, particularly following the widespread adoption of SCMC during the COVID-19 pandemic. In this review, we synthesise frameworks and findings to shed light on how social presence affects student involvement and psychological pressure in culturally sensitive language-learning contexts.

A. Theoretical Foundations: The Psychology of Language-Learning Anxiety

Krashen's (1977, 1980) second language acquisition theory provided essential insights into the psychological factors that influenced learning outcomes. The affective filter hypothesis identified anxiety as a primary barrier to acquisition — high-anxiety learners form mental blocks that impede the processing of comprehensible input, while learners with low anxiety and high self-confidence achieve superior outcomes. This framework is particularly relevant for understanding how social presence affects anxiety levels in SCMC environments, as social visibility has a direct influence on the strength of the affective filter.

MacIntyre and Gardner's (1994) foreign-language anxiety research extended Krashen's (1977, 1980) work by identifying the specific types of anxiety that social presence can trigger, namely communication apprehension (fear of speaking), test anxiety (fear of evaluation), and fear of being judged negatively (judgement apprehension). These dimensions are particularly susceptible to the manipulation of social presence, as reduced visibility can simultaneously decrease communication apprehension and fear of negative evaluation. Long's (1983) interactionist hypothesis complemented the affective filter theory by emphasising meaning negotiation through clarification and confirmation. However, the effectiveness of interactions relies heavily on students' willingness to engage, a factor that is directly influenced by social presence through perceived pressure and impacts on feelings of psychological safety. Gass and Mackey (2007) demonstrated that optimal interaction occurred when the learners felt sufficiently psychologically safe to negotiate meaning without fear of social consequences.

B. Social Presence Theory: Evolution and Educational Applications

Social presence, initially defined by Short et al. (1976) as interpersonal salience in conversation, has undergone a significant evolution since its origins in telecommunications. The theory operates through two primary mechanisms that affect students' involvement and pressure, namely intimacy and immediacy. Intimacy encompasses physical distance, eye contact, and body language cues that influence how exposed students feel during interactions. In SCMC contexts, intimacy is manipulated through visual elements — video conferencing maximises intimacy cues, while text-based communication minimises them (Argyle & Dean, 1965). Immediacy refers to the perceived psychological closeness amongst participants, which intensifies the pressure to provide an immediate response (Gorham, 2009). SCMC environments are unique in that they allow for the manipulation of immediacy through temporal controls — synchronous communication maintains immediacy while allowing graduated exposure through different modalities.

Biocca et al.'s (2003) networked minds theory provided a nuanced understanding, as it proposed that social presence existed along a continuum that affected cognitive processes differently. With regard to language learning, this suggests that optimal levels of social presence may vary depending on specific objectives, such as accuracy versus fluency or comprehension versus production.

C. Empirical Evidence: The Social Presence Paradox in Language Learning

Research has revealed counterintuitive relationships between social presence and student involvement in language learning. Van Le et al.'s (2018) seminal study demonstrated that reduced social presence increased spontaneous English use and willingness to communicate amongst Vietnamese EFL learners. The students demonstrated 40% greater

participation in low social-presence situations compared to high-presence video interactions, suggesting that visible social cues created inhibiting rather than facilitating pressure. These findings aligned with Satar and Ozdener's (2008) observation that SCMC created "less pressured environments" via anonymity and screen-mediated interactions. A study of Turkish EFL learners revealed that remaining "hidden behind the screen" reduced performance anxiety by 35% compared to face-to-face interactions.

Suler's (2004) online disinhibition effect provided a theoretical explanation for how reduced social presence decreased student pressure through six interacting factors:

- (1) anonymity removed identity-based judgement fears,
- (2) invisibility eliminated visual performance pressure,
- (3) asynchronicity allowed for temporal control,
- (4) solipsistic introjection enabled internal voice processing,
- (5) dissociative imagination separated online/offline identities, and
- (6) minimised authority created egalitarian spaces.

Smith's (2005) and Zeigler's (2015) research demonstrated that written chat environments provided significant relief from pressure via asynchronous processing opportunities, which decreased real-time language-production anxiety by up to 45% because students could pause, reflect, and formulate responses instead of providing immediate answers while under social observation.

However, the effects of social presence have been found to vary across cultural contexts. Coban and Goksu's (2022) study at a Turkish university found positive relationships between social presence and student encouragement, which contradicted the inverse relationships that were documented in other research. Similarly, Catyanadika and Rajasekera (2022) found benefits of a higher social presence in terms of knowledge sharing amongst Indonesian learners. Ebadi and Amini's (2024) study of Iranian EFL learners who were using AI chatbot technology provided additional evidence of cultural variations; social presence significantly influenced learners' motivation, but the optimal levels varied based on cultural expectations about human-like interactions. Iranian learners showed increased motivation at moderate rather than at minimal or maximal levels of social presence, suggesting that cultural factors shaped preferences that differed from Western individualistic and East Asian collectivistic patterns.

These contradictory findings suggest that cultural factors significantly moderate the effects of social presence on involvement and pressure. Hofstede's (1980) cultural dimensions theory provided an explanatory framework: Cultures that avoid high uncertainty may benefit more from reduced social presence due to greater anxiety about making mistakes in public, while collectivistic cultures may require a moderate social presence to create group cohesion.

D. Research Gaps and Cultural Considerations

Most of the research on social presence has been conducted in Western or East Asian contexts, with limited investigations in the Middle East. Ebadi and Amini's (2024) Iranian study made a significant contribution to understanding social presence in the Middle East as it revealed optimal motivation at moderate levels, which contrasts with minimal preferences in East Asian contexts and maximal preferences in Western studies. This variation is particularly significant for Saudi contexts, as Iran and Saudi Arabia share high uncertainty avoidance, collectivistic tendencies, and conservative educational environments in which the use of a foreign language entails concerns about cultural sensitivity.

Existing research has shown that inconsistent attention has been paid to gender differences in sensitivity to social presence. Dewaele (2007) suggested that female language learners may experience higher levels of foreign-language anxiety and greater sensitivity to social evaluation, potentially making the effects of social presence more pronounced. However, most studies lack sufficient gender representation to allow for a meaningful analysis.

The current literature does not distinguish adequately between the technology-mediated effects of social presence and culturally mediated anxiety responses. In contexts in which the use of a foreign language involves cultural risks that extend beyond typical performance anxiety, an investigation into the effects of social presence on student involvement and pressure in SCMC environments can provide transformative insights for addressing barriers to learning EFL in culturally conservative contexts. We established that a strategic reduction of social presence created optimal conditions for both increased involvement and decreased psychological pressure amongst Saudi learners. The quantified evidence — 77% benefiting from temporal control and 61% from visual anonymity — provides concrete parameters for designing effective SCMC interventions, thus extending beyond existing theories to propose new theoretical constructs: The optimal social presence threshold model and the selective social presence framework shift social presence theory from descriptive to prescriptive guidance. Integrating cultural factors as moderators addresses significant gaps in the existing literature, in which it is assumed that there are universal impacts of social presence, to provide a roadmap for next-generation SCMC platforms that prioritise psychological safety in conjunction with pedagogical effectiveness through granular control over elements of social presence instead of maximising the features of social connection. The complementary model that emerged from the students' preferences (with 50.3% viewing SCMC as supplementary) suggests the need for scaffolded approaches in which reduced social presence environments prepare learners for traditional, high-pressure interactions. Our study offers an evidence-based justification for investing in SCMC infrastructure as a culturally responsive pedagogical tool that respects cultural values while achieving international educational standards. Our research also demonstrated how educational technology could bridge the gap between cultural preservation and participation in global educational by mitigating culturally amplified language anxiety while maintaining effectiveness, ultimately suggesting

that the optimal design of educational technology requires an in-depth understanding of learners' psychology, cultural contexts, and pedagogical theory. The integration of these elements is essential for creating learning environments that serve diverse populations effectively through optimised rather than maximised social connections, and cultural rather than purely technological mechanisms. Culturally conservative learners may require sufficient social connection for legitimacy while avoiding excessive exposure, which triggers their cultural anxiety.

Effective SCMC environments should incorporate graduated controls of social presence that allow learners to adjust their visibility based on their levels of comfort and competence. Our findings challenge traditional educational technology designs that have assumed that maximum social connection optimised learning outcomes, thus highlighting the need for culturally responsive SCMC designs that consider the local factors that influence language-learning anxiety and the norms of social interactions.

III. METHODOLOGY

In this study, we investigated the influence of social presence on student involvement and psychological pressure amongst Saudi secondary and intermediate school students in SCMC English-learning environments. A mixed-method approach was employed to capture both quantitative patterns and qualitative insights regarding the effects of social presence on participation and anxiety levels in a culturally conservative educational context.

A. Research Design and Theoretical Framework

A cross-sectional survey design utilising questionnaires was selected as the primary method for data collection based on social presence theory (Short et al., 1976) and Krashen's (1977, 1980) affective filter hypothesis. This approach allowed for the systematic examination of how manipulations of social presence in SCMC environments influenced the affective variables that impact language-learning outcomes. Questionnaires are an effective instrument for collecting large-scale data pertaining to attitudes and perceptions (Seliger & Shohamy, 1989). Questionnaires are particularly suitable for examining subjective experiences of social presence, involvement, and pressure in online learning contexts. The cross-sectional design captured the students' experiences across different configurations of social presence during a specific timeframe, thus providing a snapshot of the social presence-involvement-pressure relationship. The questionnaire incorporated both closed-ended Likert-scale items (ranging from "strongly agree" to "strongly disagree") and open-ended questions to enable the methodological triangulation of quantitative patterns with qualitative explanations (Pilcher & Cortazzi, 2024). This design enabled the comprehensive examination of how varying levels of social presence in SCMC environments influenced students' psychological states and behavioural responses.

B. Instrument Development and Validation

The questionnaire was systematically developed in several stages to ensure construct validity and cultural appropriateness:

(a). Phase 1: Literature-Based Item Generation

Items were generated based on established measures of social presence (Gunawardena & Zittle, 2009; Tu & McIsaac, 2010) and foreign-language anxiety scales (Horwitz et al., 1986) that were explicitly adapted for SCMC contexts and took Saudi cultural considerations into account.

(b). Phase 2: Expert Review

The instrument was subjected to an expert review by three applied linguistics specialists and two educational technology researchers to establish content validity and to ensure cultural sensitivity.

(c). Phase 3: Pilot Testing

A pilot study involving 25 students with similar demographic backgrounds was conducted to identify potential comprehension issues and to refine the wording of items.

(d). Final Instrument Structure

The questionnaire was structured around two primary constructs that were related directly to the research question:

1. *Section 1: Social Presence and Student Involvement* (13 items). This section measured how different levels of social presence in SCMC environments affected students' willingness to participate compared to face-to-face classes. Key items included:

Item 7: "The limited social presence of the students (not confronting students and teachers face to face) enables me to participate comfortably".

Item 8: "Online English classes allow me to think about and formulate the answer before answering without feeling nervous".

Item 2: "I interact more with the teacher during the online English classes than in face-to-face classes".

The section examined the factors that motivated participation, perceived control over social visibility during online interactions, and comparative levels of engagement across different modalities. Item 12 used a multiple-choice format to allow the participants to select multiple skills that they developed via online learning, while Item 13 enabled an open-ended exploration of students' preferences.

2. *Section 2: Social Presence and Psychological Pressure* (nine items). This section assessed anxiety levels across different configurations of social presence in SCMC versus traditional classroom settings. Core items included:

Item 2: “Not seeing the teacher and students directly makes me practice the English language comfortably”.

Item 1: “I am not afraid of making mistakes when I practice English in online classes”.

Item 3: Multiple-choice identification of specific sources of anxiety in online environments.

The items explored whether reduced social presence created a “relaxed environment”, and how social visibility affected language performance anxiety and specific anxiety triggers in different communication modes. Item 8 examined students’ perceptions of the role of online learning relative to traditional instruction, while Item 9 provided a qualitative exploration of anxiety mechanisms. Both sections utilised 5-point Likert scales (ranging from “strongly agree” to “strongly disagree”) for the quantitative analysis, while strategic open-ended questions (Items 13 and 9) enabled the qualitative triangulation of the findings.

C. Participants and Sampling

The target population consisted of secondary and intermediate Saudi EFL students in the northern region, representing learners who experienced a rapid transition to SCMC platforms during the COVID-19 pandemic. We employed purposive random sampling to select participants from two Saudi schools in the northern region ($N = 183$). Schools were selected based on their use of both Madrasati and Microsoft Teams platforms during the pandemic to ensure that the participants had an authentic SCMC experience across different configurations of social presence. The final sample consisted of 183 female students whose ages ranged from 14 to 19 years: Ninety-three (50.8%) were aged 14-16, and 90 (49.18%) were aged 17-19. This demographic represents the target population for examining the effects of social presence in culturally conservative educational contexts in which foreign-language anxiety may be particularly pronounced.

D. Ethical Considerations

The study received approval from the school administration and followed all the ethical guidelines for research involving minors. Informed consent was obtained from school authorities acting in loco parentis; student participation was entirely voluntary and they were given the right to withdraw at any time.

E. Data Collection Procedures

Data collection occurred during regular school hours over two weeks in April 2023. The questionnaire was administered electronically via the school’s learning management system to ensure familiarity with the digital environment and to maintain consistency with the students’ SCMC experiences.

F. Data Analysis

We employed a sequential mixed-method data analysis approach to comprehensively examine the effects of social presence on student involvement and perceived psychological pressure. The quantitative data were analysed using SPSS software version 29, beginning with descriptive statistics to characterise the participants’ demographics and response patterns across all the Likert-scale items. A correlation analysis was conducted to examine relationships between social presence variables and indicators of student involvement/pressure, while chi-square tests were used to assess the associations between categorical variables such as anxiety sources and social presence preferences. The internal consistency of the instrument was evaluated using Cronbach’s alpha reliability analysis to ensure measurement quality. The qualitative data from the open-ended responses underwent a systematic thematic analysis following Braun and Clarke’s (2006) six-phase framework. The analysis process began with familiarisation through repeated reading of all the textual responses to gain a comprehensive understanding of the data. The initial coding involved the systematic identification of meaningful units related to mechanisms of social presence and their effects on students’ experiences. Theme development proceeded via clustering related codes into coherent patterns that explained how and why social presence influenced involvement and pressure. Theme refinement involved reviewing and validating the emerging themes against the original data to ensure accuracy and completeness. Finally, the qualitative themes were integrated with the quantitative findings to provide a comprehensive understanding of the effects of social presence, thus enabling the triangulation of the results and deeper insights into the mechanisms underlying the statistical patterns. This integrated approach facilitated the robust interpretation of the findings while maintaining methodological rigour throughout the analysis process.

G. Study Limitations and Methodological Constraints

Several significant limitations affect the interpretation and generalisability of the findings and require careful consideration when applying the results to broader educational contexts. The exclusively female participant sample (100%) constitutes a critical limitation that potentially restricts the findings to gender-specific responses to the manipulation of social presence. Research has suggested substantial gender differences in sensitivity to social presence and foreign-language anxiety (MacIntyre et al., 2008), making generalisability to male learners impossible without additional research. This complete gender homogeneity may have systematically overestimated the benefits of social presence if female students demonstrate greater sensitivity to the pressures of social evaluation compared to their male counterparts, thereby limiting the applicability of the findings to mixed-gender educational environments or to male-only educational contexts, which are common in Saudi Arabia’s gender-segregated education system.

Cultural and linguistic homogeneity present another significant constraint on generalisability. The shared first language (Arabic) amongst the teachers and students, combined with the homogeneous Saudi cultural context, limits the applicability of the findings to multicultural learning environments in which cultural and linguistic diversity between educators and learners may create different dynamics regarding social presence. The effects of social presence that were documented in this culturally conservative context may not translate directly to educational settings with greater cultural heterogeneity or in which there are different cultural attitudes towards learning a foreign language and social interaction norms.

Methodological constraints further limit the study's scope and interpretation. The self-reporting bias represents a fundamental limitation, as reliance on students' perceptions may be subject to the effects of social desirability, particularly in contexts in which students may wish to appear to be technologically sophisticated or academically motivated. The cross-sectional design prevents the examination of how preferences regarding social presence evolve over time as students develop language proficiency and technological comfort, thus potentially overlooking important developmental patterns in the sensitivity to social presence. In addition, the mixed learning environment, in which the students concurrently experienced both SCMC and traditional instruction, prevents a pure modality comparison and may have confounded the findings due to comparative effects rather than the absolute impacts of SCMC. The convenience sampling approach, which focused on a single regional educational context, may not adequately represent broader Saudi educational environments, thus limiting the generalisability even within the national context.

Finally, the deliberate exclusion of teachers' perspectives represents a significant gap in the comprehensive understanding of the dynamics of social presence in SCMC environments. Teachers play crucial roles in intentionally managing social presence through pedagogical choices, the utilisation of technology, and classroom management strategies. However, their perspectives on optimal levels of social presence and management techniques remain unexplored. This absence limits the understanding of how educators' intentions and strategies influence the effects of social presence that were documented amongst students, potentially overlooking critical mediating factors that could explain variability in the students' responses to different configurations of social presence.

IV. RESULTS AND FINDINGS

Our study investigated the impact of social presence on student involvement and perceived psychological pressure amongst 183 female Saudi EFL learners (ages 14-19) at the secondary and intermediate levels. The findings provided compelling evidence for an inverse relationship between social presence and student participation, while demonstrating significant anxiety reduction through the strategic manipulation of social presence in SCMC environments.

A. Effects of Social Presence on Student Involvement

(a). Reduced Social Presence Increases Participation

The data revealed strong empirical support for the inverse relationship between social presence and student involvement predicted by the theoretical literature. Table 1 presents the core findings regarding the effects of social presence on student participation, comfort, and temporal control.

TABLE 1
EFFECTS OF SOCIAL PRESENCE ON STUDENT PARTICIPATION

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
7. The limited social presence of students (students and teachers not confronting each other face to face) enables me to participate comfortably.	66 (36.3%)	46 (25.3%)	37 (20.3%)	29 (15.9%)	4 (2.2%)
8. Online English classes allow me to think about and formulate the answer before answering without feeling nervous.	88 (48.4%)	52 (28.6%)	24 (13.2%)	13 (7.1%)	5 (2.7%)

When asked about the effects of limited social presence, 61.6% of students responded positively to the benefits of feeling more comfortable due to the reduced face-to-face encounters, while only 18.1% disagreed. Even more striking was the 77% positive response rate regarding the benefits of temporal control, with students overwhelmingly appreciating the opportunity to have time to think about and formulate their answers without feeling nervous. This finding directly challenged conventional assumptions about the necessity of high social presence to ensure educational engagement, and was aligned with Van Le et al.'s (2018) observations in Vietnamese EFL contexts.

(b). Temporal Control Enhanced Involvement

The most significant finding concerning student involvement was the participants' appreciation of the reduced temporal pressure that was facilitated by SCMC environments. An overwhelming number of students (88, or 48.4%) strongly agreed and 52 (28.6%) agreed that "online English classes allow me to think about and formulate my answer before responding without feeling nervous", representing 77% of the participants. This temporal control mechanism directly demonstrated how reduced social presence eliminated the immediate performance pressure that is characteristic of face-

to-face interactions, thus providing empirical validation for theoretical predictions regarding the effects of manipulating social presence on students' willingness to participate.

(c). *Multimedia Expression Compensated for Reduced Social Cues*

Despite the reduced social presence, the students demonstrated adaptation through alternative modalities for communication. Sixty students (32.8%) strongly agreed and 66 (36.1%) agreed that they could express themselves more effectively through the use of multimedia when participating in online English classes, with 68.9% positive responses in total. This finding suggested that, while traditional social cues were diminished in SCMC environments, students compensated effectively through technological affordances, thereby maintaining effective communication while reducing anxiety-inducing social exposure.

B. *Effects of Social Presence on Psychological Pressure*

(a). *Visual Anonymity Reduces Performance Anxiety*

We found robust evidence that reducing the visual social presence significantly decreased language-learning anxiety. Table 2 demonstrates the reduction of psychological pressure across multiple anxiety-related measures.

TABLE 2
EFFECTS OF SOCIAL PRESENCE ON PSYCHOLOGICAL PRESSURE

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I am not afraid of making mistakes when I practice English in online classes.	64 (35.2%)	47 (25.8%)	38 (20.9%)	25 (13.7%)	8 (4.4%)
2. Not seeing the teacher and students directly enables me to practice the English language comfortably.	67 (36.8%)	44 (24.2%)	25 (13.7%)	31 (17%)	15 (8.2%)
3. Practising English in online classes increases my self-confidence.	72 (39.6%)	47 (25.8%)	40 (22%)	15 (8.2%)	8 (4.4%)

The results demonstrated a consistent reduction in anxiety across all the measures. Sixty-one percent of students reported reduced fear of making mistakes, 61% felt more comfortable in the absence of direct visual contact, and 65.4% experienced increased self-confidence. These findings provided empirical validation of Suler's (2004) invisibility factor by demonstrating how visual anonymity in SCMC environments directly reduced the performance pressure that typically inhibits foreign-language production.

(b). *Anxiety About Making Mistakes Decreased Substantially*

With regard to the fear of making linguistic errors, 64 students (35.2%) strongly agreed and 47 (25.8%) agreed that they were "not afraid of making mistakes when practising English in online classes", representing 61% of the participants. This finding indicated that reduced social presence created a psychologically safer environment for experimenting with language, directly supporting Krashen's (1977, 1980) affective filter hypothesis by demonstrating how decreased anxiety facilitated the process of language acquisition.

(c). *Enhanced Self-Confidence Through the Reduction of Social Presence*

The data demonstrated significant improvements in self-efficacy associated with the reduced social presence. Seventy-two students (39.6%) strongly agreed and 47 (25.8%) agreed that "practising English in online classes increases my self-confidence", with 65.4% positive responses in total. This finding suggested that reduced pressure in relation to social presence pressure led to enhanced self-efficacy in language use, thus creating a positive feedback cycle in which decreased anxiety facilitated participation, which subsequently built confidence and further reduced anxiety.

(d). *Sources of Anxiety in SCMC Environments*

The analysis of specific sources of anxiety in reduced social presence environments revealed a telling hierarchy of student concerns that further validated social presence theory. Table 3 presents the distribution of anxiety triggers in SCMC learning contexts.

TABLE 3
PRIMARY SOURCES OF ANXIETY IN SCMC ENGLISH CLASSES

Anxiety Source	Frequency	Percentage
Technical problems (internet outages, connectivity issues).	72	39.6%
Teachers asking students to answer without prior preparation.	42	23.1%
Fear of making mistakes.	44	24.2%
Feeling ashamed that everyone is listening very intently.	18	9.9%

Technical problems emerged as the primary source of anxiety (39.6%), followed by the fear of making mistakes (24.2%) and concerns about unpreparedness (23.1%). Most significantly for social presence theory, only 9.9% of students reported feeling anxiety about "everyone listening to me very intently", indicating that an audio-only social presence created substantially less pressure compared to a visual presence. This gradient of sources of anxiety suggested that, while SCMC

environments reduced social anxiety, they introduced technological anxiety as a trade off. Nonetheless, the social benefits outweighed technological concerns for the majority of the participants. In addition, the students demonstrated a nuanced understanding of SCMC's role in language education, with 91 students (50.3%) viewing online English classes as "an effective supplement to face-to-face classes". In comparison, only 46 students (25.4%) considered online classes to be a complete alternative to traditional instruction. This suggests an informed preference for blended approaches rather than the wholesale replacement of traditional methods.

C. *Qualitative Insights: Students' Explanations of the Benefits of Social Presence*

The open-ended responses provided rich explanatory data for the quantitative patterns by revealing that the students specifically valued the "limited social presence" aspect of SCMC environments. The thematic analysis identified four primary categories of benefits:

(a). *Psychological safety* emerged as the dominant theme, with students describing SCMC as creating a "free and quiet environment [that] means less anxiety and shame". This sense of psychological safety allowed the students to experiment with language without fear of immediate social consequences, thus supporting theoretical predictions about anxiety reduction through the manipulation of social presence.

(b). *Temporal control* represented the second major theme, with students appreciating how SCMC environments "allow them to think, formulate answers, and revise before answering". This temporal flexibility eliminated the pressure to provide an immediate response that is characteristic of traditional classroom interactions, thereby enabling more thoughtful and confident participation.

(c). *Reduced social comparison* emerged as an unexpected benefit, with students noting that SCMC provided "equal chances of learning" by reducing visible status differences and performance comparisons that could inhibit participation in traditional classroom settings.

(d). *Anonymity benefits* were recognised explicitly, with students acknowledging that "limited social presence helps put students in a comfortable zone" in which they can focus on learning rather than on social performance.

D. *Recognition of SCMC's Limitations*

Despite overwhelmingly positive responses to the reduced social presence, the students demonstrated sophisticated awareness of the trade offs. The participants acknowledged some limitations, including reduced comprehension due to less nonverbal communication and technical anxiety related to platform functionality. However, the students consistently emphasised that the benefits outweighed the drawbacks as their anxiety was reduced and their participation increased, suggesting an informed preference rather than uncritical enthusiasm for SCMC environments.

E. *The Social Presence Paradox: Empirical Confirmation*

The results provided compelling empirical confirmation of the theoretical paradox that has been identified in the recent literature — reduced social presence in SCMC environments simultaneously decreased psychological pressure and increased meaningful student involvement. This relationship appeared to be particularly pronounced in the Saudi EFL context, in which cultural factors may amplify the benefits of reduced social visibility when practising a foreign language. The consistency of findings across multiple measures (comfortable participation, temporal control, reduced anxiety, and enhanced confidence) suggested a robust phenomenon rather than a measurement artefact, thus providing a strong empirical foundation for reconceptualising optimal levels of social presence in the design of educational technology.

V. DISCUSSION

The findings of our study provide compelling evidence for an inverse relationship between social presence and student involvement in SCMC environments while simultaneously demonstrating how reduced social presence alleviates psychological pressure amongst Saudi EFL learners. The results fundamentally challenge conventional assumptions about optimal levels of social presence in the design of educational technology, and provide new theoretical insights for culturally responsive language-learning environments.

A. *The Social Presence-Involvement Paradox Confirmed*

The results were strongly aligned with Van Le et al.'s (2018) study of Vietnamese students, demonstrating that reduced social presence increased rather than decreased meaningful student participation. The 61.6% of students who reported feeling more comfortable when participating due to "limited social presence" confirmed Walther's (1996) assertion that reduced social cues could enhance instead of inhibit communication in educational contexts. This finding supports Satar and Ozdener's (2008) observation that SCMC creates a "less pressured environment" compared to face-to-face classes due to anonymity and screen-mediated interactions. This paradox challenges traditional pedagogical assumptions about the necessity of having a high social presence to ensure engagement. It also contradicts previous social presence theories by Short et al. (1976), who assumed that a higher social presence would universally improve educational outcomes. Instead, the data suggest that, for anxiety-prone EFL learners, optimal involvement occurs when social pressure is minimised through reduced visibility and temporal control, thus supporting a more nuanced understanding of the effects of social presence in educational contexts.

B. Mechanisms for Pressure Reduction Through the Manipulation of Social Presence

(a). Temporal Controllability as a Key Factor

The most significant finding, which was that 77% of the students valued the ability to “think about and formulate the answer before answering without feeling nervous”, directly supported Walther’s (1996) controllability hypothesis and aligned with Smith’s (2005) and Zeigler’s (2015) findings that written chats allowed for pause-and-reflect responses, unlike immediate audio/video requirements. Unlike face-to-face environments that require immediate responses while under social observation, SCMC environments allow students to manage their temporal exposure, thereby reducing their pressure to perform. This temporal control mechanism directly contradicted the immediacy demands that Gorham (2009) identified as being central to traditional social presence theory, thus suggesting that educational applications of social presence theory require a fundamental reconceptualisation.

(b). Visual Anonymity Effects

The 61% of students who reported experiencing less anxiety when “not seeing the teacher and students directly” confirmed Suler’s (2004) invisibility factor as a key mechanism for reducing pressure. This finding strongly supported Mathieson and Leafman’s (2014) research, which showed that students felt more confident in online classes than they did in face-to-face environments. It also validated Rice’s (2009) and Sheldon’s (2008) studies, which demonstrated enhanced confidence in text and voice interactions when visual anonymity was maintained. This visual anonymity effect was particularly significant in the Saudi context, in which cultural factors may amplify anxiety about visible language performances and create additional barriers to participation that SCMC environments can address effectively.

(c). Psychological Safety for Language Experimentation

The students’ reduced fear of making mistakes (61% positive response) supported the theoretical proposition that decreased social presence creates a sense of psychological safety when experimenting with a language. This finding aligned perfectly with Krashen’s (1977, 1980) affective filter hypothesis, which states that reduced anxiety enables better language acquisition by lowering the affective barrier to processing input. The results confirmed those of Zhong (2013), who found that students typically feared making mistakes and giving feedback in front of the class, whereas SCMC environments decreased this fear. In addition, this supports the extensive meta-analytic evidence from Botes et al. (2020), who confirmed a negative association between foreign-language classroom anxiety and academic achievement, demonstrating that anxiety reduction directly improved language-learning outcomes.

(d). Cultural Amplification of the Effects of Social Presence

The strong preference for SCMC environments amongst Saudi students may reflect the cultural amplification of the effects of social presence, in line with Al-Saraj’s (2014) analysis of how Saudi society’s conservative traditions created resistance to the use of a foreign language. In conservative educational contexts in which the use of a foreign language carries additional social risks, the anonymity and controllability of SCMC environments provide essential psychological protection that enables participation. This cultural sensitivity is further supported by previous research (Al-Seghayer, 2014; Mahboob & Elyas, 2014), which identified misconceptions about learning the English language in that it could potentially affect the acquisition of the Arabic language and Islamic identity.

The qualitative data emphasising that a “free and quiet environment means less anxiety and shame” suggested that the effects of social presence were particularly pronounced in cultures in which language mistakes have heightened social consequences. This finding aligned with Baran-Lucarz’s (2014) research, which revealed a relationship between willingness to communicate and pronunciation anxiety. Specifically, students with less confidence about their accents were less inclined to participate — this factor may be amplified in Saudi contexts, in which anxiety about one’s accent intersects with concerns about cultural identity.

C. Theoretical Implications: Redefining Optimal Social Presence

Our findings challenge the assumption that higher social presence universally improves educational outcomes, thus contradicting Coban and Goksu’s (2022) Turkish study, which found positive relationships between social presence and student encouragement. Instead, the data suggested an optimal social presence threshold — sufficient connection for meaningful interactions but sufficiently reduced to minimise pressure that may be inhibiting. For anxiety-prone EFL learners, this threshold appeared to be lower than was traditionally assumed, supporting Catyanadika and Rajasekera’s (2022) finding that psychological safety, rather than a high social presence, promoted knowledge-sharing behaviour. The results supported a selective social presence model in which different aspects of social presence (visual, auditory, and temporal) could be manipulated independently to optimise the involvement-pressure balance, building on Argyle and Dean’s (1965) conceptualisation of intimacy and immediacy as separate dimensions of social presence. The students benefited from the auditory presence in terms of developing their listening skills while preferring a reduced visual presence to decrease their anxiety, suggesting that Short et al.’s (1976) original social presence theory needs to be refined to suit educational contexts. This selective approach aligned with Long’s (1983) interactionist hypothesis, which emphasised meaning negotiation over the intensity of the social connection. The data suggested that comprehensible input

became more accessible when social pressure was reduced, supporting Long's claim that the quantity of meaningful interactions was more important than was the quality of the social presence.

D. Practical Implications for SCMC Design

Our findings suggest that effective SCMC environments for EFL learning should incorporate insights from multiple theoretical frameworks. Building on Suler's (2004) disinhibition factors (anonymity, invisibility, and minimised authority), effective SCMC environments should:

(1) provide options for visual anonymity while maintaining auditory connections, supporting Kern's (1995) finding that SCMC provided equal learning opportunities,

(2) allow temporal control through asynchronous elements within synchronous sessions, implementing Smith's (2005) recommendations for pause-and-reflect opportunities,

(3) enable a graduated social presence whereby students can progressively increase their visibility as their confidence increases, aligning with Krashen's (1989) skill-building hypothesis, and

(4) recognise cultural context in determining optimal levels of social presence, which is particularly important given Al-Saraj's (2014) insights regarding cultural resistance to the use of a foreign language.

These recommendations draw further support from Sequeira's (2012) suggestion that SCMC environments should encourage language production while maintaining psychological comfort, and Warschauer's (1996) and Gass and Mackey's (2007) emphasis on immediate feedback within supportive environments.

E. Study Limitations and Future Research Directions

While these findings demonstrated the clear effect of social presence on involvement and pressure, several limitations warrant consideration. The exclusively female sample (100%) significantly limits the generalisability, particularly given potential gender differences in sensitivity to social presence as documented in the literature. In addition, the shared first language (Arabic) of the teachers and the students may have created different dynamics pertaining to social presence than those that occur in multilingual contexts, potentially limiting the applicability of the findings to diverse educational settings.

Future research should examine how the effects of social presence vary across cultural contexts and whether optimal levels of social presence change as language proficiency develops. Longitudinal studies could investigate whether students' preferences regarding social presence evolve as their confidence and competence increase. By contrast, experimental studies that manipulate specific variables pertaining to social presence could establish clearer causal relationships between configurations of social presence and learning outcomes.

VI. CONCLUSION

This investigation into the effects of social presence on student involvement and pressure in SCMC environments revealed transformative insights for addressing barriers to EFL in culturally conservative contexts. It established that a strategic reduction of social presence creates optimal conditions for both increased involvement and decreased psychological pressure amongst Saudi learners. The quantified evidence — 77% benefiting from temporal control and 61% from visual anonymity — provide concrete parameters for designing effective SCMC interventions, extending beyond existing theories to propose new theoretical constructs, namely the optimal social presence threshold model and the selective social presence framework, which shift social presence theory from descriptive to prescriptive guidance. Integrating cultural factors as moderators addressed significant gaps in the literature, in which it has been assumed that social presence has universal impacts, thereby providing a roadmap for next-generation SCMC platforms that prioritise psychological safety in conjunction with pedagogical effectiveness through granular control over elements of social presence instead of maximising the features of social connection. The complementary model emerging from the students' preferences (with 50.3% viewing SCMC as supplementary) suggests scaffolded approaches in which environments with reduced social presence prepare learners for traditional, high-pressure interactions. Our study has provided evidence-based justification for investing in SCMC infrastructures as culturally responsive pedagogical tools that respect cultural values while achieving international educational standards. Our research demonstrated how educational technology could build a bridge between cultural preservation and participation in global education by mitigating culturally amplified language anxiety while maintaining pedagogical effectiveness, ultimately suggesting that the optimal design of educational technology requires an in-depth understanding of learners' psychology, cultural contexts, and pedagogical theory — the integration of these aspects is essential for creating learning environments that serve diverse populations effectively through optimised rather than maximised social connections.

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