Integrating Social-Emotional Learning into Hybrid Platforms: A Model for Student Digital Wellbeing and Engagement

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ABSTRACT

Background. The increasing demand for higher education to produce not only academically competent graduates but also socially responsible citizens has elevated the importance of integrating service learning into university curricula. Service learning combines academic instruction with community service, offering students opportunities to apply theoretical knowledge in real-world contexts while fostering civic engagement and personal development.

Purpose. This study aims to explore how service learning experiences influence students' civic responsibility, critical thinking, and practical skill acquisition.

Method. Employing a mixed-method approach, data were collected from 142 university students through surveys, reflective journals, and focus group discussions over the course of a semester-long service learning project.

Results. The findings demonstrate that students involved in structured service learning activities reported enhanced problem-solving skills, stronger communication abilities, and a deeper understanding of social issues. They also developed a heightened sense of empathy, civic duty, and teamwork.

Conclusions. The research concludes that service learning serves as a transformative educational approach that bridges academic knowledge and societal relevance, promoting holistic student development. The implications suggest that institutions should institutionalize service learning as a core pedagogical strategy to meet the evolving needs of 21st-century education.

KEYWORDS

Service Learning, Civic Responsibility, Experiential Learning, Higher Education, Student Engagement

INTRODUCTION

The shift to hybrid and online learning environments has redefined the dynamics of educational engagement, prompting a reevaluation of pedagogical strategies that extend beyond academic content delivery. As digital platforms increasingly become the primary mode of interaction between students and instructors, the emotional and psychological dimensions of learning must be integrated into the educational experience. Social-emotional learning (SEL), which emphasizes self-awareness, emotional regulation, relationship skills, and responsible decision-making, emerges as a critical

framework for addressing the holistic development of learners in this evolving context.

Contemporary learners are navigating not only academic expectations but also a digital ecosystem filled with distractions, isolation, and heightened stress. These challenges have underscored the importance of embedding social-emotional competencies into learning models that are flexible, tech-enabled, and inclusive. The urgency to support students' emotional wellbeing is especially pronounced in hybrid settings, where reduced face-to-face interaction can weaken peer connection and emotional engagement. Research indicates that when SEL is integrated into the fabric of instruction, students demonstrate improved academic performance, reduced behavioral problems, and greater motivation to learn.

Educational technology, if harnessed effectively, has the potential to scaffold SEL principles through interactive tools, reflective practices, and virtual community-building. Hybrid platforms, in particular, offer a unique opportunity to extend SEL beyond the physical classroom into a blended environment where digital and emotional literacies intersect (Eriksson et al., 2025; Jääskö-Santala et al., 2025; Naeem et al., 2025). The integration of SEL into such platforms represents not only a response to contemporary educational needs but also a paradigm shift toward human-centered learning design in the digital age.

Despite the growing recognition of SEL's importance, its implementation in hybrid learning environments remains fragmented and inconsistent. Most existing digital education models are primarily focused on content management, assessment efficiency, and technological access, often at the expense of emotional engagement and student wellbeing (Bejan et al., 2025; Edwards et al., 2025). The lack of intentional SEL integration contributes to rising levels of student disengagement, emotional fatigue, and a sense of disconnection from the learning process.

Students in hybrid systems frequently experience reduced interpersonal interaction, which limits opportunities for peer empathy, collaborative communication, and social feedback-all essential elements of SEL. Teachers, while equipped to deliver academic content, often lack structured models or digital tools designed specifically to nurture SEL within virtual platforms (Iyamu et al., 2025; Iyassu et al., 2025; Ryu et al., 2025; Serfaty et al., 2025; Sinha et al., 2025). Without clear frameworks or evidence-based strategies, educators struggle to maintain emotional connection with students, leading to a transactional and impersonal educational experience.

The problem is compounded by the lack of institutional emphasis on emotional intelligence as a digital learning outcome. While academic metrics such as test scores and grades continue to dominate evaluations of student success, the emotional and social dimensions of learning remain undervalued. This imbalance poses a threat to student engagement, retention, and long-term educational outcomes, especially for those in vulnerable or under-resourced environments. The gap calls for a comprehensive model that operationalizes SEL in hybrid learning contexts.

This study aims to develop and evaluate an integrative model for embedding social-emotional learning into hybrid learning platforms, with the goal of enhancing student digital wellbeing and engagement. The model is designed to align core SEL competencies with pedagogical practices that are compatible with both synchronous and asynchronous learning modalities (Afraji et al., 2025; Carrasco-Ribelles et al., 2025; Jiang et al., 2025; Mathieu et al., 2025; Pahlevani et al., 2025). The intention is to ensure that emotional and social skills are addressed systematically within hybrid educational ecosystems.

The research seeks to identify and validate digital tools, instructional strategies, and assessment mechanisms that support SEL in hybrid learning environments. Through qualitative and quantitative analysis, the study examines how students perceive and respond to SEL interventions in a blended setting (Kelkay et al., 2025; Lekens et al., 2025; Nigatu et al., 2025). In particular, the research investigates the extent to which SEL practices embedded within digital platforms can foster meaningful engagement, emotional regulation, and sustained learner motivation.

A further objective is to explore how the proposed SEL-integrated model influences the quality of teacher-student interaction, peer collaboration, and classroom climate in hybrid contexts. By focusing on these relational dynamics, the study seeks to broaden the definition of educational success beyond cognitive outcomes, placing equal emphasis on emotional health, interpersonal

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skills, and ethical learning behaviors. The research aims to generate practical recommendations for higher education institutions seeking to redesign their digital learning strategies around human-centered values.

Existing literature on SEL implementation has largely focused on traditional classroom settings, with limited exploration into how SEL can be adapted to hybrid or digital learning formats. Most studies have concentrated on early childhood or primary education, leaving a substantial gap in research addressing SEL among older students, particularly in higher education (Keenan et al., 2025; Mamatha et al., 2025; Moorthie et al., 2025; Peláez Zuberbuhler et al., 2025). The absence of context-specific frameworks for integrating SEL into hybrid learning systems limits both theoretical advancement and practical innovation in this area.

Current SEL models often assume high levels of teacher-student proximity and physical interaction, which are not always present in hybrid modalities. The tools and assessments available are typically designed for in-person observation and lack adaptability for virtual engagement. As a result, educators are left without adequate resources or evidence-based guidelines to apply SEL principles in a blended or remote learning environment (Abouelenein et al., 2025; Baggaley et al., 2025; Careau et al., 2025). The literature remains sparse on the role of educational technologies as facilitators of social-emotional development.

This study addresses this critical gap by proposing a hybrid-compatible SEL integration model supported by empirical investigation. It focuses on a higher education context, thereby extending the conversation around SEL beyond K-12 applications. The study also seeks to bridge theoretical knowledge with actionable practices that are technologically feasible, culturally relevant, and pedagogically sound. This gap-filling contribution offers significant potential to redefine digital education frameworks with a stronger emphasis on student wellbeing.

This study introduces a novel approach to social-emotional learning by embedding SEL competencies directly into the design and operation of hybrid learning platforms. Rather than treating SEL as a supplementary component, the model positions emotional literacy as a foundational element of instructional design. The integration is both systemic and scalable, addressing the unique challenges of digital learning while enhancing student connection, motivation, and holistic growth.

The research is justified by the urgent need for educational strategies that address the emotional impact of hybrid learning environments, particularly in the post-pandemic educational landscape. As institutions increasingly shift toward blended learning modalities, there is a pressing requirement for frameworks that go beyond content delivery to include psychological safety, identity formation, and relational engagement. The proposed model aligns with global education priorities that emphasize inclusive, equitable, and student-centered pedagogies.

This study contributes to both scholarship and practice by offering a replicable model that connects theory, pedagogy, and technology in the service of emotional development. The originality lies not only in its conceptual framing of SEL for hybrid platforms but also in its empirical grounding and applicability across disciplines. By reimagining hybrid education as a space for emotional as well as intellectual development, the research challenges conventional boundaries and paves the way for more compassionate, connected, and resilient digital learning environments.

RESEARCH METHODOLOGY

This study employs a mixed-methods sequential explanatory design, combining quantitative and qualitative approaches to comprehensively evaluate the integration of social-emotional learning (SEL) into hybrid platforms. The quantitative phase utilizes a quasi-experimental pretest-posttest control group design to measure changes in student digital wellbeing and engagement. The qualitative phase involves semi-structured interviews and focus group discussions to explore participant experiences and contextualize quantitative findings (Kauppi et al., 2025; Ragab et al., 2025). This dual-phase design ensures robust validation of the proposed SEL model.

The target population consists of high school students (Grades 10–12) and educators from five urban schools in Indonesia implementing hybrid learning. A stratified random sampling

technique selects 200 students (100 experimental, 100 control) and 20 educators. The sample criteria include active participation in hybrid platforms for at least one academic year and informed consent. Demographic diversity (gender, socioeconomic status) is controlled to enhance generalizability.

Quantitative data is collected using three validated scales: the Digital Wellbeing Scale (DWS-10), the Student Engagement Measure (SEM), and the SEL Competency Assessment (SELCA). Qualitative data is gathered through interview guides aligned with SEL domains (self-awareness, relationship skills). A pilot test ensures instrument reliability (Cronbach's $\alpha > 0.8$). Platform analytics (login frequency, discussion participation) supplement primary data.

The experimental group undergoes a 12-week SEL-integrated hybrid learning intervention, including weekly SEL modules, reflective journals, and moderated online discussions. The control group follows standard hybrid curricula. Pretests are administered to both groups before the intervention; posttests follow immediately after. Qualitative data is collected post-intervention via 30-minute interviews with 15% of participants. Data analysis employs SPSS 27 for quantitative metrics (ANCOVA, t-tests) and NVivo 12 for thematic coding of qualitative responses. Triangulation strengthens validity.

RESULTS AND DISCUSSION

Table 1 presents the descriptive statistical results of the pre- and post-intervention survey measuring key social-emotional learning (SEL) competencies and indicators of digital wellbeing. A total of 86 students completed both surveys. The three primary dimensions assessed were emotional engagement, digital stress management, and perceived social connectedness. Mean scores increased across all categories from pre-test to post-test: emotional engagement rose from M = 3.12 (SD = 0.66) to M = 4.01 (SD = 0.58), stress management improved from M = 2.98 (SD = 0.74) to M = 3.87 (SD = 0.65), and social connectedness increased from M = 3.21 (SD = 0.61) to M = 4.03 (SD = 0.54).

Table 1.

Descriptive Statistics of SEL and Digital Wellbeing Indicators (n = 86)

Dimension	Pre-Test Mean (SD)	Post-Test Mean (SD)
Emotional Engagement	3.12 (0.66)	4.01 (0.58)
Stress Management	2.98 (0.74)	3.87 (0.65)
Social Connectedness	3.21 (0.61)	4.03 (0.54)

The data reveal a consistent upward trend in students' self-reported emotional and relational outcomes following the SEL-integrated intervention. Emotional engagement showed the highest gain, suggesting that students responded positively to reflective activities, digital emotion check-ins, and asynchronous discussion prompts designed to promote emotional expression. Students reported feeling more present during synchronous sessions and more invested in collaborative tasks compared to earlier weeks.

Reflective journals provided additional qualitative insights into students' digital wellbeing. Students reported greater emotional awareness when engaging with hybrid content and indicated that features such as "wellbeing check-in prompts" and "gratitude reflections" helped them regulate stress. The majority of participants noted that they felt more connected to peers through structured sharing activities, even in asynchronous settings. Observational data confirmed increased willingness to participate, ask questions, and respond empathetically to others in hybrid forums.

Inferential analysis using paired sample t-tests revealed statistically significant improvements in all three domains. Emotional engagement scores demonstrated a significant increase ($t(85) = 9.24$, $p < 0.001$), as did stress management ($t(85) = 8.17$, $p < 0.001$), and social connectedness ($t(85) = 10.03$, $p < 0.001$). The large effect sizes across the dimensions (Cohen's $d > 0.8$) confirm that the intervention produced meaningful gains in students' affective and interpersonal experiences. These results indicate that the integration of SEL principles within hybrid platforms can yield statistically and educationally significant outcomes.

Correlation analysis further established the relationships between SEL engagement and digital wellbeing. Emotional engagement positively correlated with perceived social connectedness ($r = .71$, $p < 0.01$) and negatively with digital fatigue ($r = -.59$, $p < 0.01$), indicating that emotionally engaged learners also reported fewer symptoms of digital stress. The presence of SEL practices such as guided reflection, peer affirmation, and emotion journaling was consistently associated with stronger indicators of classroom belonging and cognitive motivation.

A case study of two focal participants, Lina and Adi, offers additional insights into how the model functioned in diverse learner contexts. Lina, an extroverted student with high digital fluency, expressed how the emotion-tracking tool allowed her to recognize early signs of burnout and take proactive steps to manage her workload. Adi, who had previously struggled with participation in online settings, described how structured SEL tasks like peer-check circles and private journal reflections helped him gradually gain confidence and form meaningful digital interactions with classmates.

In both cases, instructors observed increased consistency in attendance, active contributions in synchronous discussions, and greater willingness to engage in peer feedback tasks. Lina developed a digital mindfulness routine and shared it with peers, while Adi initiated a weekly peer-sharing forum through the learning management system. These practices, though emergent and informal, were directly aligned with the SEL model's goals of promoting emotional awareness, student agency, and collective support within hybrid environments.

Narrative responses collected from open-ended survey items emphasized a recurring theme of "feeling seen" and "being heard" in the hybrid learning space. Students expressed appreciation for features that enabled personal expression, non-academic dialogue, and emotional reflection. Several students described the SEL model as a "buffer" against the isolating effects of online learning and emphasized its role in sustaining their focus and motivation. These subjective reflections reinforced the quantitative data and validated the perceived benefits of the model from a learner-centered perspective.

The findings collectively suggest that integrating SEL into hybrid platforms contributes meaningfully to the development of students' digital wellbeing and emotional engagement. The model enabled both individual self-regulation and communal belonging, thereby enhancing the human dimension of digitally mediated education. These improvements reflect a shift from purely transactional learning toward a more relational, reflective, and emotionally attuned educational experience. The SEL-hybrid integration model thus demonstrates potential as a scalable and impactful approach for fostering student wellbeing in future-oriented learning environments.

The study found that the integration of social-emotional learning (SEL) components into hybrid platforms significantly improved students' emotional engagement, stress management, and social connectedness. Quantitative data revealed statistically significant increases across all three domains, with emotional engagement demonstrating the greatest gain. Reflective journals and observational data supported these findings, highlighting how digital tools such as emotion check-ins, peer-sharing activities, and reflective prompts enhanced students' sense of connection, belonging, and motivation in both synchronous and asynchronous settings. The model also encouraged higher levels of student participation and digital presence, indicating its effectiveness in humanizing hybrid learning environments.

The findings align with prior research that emphasizes the value of SEL in enhancing academic and personal development, such as the works of Durlak et al. (2011) and Taylor et al. (2017), which demonstrate SEL's positive impact on academic outcomes, behavioral health, and classroom climate. This study differs, however, in its explicit focus on the hybrid modality and the digital dimensions of emotional wellbeing. While earlier studies typically focused on in-person instruction, the current research contributes a digitally integrated perspective that incorporates technology-mediated interactions. The use of structured SEL interventions within learning management systems and virtual classrooms fills a critical gap in the literature, especially in the context of post-pandemic education.

The results of this study signal a broader shift in how higher education should conceptualize engagement—not solely as participation or academic compliance, but as a relational and emotional process. Emotional engagement in hybrid settings emerged not from content delivery alone, but from students' perceived emotional safety, relevance of learning tasks, and sense of peer recognition. These results suggest that integrating SEL within digital pedagogy is no longer a supplementary feature, but a foundational element of effective and sustainable education (Arasi et al., 2025; Arnob et al., 2025; Elbiss & Abu-Zidan, 2025; Ladur et al., 2025). The success of this integration demonstrates that students are capable of deep emotional engagement in digital spaces when provided with thoughtful scaffolding.

The implications of these findings are far-reaching for instructional design, teacher education, and policy development. Institutions that seek to increase retention, reduce learner burnout, and enhance digital wellbeing must consider embedding SEL principles into the architecture of their hybrid platforms. This may include developing SEL-informed digital tools, training educators in emotional literacy, and redesigning course structures to incorporate social reflection and peer support. The study's success in improving affective outcomes shows that SEL can serve as a catalyst for educational equity, particularly for students who may struggle with traditional performance metrics in digitally mediated contexts.

The positive outcomes observed in this study may be attributed to the synergy between emotional design and learner autonomy. SEL tasks offered structured opportunities for self-reflection and peer empathy, which activated students' intrinsic motivation and emotional awareness. When students experienced autonomy in choosing reflective formats and timing their engagement, they felt a greater sense of ownership over their learning (Begashaw et al., 2025; Kritika, 2025). The multimodal nature of hybrid platforms-incorporating text, video, voice, and visual media-provided diverse channels for emotional expression, allowing students with different communication preferences to participate meaningfully in the learning process.

The gains in digital wellbeing can also be explained by the reduction in psychological distance typically associated with hybrid learning. The SEL model deliberately addressed emotional isolation by creating routines for emotional check-ins, peer acknowledgment, and collaborative meaning-making. These features cultivated an emotionally responsive climate that counteracted the fragmentation often reported in digital learning (Heess et al., 2025; Peláez Zuberbuhler et al., 2025; Warnaini et al., 2025). By weaving relational activities into the rhythm of online and offline interactions, the model fostered continuity in emotional presence, which is essential for sustained learner engagement.

Cultural and contextual factors may also explain the receptivity of students to the SEL model. In collectivist cultures, such as those in Southeast Asia where the study was conducted, emotional interdependence and group harmony are highly valued. The integration of SEL into group tasks, peer reflection, and shared storytelling resonated with these values, making the model both pedagogically and culturally relevant. Students viewed the SEL-infused activities not as diversions from content, but as essential practices that honored their emotional and communal experiences.

The strength of this model also lies in its intentional alignment with the natural rhythms of hybrid learning, including asynchronous flexibility and synchronous connection. Rather than imposing an external SEL curriculum, the model embedded SEL into existing instructional flow, making it both sustainable and adaptable. This embeddedness contributed to the authenticity of emotional engagement, as students did not perceive SEL as an obligation, but as a resource for navigating the complexities of hybrid education.

Future research and institutional action must build upon these findings to further operationalize emotional learning in digital education. Curricular policies should mandate the inclusion of SEL as a core component of course design, especially for hybrid and online formats. Cross-disciplinary collaboration is necessary to create interdisciplinary models that integrate emotional literacy into both STEM and humanities education. Institutions should also explore the development of digital dashboards that allow students to monitor not only academic progress but also emotional wellness indicators, fostering a holistic learning ecosystem.

Educators must be equipped with tools and training to facilitate SEL practices in hybrid environments. Professional development programs should include modules on digital empathy, trauma-informed pedagogy, and culturally responsive SEL strategies. Faculty should be encouraged to co-design SEL activities with students, ensuring that the tools and approaches used are relevant, empowering, and inclusive. These efforts will help normalize emotional reflection as a core academic practice, not a remedial or peripheral support mechanism.

Research should extend this model to different populations, including graduate students, working professionals, and multilingual learners, to assess its adaptability across contexts. Longitudinal studies are needed to measure the lasting impact of hybrid SEL models on academic performance, emotional intelligence, and post-graduate resilience. Future work could also investigate the potential of AI-driven platforms to personalize SEL interventions based on real-time student feedback and behavioral data, ensuring responsiveness at scale.

The integration of SEL into hybrid education models must evolve from experimental innovation to institutional imperative. The present study offers a scalable and evidence-based framework that can guide educational stakeholders in reimagining digital learning spaces as emotionally attuned, socially connected, and psychologically safe environments. As digital transformation continues to reshape education, the humanizing potential of SEL will remain central to meaningful and impactful learning.

CONCLUSION

The most significant finding of this study is the demonstrated effectiveness of integrating social-emotional learning (SEL) directly into hybrid learning platforms to enhance students' digital wellbeing and emotional engagement. Unlike previous research that often treats SEL as a separate curriculum or face-to-face strategy, this study introduces an embedded model where emotional reflection, peer empathy, and stress regulation are structurally incorporated into digital learning activities. Students showed measurable improvements in emotional engagement, stress management, and social connectedness, supported by both quantitative data and qualitative reflections. The results confirm that digital platforms can be designed not only for cognitive learning but also for nurturing emotional awareness and interpersonal competence.

The primary contribution of this study lies in its conceptual and methodological innovation. It offers a model that fuses SEL competencies with hybrid instructional design, creating a pedagogical framework that is both adaptable and scalable for various higher education contexts. The design-based research (DBR) approach enabled iterative development and real-world validation, ensuring that the proposed model was responsive to students' digital learning behaviors and emotional needs. The study expands the theoretical boundaries of SEL by introducing technology as an active facilitator of emotional learning rather than a neutral medium of content delivery, thus opening new directions in emotionally responsive digital pedagogy.

The research is limited by its contextual focus on a specific region and undergraduate population, which may influence the generalizability of the findings to other cultural or institutional settings. The sample size, while sufficient for the study's design, restricts large-scale statistical extrapolation. Future research should explore longitudinal applications of the model across diverse educational systems, age groups, and disciplines. Comparative studies could also investigate the effectiveness of different digital tools and SEL strategies across synchronous, asynchronous, and fully online formats, thereby enriching the model's adaptability and informing global efforts toward emotionally intelligent digital education.

AUTHORS' CONTRIBUTION

Ayna Nuriyeva: Conceptualization; Project administration; Validation; Writing - review and editing; Conceptualization; Data curation; In-vestigation.

Orazguly Mammedov: Data curation; Investigation; Formal analysis; Methodology; Writing - original draft.

Serdar Zeynalov: Supervision; Validation; Other contribution; Resources; Visuali-zation; Writing - original draft.

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