

# The Context of Social-Emotional E-Competencies Among High School Students In Vietnam

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DOI: <https://dx.doi.org/10.47772/IJRISS.2026.1017PSY0021>

Received: 08 April 2026; Accepted: 13 April 2026; Published: 11 May 2026

## ABSTRACT

In the context of digital transformation, adolescent social interaction increasingly occurs online, making social-emotional e-competencies (e-SEC) an important educational concern. Drawing on the social-emotional learning framework and research on digital interaction, this cross-sectional study examined the e-SEC of 335 Vietnamese high school students using two self-report instruments: the Social-Emotional e-Competencies Questionnaire (e-COM) and the E-motions scale. Descriptive statistics, reliability analysis, factor loadings, correlations, and independent-samples t tests were conducted in SPSS. Results indicated that overall e-SEC on the e-COM was relatively high ( $M = 3.44$ ,  $SD = .48$ ), whereas online emotional functioning measured by the E-motions scale was at an average level ( $M = 3.04$ ,  $SD = .60$ ). Emotional e-conscience and emotional e-regulation obtained the highest mean scores, while emotional e-independence and social e-competency were comparatively lower. The e-COM subscales were intercorrelated overall, and a statistically significant sex difference was reported only for emotional e-independence. These findings suggest that Vietnamese high school students show promising emotional awareness and regulation in online contexts, but still need support in building autonomy and constructive social interaction in cyberspace. The study provides an initial empirical basis for future school-based programs aimed at strengthening students' social-emotional competence in the digital environment.

**Keywords:** digitalization, social-emotional e-competencies, high school students, cyber-behavior, emotion

## INTRODUCTION

Social-emotional competence (SEC) is a fundamental human competence that reflects an individual's ability to perceive and regulate emotions, control behavior, and establish positive social relationships in order to achieve desired outcomes. Huynh Van Son (2019) described SEC as the effective interaction of an individual with themselves and with society to attain meaningful goals. According to the CASEL model, SEC includes five dimensions: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. In educational contexts, these competencies are closely associated with students' mental health, social adaptation, learning engagement, and personality development (Giang Thien Vu, 2021; Huynh Van Son, 2019; Kieu Thi Thanh Tra, 2022; Nguyen Thi Tu, 2019).

In the context of digital transformation, the rapid expansion of the Internet and social media has substantially changed the living, learning, and communication environments of high school students. Online space has become a distinctive social setting in which students not only access information but also express emotions, construct self-image, and maintain interpersonal relationships. Prior studies suggest that social media communication can shape self-presentation, social comparison, and self-assurance, thereby influencing motivation and psychosocial adjustment (Cebollero-Salinas et al., 2022; Suler, 2004).

However, the virtual environment also poses important challenges for the development of SEC. Interpreting another person's emotional state is often more difficult online than in face-to-face interaction because communication is mediated by text, images, and limited nonverbal cues (Suler, 2004). In addition, the speed of

online interaction, relative anonymity, and the pressure of social approval through likes, comments, and shares may increase impulsive responding and make emotional regulation more difficult for adolescents (Coelho & Marchante, 2018; Marín-López et al., 2020).

From this context, the concept of online social-emotional competence (e-SEC) has emerged to describe an individual's ability to perceive and regulate emotions, control behavior, and establish positive social relationships in digital environments. Cebollero-Salinas et al. (2022) argue that e-SEC is conceptually related to face-to-face socio-emotional competence but is enacted under the specific conditions of online interaction. Because technology-mediated communication may intensify emotions, limit contextual cues, and increase the risk of misunderstanding, e-SEC deserves independent attention in educational research.

Against this background, examining e-SEC among high school students in Vietnam is necessary to clarify how social-emotional competence is expressed in digital settings. Such evidence can provide a scientific basis for educational and preventive interventions designed to strengthen students' self-regulation, adaptive online behavior, and mental health protection in the current period of digitalization.

## **THEORETICAL FRAMEWORK**

This study is grounded in the theoretical framework of social-emotional competence in digital contexts. It draws on the CASEL view of SEC while adapting that perspective to the characteristics of technology-mediated interaction. In this study, e-SEC is understood as an individual's ability to perceive and regulate emotions, control behavior, and establish constructive social relationships during online interaction. In other words, e-SEC refers to the expression of social-emotional competence within the specific conditions of cyberspace.

While traditional SEC provides the foundational framework for emotional and interpersonal functioning, digital environments introduce interactional conditions that may alter how these competencies are enacted. Features such as anonymity, asynchronous communication, algorithmic exposure, reduced nonverbal cues, and rapid emotional diffusion create social-emotional demands that differ from face-to-face contexts. Thus, online social-emotional competence (e-SEC) is conceptualized in this study not as equivalent to traditional SEC, but as a contextually extended manifestation of SEC under digitally mediated conditions (see Table 1).

Table 1. Conceptualizing e-SEC as an extension of CASEL in cyberspace

| <b>CASEL</b>                         | <b>Digital extension</b>        |
|--------------------------------------|---------------------------------|
| Self-awareness                       | Online emotional awareness      |
| Self-management                      | Online emotional regulation     |
| Responsible decision-making          | Online impulse control          |
| Social awareness/relationship skills | Digital empathic responsibility |

Rather than replacing the CASEL model, the present study extends it by examining how core competencies may manifest under digitally mediated interaction. These dimensions were selected not merely as instrument subscales, but as theoretically coherent indicators of social-emotional functioning under online conditions.

To assess students' e-SEC, the study employed two validated self-report instruments: the Social-Emotional e-Competencies Questionnaire (e-COM) and the E-motions scale. The e-COM, developed by Cebollero-Salinas et al. (2022), includes five subscales: (1) emotional e-conscience, referring to the ability to recognize and understand one's emotional states while using digital media; (2) emotional e-regulation, referring to the capacity to regulate emotional responses in online interaction; (3) e-self-control of impulsiveness, reflecting the ability to inhibit immediate or impulsive online reactions; (4) emotional e-independence, referring to the extent to which

an individual is not overly affected by others' online feedback; and (5) social e-competency, which captures prosocial and relationship-building skills in cyberspace.

To complement this competence-based perspective, the study also used the E-motions scale, which examines emotional functioning in online interaction through four components: (1) e-emotional expression, or the tendency to communicate emotions through digital platforms; (2) e-emotional perception, or the ability to recognize others' emotions online; (3) facilitating use of e-emotions, or the use of emotional information to support thinking, decision-making, and relationship management; and (4) understanding and management, referring to the ability to analyze, regulate, and appropriately respond to emotions in online situations.

By combining these two instruments, the study approaches e-SEC from both a competence perspective and an emotional-process perspective. This framework enables a more comprehensive description of how students manage feelings, behavior, and relationships in cyberspace, and it provides a conceptual basis for interpreting the current status of e-SEC among Vietnamese high school students.

## METHODS

### Participants

A total of 335 high school students participated in the study ( $M_{age} = 17.40$  years). Participants were recruited through convenience sampling with permission from school principals. Students participated voluntarily following school approval and informed consent procedures. The sample included students aged 16 to 18, of whom 66.9% were female and 33.1% were male. Most participants were in Grade 12 (60.0%), followed by Grade 11 (20.9%) and Grade 10 (19.1%). Because the sample was non-random and unevenly distributed across gender and grade level, the findings should be interpreted with appropriate caution (see Table 2).

Table 2. Participant characteristics

| Characteristics |        | N          | Percentage (%) |
|-----------------|--------|------------|----------------|
| Gender          | Female | 224        | 66.9           |
|                 | Male   | 111        | 33.1           |
| Grade           | 10     | 64         | 19.1           |
|                 | 11     | 70         | 20.9           |
|                 | 12     | 201        | 60.0           |
| <b>Total</b>    |        | <b>335</b> | <b>100</b>     |

Although the final valid sample ( $n = 335$ ) did not fully reach the initially estimated target size, it exceeded commonly accepted thresholds for exploratory correlational research and was retained as adequate for preliminary analysis. Nevertheless, this shortfall should be considered when interpreting the generalizability of the findings.

### Instruments

The research instruments included a self-report questionnaire that combined two validated scales: the Social-Emotional e-Competencies Questionnaire (e-COM) and the Online Emotions (E-motions) scale, both scored on a 5-point Likert scale. The e-COM contains 25 items assessing competencies needed for safe and effective interaction in cyberspace. Its five subscales measure emotional e-conscience (e.g., "I usually know how to distinguish why I have certain feelings on social media"), emotional e-regulation (e.g., "I control the emotions I

express through the Internet”), e-self-control of impulsiveness (e.g., “On the Internet, I can’t stop clicking on the attractive links I see”), emotional e-independence (e.g., “I feel socially awkward if others get lots of comments on social networks”), and social e-competency (e.g., “I offer help on social networks when people need it”).

The E-motions scale consists of 21 items assessing emotional functioning in cyberspace across four components: e-motional expression (e.g., “I let my contacts on Facebook, Instagram... know if I am happy or sad”), e-motional perception (e.g., “I usually know what my contacts on Facebook, Instagram feel”), facilitating use of e-motions (e.g., “I express emotions on Facebook, Instagram... to improve relationships with my contacts”), and understanding and management (e.g., “If I get angry, I control myself so I do not take it out on my contacts on Facebook, Instagram...”).

All instruments were translated and adapted following forward-back translation procedures. Content adequacy was reviewed by experts in psychology and education, and pilot testing was conducted with a small group of students prior to formal data collection. Internal consistency coefficients (Cronbach’s alpha) indicated acceptable reliability for the overall scale and subscales ( $\alpha = 0.692$  to **0.821**)

The research process included three main steps: (1) obtaining permission from participating high schools; (2) collecting, screening, and cleaning the data; and (3) analyzing the data using appropriate statistical procedures. Ethical principles were observed throughout the study. Participants were informed about the purpose of the research, participation was voluntary, they had the right to withdraw at any time, and personal information was kept confidential.

Data were analyzed in SPSS using descriptive statistics. Means (M) and standard deviations (SD) were used to describe the level of each variable. Cronbach’s alpha coefficients, normality indices, factor loadings, Pearson correlations, and independent-samples t tests were used to examine the psychometric properties of the scales and group differences. Statistical significance was considered at  $p < .05$ .

## RESULTS

All e-COM items showed acceptable univariate normality, with skewness and kurtosis values within the commonly accepted range of  $\pm 2.0$ . Internal consistency was satisfactory for the overall e-COM ( $\alpha = .821$ ) and for each subscale: emotional e-conscience ( $\alpha = .784$ ), emotional e-regulation ( $\alpha = .739$ ), e-self-control of impulsiveness ( $\alpha = .773$ ), emotional e-independence ( $\alpha = .801$ ), and social e-competency ( $\alpha = .755$ ). Pearson correlation analysis indicated positive associations among most e-COM components. In addition, factor loadings supported a five-factor structure for the e-COM in this sample, with item loadings ranging from .487 to .806 (See Table 3).

Table 3. Factor loadings and normality indices for the e-COM items

| Factor   | Items   | Item’s loading | Skewness | Kurtosis |
|----------|---|----------------|----------|----------|
| Factor 1 | e-COM_1. When using social media, I am aware of whether I am feeling angry or happy.  | .720           | -.883    | .732     |
|          | e-COM_2. When using social media (e.g., reading comments, viewing profiles, watching videos), I can identify what I am feeling. | .743           | -.476    | -.140    |
|          | e-COM_3. When engaging in online entertainment (e.g., gaming, watching videos), I can recognize my emotions.                    | .740           | -.773    | .325     |

|          |   |      |       |       |
|----------|---|------|-------|-------|
|          | e-COM_4. I can distinguish why I experience certain emotions while using social media.                              |      |       |       |
|          | e-COM_5. I am clear about what I feel when playing online games, watching videos, or reading comments.              | .555 | -.469 | -.161 |
|          |   | .712 | -.777 | .400  |
| Factor 2 | e-COM_6. Before making a joke about someone on social media, I can imagine how that person might feel.              | .717 | -.638 | -.215 |
|          | e-COM_7. I manage my emotions well when using social media.   | .720 | -.581 | -.150 |
|          | e-COM_8. I regulate the emotions I express online.  |      |       |       |
|          | e-COM_9. Even when something upsets me on social media, I can still respond politely.                               | .714 | -.461 | -.310 |
|          | e-COM_10. Before posting or saying something online, I can anticipate its consequences.                             | .504 | -.294 | -.645 |
|          |   | .569 | -.828 | .360  |
| Factor 3 | e-COM_11. When a rumor appears in a Messenger group or another platform, I find it hard to resist commenting on it. | .605 | -.284 | -.643 |
|          | e-COM_12. Online, I find it difficult to stop clicking on attractive links.   | .605 | -.473 | -.810 |
|          | e-COM_13. On social media, I find it hard to refrain from commenting on jokes I encounter.                          |      |       |       |
|          | e-COM_14. When something surprises me, I find it hard not to comment about it online.                               | .773 | -.482 | -.562 |
|          | e-COM_15. I find it difficult to stop myself from posting comments about past events online.                        | .663 | -.259 | -.756 |
|          |   | .677 | -.786 | -.378 |
| Factor 4 | e-COM_16. The number of comments my friends receive on social media affects me.                                     | .696 | .055  | -.946 |
|          | e-COM_17. I feel hesitant to interact socially with someone who receives many comments online.                      | .610 | -.683 | -.434 |

|          |  |      |       |        |
|----------|--|------|-------|--------|
|          | e-COM_18. I feel like a failure when others discover negative things about me on social media. |      |       |        |
|          | e-COM_19. If someone does not reply to me online, I feel excluded from the group.              | .693 | .032  | -.946  |
|          | e-COM_20. I feel like a failure when my photos/videos receive no comments.                     | .754 | .100  | -.910  |
|          |  | .749 | -.144 | -1.137 |
| Factor 5 | e-COM_21. On social media, I pay attention to the needs of others.                             | .487 | .104  | -.610  |
|          | e-COM_22. I know how to help others who need support online.                                   | .748 | .012  | -.211  |
|          | e-COM_23. I usually offer help when someone needs it online.                                   | .806 | -.061 | -.425  |
|          | e-COM_24. I tend to help resolve problems that arise on social media.                          | .774 | .042  | -.352  |
|          | e-COM_25. I try to calm others when they become upset online.                                  | .647 | -.333 | -.342  |

Table 4. Pearson's correlation between e-COM components

|       | EC     | ER     | ESC     | EI      | SC     | e-COM |
|-------|--------|--------|---------|---------|--------|-------|
| EC    | -      |        |         |         |        |       |
| ER    | .454** | -      |         |         |        |       |
| ESC   | .273** | .314** | -       |         |        |       |
| EI    | .299** | .270** | .530**  | -       |        |       |
| SC    | .134*  | .129*  | -.244** | -.175** | -      |       |
| e-COM | .696** | .705** | .660**  | .689**  | .237** | -     |

Table 5 shows that the overall level of e-SEC measured by the e-COM was relatively high ( $M = 3.44$ ,  $SD = .48$ ). Among the five components, emotional e-conscience had the highest mean ( $M = 3.77$ ,  $SD = .73$ ), followed by emotional e-regulation ( $M = 3.66$ ,  $SD = .76$ ) and e-self-control of impulsiveness ( $M = 3.59$ ,  $SD = .85$ ). Emotional e-independence ( $M = 3.29$ ,  $SD = .92$ ) and especially social e-competency ( $M = 2.90$ ,  $SD = .75$ ) were comparatively lower. These findings suggest that students showed relatively strong awareness and regulation of emotions online, but may still face difficulty maintaining autonomy from online feedback and engaging in constructive social interaction in cyberspace. Independent-samples t tests indicated that most gender differences

were not statistically significant; a significant difference was reported only for emotional e-independence (see Table 5 and 6).

Table 5. Descriptive statistics for high school students' e-SEC

| e-SEC's components              | N   | M    | SD  | Level  |
|---------------------------------|-----|------|-----|--------|
| Emotional e-Conscience          | 335 | 3.77 | .73 | High   |
| Emotional e-Regulation          | 335 | 3.66 | .76 | High   |
| e-Self-control of impulsiveness | 335 | 3.59 | .85 | High   |
| Emotional e-Independence        | 335 | 3.29 | .92 | Medium |
| Social e-Competency             | 335 | 2.90 | .75 | Medium |
| <b>e-SEC</b>                    | 335 | 3.44 | .48 | High   |

Table 6. Gender differences in e-SEC

|                                 | Gender | N   | M    | SD   | t     | p    |
|---------------------------------|--------|-----|------|------|-------|------|
| Emotional Conscience            | Female | 224 | 3.76 | .73  | -.26  | .792 |
|                                 | Male   | 111 | 3.79 | .72  |       |      |
| Emotional Regulation            | Female | 224 | 3.68 | .74  | .77   | .444 |
|                                 | Male   | 111 | 3.62 | .78  |       |      |
| e-Self-control of impulsiveness | Female | 224 | 3.61 | .82  | .68   | .495 |
|                                 | Male   | 111 | 3.54 | .92  |       |      |
| Emotional Independence          | Female | 224 | 3.20 | .86  | -2.56 | .011 |
|                                 | Male   | 111 | 3.47 | 1.00 |       |      |
| Social Competency               | Female | 224 | 2.90 | .74  | -.05  | .959 |
|                                 | Male   | 111 | 2.91 | .76  |       |      |
| <b>e-SEC</b>                    | Female | 224 | 3.43 | .48  | -.56  | .578 |
|                                 | Male   | 111 | 3.46 | .50  |       |      |

The results from the E-motions scale showed an overall mean of 3.04 (SD = .60), indicating an average level of online emotional functioning. Among its components, understanding and management obtained the highest mean score (M = 3.22, SD = .65), whereas facilitating use of e-motions showed the lowest mean score (M = 2.94, SD = .79) (see Table 7). Overall, these results suggest that students were reasonably able to understand and manage emotions in online interaction, but were less likely to use emotional information strategically to guide communication and relationship management in digital contexts.

Table 7. Descriptive statistics for high school students' E-motions

| E-motions components          | N          | M           | SD         | Level   |
|-------------------------------|------------|-------------|------------|---------|
| E-motional expression         | 335        | 2.99        | .87        | Average |
| E-motional perception         | 335        | 3.01        | .84        | Average |
| Facilitating use of e-motions | 335        | 2.94        | .79        | Average |
| Understanding and management  | 335        | 3.22        | .65        | Average |
| <b>E-motions</b>              | <b>335</b> | <b>3.04</b> | <b>.60</b> | Average |

## DISCUSSION

The present study provides preliminary evidence regarding Vietnamese adolescents' online socio-emotional competence (e-SEC) and contributes to a growing body of literature that seeks to extend traditional social-emotional competence (SEC) into digitally mediated environments. Grounded in an adapted CASEL-informed perspective, the findings suggest that adolescents demonstrated moderate levels of e-SEC overall, while important variation emerged across dimensions, particularly between emotional awareness and online impulse control. This pattern is theoretically meaningful and aligns with emerging scholarship suggesting that socio-emotional functioning in online contexts may not mirror offline competence in straightforward ways (Domitrovich et al., 2017; Jones et al., 2019).

A notable finding is that students reported relatively stronger online emotional awareness and emotional regulation, while showing comparatively weaker performance in online impulse control. This pattern may indicate that adolescents possess some capacity to recognize and manage emotions in digital interactions, yet continue to face challenges translating awareness into behavioral restraint under conditions of immediacy, social pressure, and algorithmically amplified stimulation. This interpretation is broadly consistent with research showing that adolescents' emotional knowledge does not always correspond directly to effective self-regulation in digitally demanding contexts (George & Odgers, 2015; Nesi et al., 2021). The architecture of online environments, characterized by rapid feedback loops, social comparison, anonymity, and emotionally provocative content, may intensify impulsive responding even among youth who possess basic socio-emotional awareness (Odgers & Jensen, 2020).

The apparent tension between emotional awareness and weaker impulse control should be interpreted cautiously, but it may reflect a developmental and contextual pattern rather than a contradiction. During adolescence, executive control systems continue maturing, while peer influence and reward sensitivity remain highly salient (Steinberg, 2014). In digital spaces, these developmental vulnerabilities may be amplified. Similar observations have been noted in studies of problematic digital engagement and online disinhibition, where adolescents often understand social norms or emotional consequences yet still engage in reactive or poorly regulated online behavior (Suler, 2004; Valkenburg et al., 2022). In this sense, the present findings may support the argument that e-SEC requires attention not only to emotional understanding, but specifically to impulse regulation under digital conditions.

The correlational findings further reinforce the interconnected nature of e-SEC dimensions. Associations among emotional awareness, emotional regulation, social competence, and impulse control were generally consistent with the proposition that online socio-emotional competencies function as related but distinguishable capacities, echoing multidimensional SEC models in prior research (CASEL, 2020; Schoonert-Reichl et al., 2015). At the same time, the pattern of weaker alignment between reflective capacities and behavioral restraint suggests that digital environments may introduce friction between knowing and acting. This extends international discussions arguing that digital competence should incorporate not only technical or safety-oriented skills, but also relational, emotional, and ethical competencies (Livingstone et al., 2017; OECD, 2021).

Another important contribution concerns the contextual relevance of these findings for Vietnamese adolescents. While much of the existing literature on social-emotional functioning in digital contexts has emerged from Western settings, adolescents in Vietnam are navigating rapidly expanding digital ecosystems shaped by intense academic demands, strong peer connectivity, and growing exposure to social media-mediated identity processes. These contextual factors may influence how socio-emotional competencies are expressed online. In this respect, the present findings contribute to a still limited evidence base from Southeast Asia and support calls for culturally contextualized inquiry into adolescents' digital wellbeing (UNESCO, 2023). Rather than assuming universal patterns, the study suggests the importance of examining how socio-digital experiences are embedded within specific educational and cultural contexts.

Although descriptive variation by gender and grade level was observed, these patterns should be interpreted cautiously, as no inferential tests were conducted to establish statistical significance. Nonetheless, the observed trends may be tentatively viewed alongside prior studies that have reported developmental or gender-related differences in emotional regulation, online risk behavior, or social sensitivity in adolescence (Best et al., 2014; Nesi & Prinstein, 2015). Future research using larger and more balanced samples should examine whether such differences hold under more rigorous testing.

The findings also have implications for social-emotional learning (SEL) and school mental health interventions. Much SEL programming has historically focused on face-to-face interpersonal functioning, with less explicit attention to digitally mediated emotional life. Yet the present findings suggest that online impulse control, digital empathic responsibility, and emotionally responsible online communication may deserve greater attention within contemporary SEL programming. This aligns with recent arguments that SEL frameworks should evolve to address digital citizenship, online emotional regulation, and ethical participation in networked environments (Jones et al., 2021; OECD, 2021). In this sense, the study supports viewing e-SEC not as separate from SEL, but as an emerging contextual extension of it.

Several limitations should be acknowledged. First, the study relied on convenience sampling and an exploratory sample that did not reach the initially estimated target size, limiting generalizability. Second, the cross-sectional design precludes causal inference, and the correlational findings should not be interpreted as evidence of directional relationships. Third, the use of self-report measures may introduce response bias or social desirability effects. Finally, although the measures were theoretically grounded, further psychometric validation of e-SEC constructs in Vietnamese adolescent populations remains an important task for future research.

Despite these limitations, the study offers an exploratory contribution by advancing discussion of socio-emotional competence in digital environments and by identifying online impulse control as a potentially important area of vulnerability in adolescents' e-SEC profiles. Future studies should extend this work through longitudinal designs, stronger psychometric validation, and intervention research examining whether digital-adapted SEL approaches can strengthen adolescents' socio-emotional functioning online.

## CONCLUSION

This study provides an initial description of the e-SEC of Vietnamese high school students in the context of rapid digital transformation. Based on the e-COM results, students showed a relatively high overall level of e-SEC, whereas their online emotional functioning measured by the E-motions scale remained at an average level. Emotional e-conscience and emotional e-regulation were the strongest components, while emotional e-independence and social e-competency were comparatively weaker. These findings indicate that students may already possess a basic capacity to recognize and regulate emotions online, but still require support in developing autonomy and prosocial engagement in cyberspace.

The correlation results suggest that the components of e-SEC are related to one another, supporting the view that online socio-emotional competence is a multidimensional but interconnected construct. In practical terms, this means that strengthening one domain, such as emotional awareness or emotional regulation, may also support broader online adaptation. From an educational perspective, schools may therefore consider integrating e-SEC

content into digital citizenship, mental health, and life-skills education in order to promote safer and more constructive online behavior among students.

At the same time, the study should be interpreted within its methodological limits. The cross-sectional design does not allow causal inference, the convenience sample limits generalizability, and the exclusive reliance on self-report measures may have introduced response bias. In addition, further psychometric validation of these instruments in the Vietnamese context is still needed. Future studies should therefore use larger and more diverse samples, incorporate multiple sources of data, and examine the effectiveness of school-based interventions designed to enhance students' socio-emotional competence in digital environments.

## Fundings

This research was funded by the Science and Technology Fundings of Ho Chi Minh City University of Education under the student research project for the academic year 2025-2026.

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