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# A Piloting Study of Developing Social-Emotional Competence for Vietnamese High School Students

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**Abstract:** The lives and learning experiences of high school students are increasingly intertwined with online activities. With the global trend of Education 4.0, equipping students with digital skills is essential, including the capacity for online social-emotional skills. Someone with social-emotional skills knows how to turn social media into a useful tool, providing opportunities for personal development. This study focuses on developing social-emotional competence for high school students in the context of the Education 4.0 trend. The project has developed a learning program consisting of 6 common social-emotional skill themes for both virtual and real environments and implemented a test on 34 students. Using experimental evaluation methods, classroom observation, and quantitative methods were employed to assess the effectiveness of the program. The results indicate a significant improvement in students' social-emotional competence, with an average score post-experiment of 3.7397. Our experimental model also achieved 63.6% of CASEL criteria for organizing social-emotional competence. Therefore, the study has strengthened the findings and achievements in the development of social-emotional competence training in the fields of educational psychology in Vietnam.

Keywords: Cyberspace, high school students, social-emotional competence, social networks, social-emotional skills.

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# Introduction

Emotional-social competence plays a significant role in the holistic development of an individual (Ee et al., 2014). An individual equipped with emotional-social competence helps enhance happiness, succeed in their career, and create value for society (Allen et al., 2018). For high school students, emotional-social competence is particularly important due to their increasing needs for self-development, emotional life, and social relationships. Numerous studies have shown that emotional-social competence helps students develop good communication skills, resolve conflicts, manage emotions, and integrate into society. Moreover, it also positively influences confidence, attention, and academic performance(Buchanan et al., 2009; Denham & Bassett, 2019). Emotional-social competence provides a solid foundation for the personal development and learning of high school students (V.-S. Huynh et al., 2021).

In the context of the fourth industrial revolution, high school students today are born and raised in the era of the internet boom. The internet, including social media (SM), is one of the primary tools for high school students to study, entertain, and connect socially. People's perception and expression of emotions on social media tend to shape their personalities (Suler, 2004; Son et al., 2022). Social comparison on virtual platforms can be intense and significantly impact self-image, confidence, motivation, and goal-setting (Cebollero-Salinas et al., 2022). Therefore, students need to be equipped with emotional-social competence to safely and effectively navigate the social media environment.

In developed countries, success in implementing SEL development programs has significantly contributed to improving the mental health of students (Allen et al., 2018). Educators and policymakers are increasingly recognizing that teaching and learning social-emotional competencies also play a crucial role in preparing students for their life journey. It encompasses social, ethical responsibilities, civic education, and helping students become confident and positive

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contributors to the community. In Vietnam's 2018 General Education Program, the goal of social-emotional education for students has been emphasized. Additionally, enhancing Career Exploration activities in the curriculum is a notable point in developing emotions, ethics, and social skills for students. However, social-emotional education solutions have been primarily focused on and evaluated for preschool and primary school students. For high school students, the proposed activities have not truly provided opportunities for students to express, explore, and contribute to society, and there is a lack of research evaluation and experimental models for this target group (V.-S. Huynh et al., 2021). Based on the above analysis, the authors' group believes that a strategy to develop emotional-social competence programs for high school students in alignment with Career Exploration activities in Vietnam and equipping them with skills for using virtual environments is feasible and essential.

#### Literature Review

Social-emotional competence is the effective interaction of an individual with oneself and with society to achieve desired outcomes. Social-emotional competence is operationalized through individuals' abilities, motivations, and behaviors in emotional and social aspects (Denham & Bassett, 2019). Specifically, social-emotional competence is divided into five components: (a) self-awareness: the ability to recognize and understand one's strengths and weaknesses, (b) self-management: which involves regulating thoughts, emotions, and behavior, (c) social awareness: entails observing and empathizing with others' perspectives while understanding and adhering to social norms, (d) relationship management: pertains to initiating and maintaining positive social relationships, and (e) responsible decision-making: involves making respectful and constructive choices regarding behavior and social interactions in various contexts and situations (Buchanan et al., 2009).

Research on the current state of social-emotional competence indicates that strong social-emotional competence is correlated with good mental and physical health, better management of interpersonal relationships, effective communication, and navigating social situations (Buchanan et al., 2009; Durlak et al., 2011). During the high school years, changes in personality development and increased exposure to stressors impact students' social-emotional competence. Students with social-emotional competence exhibit a negative correlation with levels of anxiety, depression, and negative behaviors (Denham & Bassett, 2019). High school students need to be equipped with socialemotional competence as they face social challenges, heightened awareness in new social environments, enhanced selfawareness, and emotional and behavioral management, which lead to making responsible decisions regarding future careers (Durlak et al., 2011). High school students in Vietnam encounter difficulties in recognizing their own values, controlling and resolving conflicts, managing stressful emotions, establishing cohesive social relationships, and expressing their own dedication (S. V. Huynh et al., 2023). Therefore, when proposing solutions to develop socialemotional competence for students, attention should be paid to the realities and challenges faced by students in the training process.

Regarding the model of social-emotional education, the non-profit organization, The Collaborative for Academic, Social, and Emotional Learning (CASEL), defines social-emotional education as the process of acquiring and effectively applying the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, empathize and show compassion for others, establish and maintain positive relationships, and make responsible decisions (Durlak et al., 2011). Zhou and Ee (2012) demonstrated that the five components of social-emotional competence outlined by CASEL are positively correlated with each other. The content of social-emotional education for students must be diverse in content and utilize a combination of skills to develop effectively. CASEL identifies factors impacting students' social-emotional competence development as educational infrastructure, family, social functions, and community collaboration (Zhou & Ee, 2012). Studies conclude that social-emotional education for students must be embedded in four environments, including the classroom (dominant environment), school (dissemination environment), family (positive educational partner), and community (Martín-López et al., 2012). The focus of socialemotional learning primarily lies in the classroom environment, fostering connections and deep learning among peers and teachers, aiming to develop individual competencies (Junge et al., 2020). Furthermore, the method of teaching social-emotional competence for students must be diverse, involving numerous group activities, students creating valuable learning products, and demonstrating the role of students in society (Zych et al., 2018).

The field of social-emotional competence education for high school students becomes increasingly relevant in the context of social media (SM) as they constantly perceive, think, and act online. The younger generation utilizes online platforms for learning and developing new skills, viewing social media as a space to express themselves, engage in dialogue with friends, participate in online communities, feel encouraged to demonstrate their best qualities and strive for self-improvement. However, social media also has some negative influences on social-emotional competence education in students. Online social-emotional competence correlates with social-emotional competence in real-life environments (Cebollero-Salinas et al., 2022). The virtual environment poses challenges in interpreting human emotional states, which can lead to negative emotions, loss of control, and an increased likelihood of impulsive behavior (Suler, 2004). Communication through screens limits the use of non-verbal cues, impairing message transmission (Martín-López et al., 2012). Studies assessing the current state of social-emotional competence in the online environment of Vietnamese students show that competencies are only at moderate levels, with the lowest being

online social competence (Vu et al., 2023). Research also indicates that Vietnamese students spend an average of over 5 hours per day on social media, which may negatively impact their mental and physical health. Therefore, the social media factor impacts the development of social-emotional competence in high school students. When proposing solutions to develop social-emotional competence for students, attention must be paid to the issue of safe and effective social media usage.

# Methodology

# Research Design

Based on the study aim, we designed a piloting study, which used the questionnaire as the primary method, combined with the experiment of the proposed SEC developing program. In this article, the researcher used the results on the impact of the proposed SEC developing program as analytical and discussion data. The process of surveying and experimenting with the program included the following stages in 2 months:

Stage 1: Pre-experimental survey and experimental impact preparation

- (1) Identify the participants involved in the experiment: contact, meet, and collect data from the participants.
- (2) Agree on the content, time, and experimental location.
- (3) The researchers are using questionnaires to assess the SEC before the experiment.

Stage 2: Conducting the experiments

Conducting six educational topics in the established SEC developing program.

Stage 3: Evaluate and conclude experiments

After implementing the program for 2 months, the researcher used the self-developed questionnaire again to assess the difference before and after the experiment. The measurement of pre- and post-experiment had a non-normal distribution with Sig. = .03 (<.05) in the Kolmogorov-Smirnow Test; therefore, a non-parametric (Wilcoxon signed-rank test) was used to find out the difference between the two stages of this study.

# **Participants**

With the non-probability purposes sampling method, the research team consulted with school principals and education administrators regarding the pragmatic significance of the program, receiving insights into groups of students characterized by deficient social-emotional competencies, who exhibit a demand for self-development or socialemotional learning. The synthesis process was conducted with the participation and consent of 34 students who participated in the Social-Emotional Competence (SEC) learning process and the experimental evaluation conducted by the research group. The research team randomly selected 34 students who did not participate in emotional learning for the purpose of forming a control group. The information about the participating students in the experiment is presented in the table below:

Demographic information		Frequency	%	
Gender	Male	35	51.5%	
	Female	33	48.5%	
Ethnicity	Kinh ethnic group	61	89.7%	
	Chinese ethnic group	7	10.3%	
Overall		N = 68	100%	

Table 1. Description of the Research Subjects

# Instruments

The measure that the research group is aiming for is the development of Social-Emotional Competence (SEC) at the classroom level, aligned with the "experiential activities and career orientation" of the Vietnamese education program, ensuring the perspectives and requirements in CASEL's social-emotional education, and the fundamental characteristics in teaching digital skills in Education 4.0.

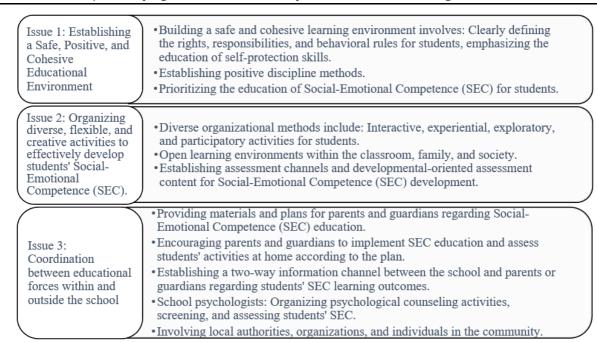


Figure 1. Key Issues in Developing Social-Emotional Competence (SEC)

The application of methods and educational measures for the development of Social and Emotional Learning (SEL) competencies in students must be flexible. Combining various active teaching methods helps students learn how to problem-solve, engage in positive experiences, unleash creativity, and develop their own competencies. The research team has designed a diverse range of learning formats for students, including project-based learning, community activities, forums, art exhibitions, interactive learning, and exchange programs. The content of the program for developing students' SEL competencies is outlined in the following table:

Table 2. Social Emotional Learning Content for High School Students

No	<b>Educational topics</b>	Specific activities	Outcome objectives
1.	Promoting the school's traditions.	Activity 1: Establishing classroom rules aligned with the class values Activity 2: Building a culture of care Activity 3: Upholding the school's traditions Activity 4: Inter-generational exchange at the beginning of the school year	Building a safe and cohesive learning environment, establishing discipline, enhancing social awareness, leveraging design thinking, and organizing activities.
2.	Self-discovery	Activity 1: Who am I, and what are my values? Activity 2: Establishing a personal development roadmap Activity 3: Developing a personal brand	Developing self-awareness: understanding one's identity, strengths and weaknesses, understanding how others perceive oneself, building a personal brand, and orienting future careers.
3.	Foster self- development	Activity 1: Understanding emotions and regulating emotions through training Activity 2: Exhibition "Dealing with Temptation and Conflict" Activity 3: Self-management Activity 4: Using social media safely and effectively Activity 5: Being proactive and confident in communication	Developing the ability to self-manage: students learn to recognize their emotions, practice regulating emotions and positive thinking, and effectively manage behavior to achieve goals.

Table 2. Continued

No	<b>Educational topics</b>	Specific activities	Outcome objectives	
4.	Responsibility towards the family	Activity 1: Empathizing with family members, recognizing the value of the family Activity 2: Organizing a forum for sharing and discussing the relationship between students and their families, individual responsibilities when participating in social networks Activity 3: Building an action plan for individual students as family members, with the involvement of the family	Developing the ability to take charge of relationships: understanding empathy, expressing concern for loved ones; Responsibility for decision-making: taking responsibility for oneself and the family through specific actions, proposing measures to contribute to the economic development of the family.	
5.	Gratitude	Activity 1: Acknowledge and express gratitude Activity 2: Appreciate those who contribute to society Activity 3: Participate in activities to commemorate contributions	Demonstrating gratitude fosters the development of self-understanding and compassion towards oneself, interpersonal skills, responsible decision-making, and social awareness.	
6.	Community Involvement Activities	Activity 1: Understanding kindness Activity 2: Participating in volunteer activities Activity 3: Organizing community service activities	Developing skills to plan and organize community activities, enhancing social awareness, establishing, and maintaining positive social relationships.	

The assessment content for students consists of expressions of qualities and competencies identified in the theoretical framework, through themed activities, participation in group activities, and the products of students in each activity. Combining teacher assessment with self-assessment and peer assessment, parent assessment, and community assessment; the class teacher synthesizes the assessment results. Integrated with the tools and products the research team designed for educational activities: Self-development handbook (softcopy and ebook), YOOT digital application, Gallup's Strengthsfinder 2.0, PHQ9 depression scale, Podcast "Youth Talks and Conversations about Self-competencies."

#### Procedure

The research team has prepared a detailed introduction letter to support the project, focusing on factors such as research objectives, the framework for the development of Social-emotional Competence (SEC) for high school students, the content of the questionnaire, information security, implementation timeline, participant selection, withdrawal rights, and contact information for the research team. Support and approval for project implementation were obtained from the principal of Huynh Man Dat High School. To ensure the quality and objectivity of the research, teachers and psychological counseling staff were assigned to accompany and support the research team. Before starting the experimental phase, there was a discussion and input from them. All students participating in the experimental class expressed their consent to participate and actively provided necessary information, adhering to research ethics.

The experimental program will run from September to December 2023. Before participating in the educational program, teachers and psychological counselors at the school will conduct an assessment of Social-emotional competence (SEC) for students in the experimental class. The research team will record the results, develop the program framework, and adjust the content based on the actual situation of the experimental class. During the experiment, learning materials and support tools will be provided to students and parents. Parents will participate alongside their children and assess the changes in their offspring. The research team will attend classes, take notes on students' perceptions, and document changes during their participation. At the end of the experiment, teachers and psychological counselors will continue the assessment of students' SEC. The research team will provide all student participation results and conduct the analysis.

# Data Collection

With 34 distributed questionnaires and direct surveys of the experimental class before and after participating in the program, the study successfully collected data from all 34 participants (100%). During the questionnaire processing, all surveys met the requirements to ensure the provision of research data (criterion: completion of all content in the questionnaire).

Data Analysis

The project utilized SPSS 26.0 software to examine the study's variables (Percentage, Mean, Standard Deviation, *P*-value). The Wilcoxon rank-sum test was employed to compare two sets of non-parametric data before and after the experiment (non-normally distributed or not following a normal distribution).

The questionnaire was designed with the following content: Part 1: Assessing the current status of students' social-emotional competencies using the SEQC scale developed by (Zhou & Ee, 2012). It comprises 25 items tailored for social-emotional interaction, based on the five fundamental components of SEL: Items 1-5: Self-Awarness (e.g., I know what I am thinking and doing), items 6-10: Self-Management (e.g., I can stay calm in stressful situations.), items 11-15: Social Awareness (e.g., I recognise how people feel by looking at their facial expressions), items 16-20: Relationship Skills (e.g., I will always apologise when I hurt my friend unintentionally), and items 20-25: Responsible Decision-Making (e.g., When making decisions, I take into account the consequences of my actions). The scoring for these 4 abilities ranges from 1 to 6, corresponding to four levels as follows: From level 1 to 2.25: Low; from level 2.26 to 3.51: Average; from level 3.52 to 4.77: Good; from level 4.78 to 6.0: High. Part 2: SEL in the Classroom Self-Assessment, evaluated by teachers participating in the experimental education program.

# Findings/Results

The research conducted an experimental evaluation involving two groups: the experimental group and the control group. In this study, the experimental group engaged in educational research activities focusing on the development of emotional-social competencies, while the control group did not participate in any research-related activities. Following the experiment, the difference in average scores before and after the experiment is presented in the table:

Test	N	Mean	Std Deviation	Minimum	Maximum
Pre test	34	2.9388	0.41886	1.92	3.80
Post test	34	3.7329	0.53337	2.92	4.88
Pre control	34	3.0329	0.48955	2.04	3.88
Post control	34	3.1141	0.43697	2.32	4.08

Table 3. Comparative statistics of Pre-test, Post-test, Pre control, and Post Control

Based on the data from the table, for the experimental group participating in the research program, before participating in the experiment, the Mean social-emotional competency Pre-test score was 2.9388, with a standard deviation of 0.41886 indicating an average level. After the experiment, the mean of social-emotional competency Post-test score was 3.7329 with a standard deviation of 0.53337, achieving a good level. For the control group: The Mean social-emotional competency score before the experiment was 3.0329 with a standard deviation of 0.48955, pointing at an average level. The Mean social-emotional competency score after the experiment was 3.1141 with a standard deviation of 0.43697, also at an average level. To demonstrate the changes in social-emotional competency after the experiment, the study employed a non-parametric statistical test, namely the Wilcoxon signed-rank test. The results of the test are presented in the table below:

			N	Mean rank	Sum of Ranks	Z	P
		Negative Ranks	0a	0.00	0.00		
Pre-test	-	Positive Ranks	33 <sup>b</sup>	17.00	561.00	-5.014 <sup>b</sup>	.000
Post-test		Ties	1 <sup>c</sup>				
Pre-control	-	Negative Ranks	16 <sup>d</sup>	16.38	262.00		
Post-control		Positive Ranks	17e	17.59	299.00	-0.331 <sup>b</sup>	0.741
		Ties	$1^{\mathrm{f}}$				

Table 4. Wilcoxon signed-rank test result of Pre-test – Post-test and Pre-control – Post-control

Analyzing the data from the table, for the experimental group, the average difference in negative ranks (-) is  $0^a$ , and the average difference in positive ranks (+) is  $33^b$ . The Ties index is  $1^c$  suggesting uniformity in scores between participants before and after the experiment. Notably, 17 out of the 34 students participating in the experiment exhibited a substantial improvement in social-emotional competency. Z score is  $-5.014^b$  in the pre-test – post-test comparison indicates a very significant difference between the ranks of the negative values compared to what would be expected by chance alone and the statistical significance (p-value) is .000 (< .05), allowing us to conclude that there is a significant difference in social-emotional competency among the 34 students who participated in the experiment. According to the control group data in the table, the average difference in negative ranks (-) is 16d, and the average difference in positive ranks (+) is  $17^c$ . The Ties index is 1. The standard Z score is  $-0.331^b$ , which suggests a less significant difference, and the statistical significance (p-value) is 0.741 (> .05), allowing us to assert that there is no significant difference in social-emotional competency among the 34 participants in the control group. From the experimental results, the Wilcoxon

signed-rank test was utilized to compare the five components of social-emotional competency before and after the experiment. The outcomes are presented in the table.

Table 5. Result of Wilcoxon signed-rank test before and after experiment on five components of social-emotional
competencies

Cocial ameticanal commetence	Pre experiment		Post ex	Post experiment		Test	
Social-emotional competency	M	SD	M	SD	Z	P	
Self-Awareness	3.112	0.7323	3.882	0.6717	-3.834	.000	
Self-Management	2.488	0.6423	3.353	0.8600	-3.834	.000	
Social Awareness	3.076	0.6439	3.924	0.5909	-4.419	.000	
Relationship Skills	2.971	0.5808	3.753	0.6552	-4.419	.000	
Responsible Decision-Making	3.047	0.6859	3.753	0.7986	-3.592	.000	

Prior to the experiment, four competencies were at an average level, including self-awareness, self-management, Social Awareness, relationship skills, and responsible decision-making. However, self-management, with a Mean of 2.488 and *SD* of 0.6423, was rated at the lowest level. Based on the table, post-experiment results reveal changes in all five components of social-emotional competency. The *Z* scores for each component are negative, and the *P*-values are greater than .05, indicating a significant difference in average scores before and after the experiment. Specifically, the five competencies: are self-awareness, self-management, social awareness, relationship skills, and responsible decision-making.

Based on the criteria of SEL in the Classroom Self-Assessment, the teachers' evaluation results of the experiment are as follows: Regarding class evaluation: Clear guidance: 2/3 items reached level 1, 1/3 items reached level 4; Integrating social-emotional learning (SEL) education: 2/10 items reached level 1, 4/10 items reached level 2, 4/10 items reached level 4; Supportive classroom environment: 4/9 items reached level 1, 2/9 items reached level 2, 1/9 items reached level 3, 2/9 items reached level 4.

# Discussion

The study has developed a program to enhance social-emotional competencies in both real-world and virtual environments for high school students through six learning themes. Within these, activities and exercises are flexibly integrated to help students develop social-emotional competencies. This enables students to apply their social-emotional competencies in both virtual and real-world environments. From the perspective of CASEL, a social-emotional education program must ensure clear guidance, integrate social-emotional education, foster a positive classroom environment, and coordinate with families (Allen et al., 2018). The experimental social-emotional education program has achieved these criteria at a moderate level. However, the experimental program needs to supplement evaluation results regarding the evidence-based approach to teaching social and emotional skills in a SAFE (Sequenced, Active, Focused, and Explicit) manner (Catalano & Hawkins, 1996). Furthermore, CASEL emphasizes incorporating SEL (Social and Emotional Learning) standards into academic programs and culturally diverse learning environments. This experimental program focuses on a group of students with limited and challenging social-emotional development capabilities. Therefore, the authors aim to construct and teach it as a separate subject, rather than integrating it into academic subjects.

The author team developed social-emotional competence development content based on the theoretical framework of the CASEL organization (Zhou & Ee, 2012). The group's experimental program focuses on guiding the development and dissemination of social-emotional competence in the dominant classroom environment. This environment enables students to engage in capturing, sharing, and experiencing emotions in the classroom, understanding deeply about surrounding relationships, easily conducting group work, and creating products for students (Allen et al., 2018). When successfully developed and established values in the classroom, they will spread to the school environment, contributing to building a happy school (Cebollero-Salinas et al., 2022). The experimental program has emphasized addressing issues regarding learning methods and constructing diverse activities for student participation, self-expression, and contribution. The open learning environment includes classrooms, families, and society. Not only do students participate, but parents also serve as companions to evaluate and implement the six experimental themes. Furthermore, mental health care for students is extremely urgent nowadays, as Vietnamese students face difficulties in self-regulating emotions (Vu et al., 2023). Therefore, the author's team developed themes in coordination with school psychological counseling staff to guide and train students in understanding their own emotions and regulating emotions to enhance mental health through the "Understanding emotions and regulating emotions through training" activity.

Research evaluations in Vietnam indicate that despite the country's emphasis on developing social-emotional competence in students in recent years, high schools have not fully implemented and delved deeply into student education (Vu et al., 2023). Activities mainly focus on cognitive learning, leading to students not being able to apply practical skills and demonstrate their roles (Vu et al., 2023). The author's team addressed this by constructing activities

based on the realistic needs and desires of students. The experimental activities are all geared towards practical application across the 6 thematic areas to develop students' social-emotional competence. Factors related to selfawareness and career orientation through learning themes are determined through digital tools and assessments considered by family counselors, yielding optimal outcomes and directions. Recognizing the urgency of equipping skills for the virtual environment, the author's team developed educational activities on the safe and effective use of social media, helping students identify the limitations of social media, minimize conflicts, and transform social media into tools for learning and personal branding.

Regarding the flexibility of the activities, this experimental program remains aligned with the objectives, principles, and assessment methods of the Vietnamese Ministry of Education and Training. When applied, it can be flexible and adaptable based on the actual social-emotional competence of students or their desires and needs, which can be incorporated into educational practices. However, the author's team acknowledges some limitations. Developing socialemotional competence in students heavily relies on the guidance of teachers. Teachers must possess organizational skills, understand the needs and capabilities of students, evaluate learning performance, and make necessary adjustments. Additionally, psychological counseling departments need to be established in Vietnamese high schools to support students. For the family component, consent and participation are necessary to implement and support students throughout the program's assessment and implementation stages.

#### Conclusion

The project has successfully developed a program that enhances social-emotional competencies for high school students. The program integrates experiential activities and career guidance, following the guidelines of the Ministry of Education and Training of Vietnam. The program not only meets the goals of the Ministry of Education but also adapts to the digital transformation trend in education through E-learning. Experimental evaluations on two groups, the experimental and control groups, reveal that the experimental group has a higher social-emotional competency score of 3.7329 compared to the control group with a score of 3.114. This result indicates that students who participated in the program have demonstrated significant improvement in competencies such as self-awareness, social awareness, relationship skills, and responsible decision-making, elevating them from an average to a good level. Particularly noteworthy is the progression in self-management, which is an essential part of the project's advancement, as it has improved from a lower to a higher level.

#### Recommendations

The results of this research are essential in creating a social-emotional competency program for high school students. Our study successfully achieved the educational objectives outlined by the Vietnamese Ministry of Education, building on previous research. Additionally, our findings will help improve the experimental research on social-emotional competencies and address limitations when designing social-emotional competency education programs for students. Future research teams can conduct follow-up research to obtain qualitative data from students about their thoughts, perceptions, and behaviors related to social-emotional competencies on the Internet. Besides, future researchers could involve parents in the program and assess their roles in developing social-emotional competencies.

# Limitations

This experimental study has a few limitations that need to be taken into consideration. Firstly, the research solely focused on the quantitative analysis of social-emotional indices of students and did not give due attention to qualitative data, including their thoughts, perceptions, and behaviors related to social-emotional competencies on the internet. Secondly, while the research team's solution aimed to develop emotional competencies for both online and offline environments, the study did not measure the correlation and influence of other factors on social-emotional competencies. Finally, the study did not assess the roles of parents and the academic performance of students participating in the program.

# **Conflict of Interest**

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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# **Authorship Contribution Statement**

Hong Hoang Nguyen: Drafting manuscript, concept and design, data acquisition, data analysis/interpretation. Minh Khang Nguyen: Drafting manuscript, statistical analysis, admin, technical support. Quoc Khanh Nguyen: Critical revision of manuscript, editing/reviewing, supervision, final approval.

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