

The Exploring Active Learning Models to Enhance Social-Emotional Learning Among Freshmen

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Abstract

The objectives of this research were to: 1) investigate the definition and components of Social Emotional Learning (SEL) among college students; 2) develop an active learning model to enhance the SEL capabilities of college students; 3) evaluate the effectiveness of the developed active learning model on the SEL of college students. The sample consisted of 304 students from the preschool education department at Guangdong Baiyun University, selected through simple random sampling. The research instruments for data collection included a structured questionnaire with 35 questions covering five key SEL aspects: self-awareness, social awareness, self-management, relationship skills, and responsible decision-making. The statistics used for data analysis were descriptive statistics and inferential statistics, specifically t-tests, to compare pre-test and post-test scores within the experimental group.

The research results were found as follows: 1) SEL among college students involves a systematic educational approach that assists in developing skills in emotional management, interpersonal relationships, and decision-making; 2) an active learning model significantly improves SEL among college students across all five studied dimensions. Suggestions for future research include exploring the application effects of active learning at different educational stages and across various subjects, and integrating modern technologies like Virtual Reality (VR) and Augmented Reality (AR) to enhance the effectiveness of teaching methods

Keywords: Social Emotional Learning; Active Learning Model; College Students

Introduction

The concept of Social Emotional Learning (SEL) originated from the research on emotional intelligence by psychologists and educational scholars. During this period, scholars like Daniel Goleman and Peter Salovey began to explore the significance of emotions and recognized the impact of emotional skills on individual development and success. The term "Social Emotional Learning" was coined in 1994 at a conference hosted by the Fetzer Institute, which included researchers, educators, and child advocates dedicated to promoting various educational efforts for the positive development of children. These SEL pioneers came together to address a common issue: the inefficiency of school planning and the lack of coordination among school-level projects. The establishment of CASEL (Collaborative for Academic, Social, and Emotional Learning) in 1994 marked the beginning of Social Emotional Learning as a distinct field, generating widespread interest in the educational community. As an authoritative organization, CASEL provides the following definition of Social Emotional Learning: "Social and emotional learning is the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and

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manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions." (CASEL, 2023).

SEL not only focuses on academic knowledge and achievements but also emphasizes the cultivation of students' emotional intelligence, interpersonal skills, and emotional management abilities. It underscores a comprehensive learning process designed to help individuals better adapt to the social environment, promoting overall psychological well-being, and enhancing social interaction skills. Specifically, this learning approach guides students in accurate self-cognition, building positive interpersonal relationships, preventing and addressing potential behavioral issues, and fostering the development of positive behaviors. Social-emotional learning involves acquiring and applying social and emotional competencies needed in complex situations involving interaction, communication, collaboration, and conflict resolution. These competencies include emotional management, empathy, self-awareness, communication skills, problem-solving abilities, and decision-making skills (Li & Xu, 2016). This capacity significantly benefits multiple areas of students' development. Scientifically validated high-quality social-emotional programs have been proven to positively impact students, leading to improvements in behavior, attitude adjustments, and academic performance (Chernyshenko et al., 2018). A meta-analysis of 213 universal social and emotional learning (SEL) programs covering 270,034 Kindergarten to high school students revealed significant improvements in social and emotional skills, attitudes, behavior, and academic performance compared to control groups, with overall achievement increasing by 11 percentage points (Durlak et al., 2011). These cumulative effects indicate that social-emotional learning has achieved significant and effective outcomes in the field of education (Zins et al., 2004; Oberle et al., 2014; Greenberg et al., 2003). It aims to promote the comprehensive development of all students (Zins & Elias, 2007).

Thus, enhancing the social emotional learning capabilities of college students is a worthy research topic and a concern for researchers. Although social emotional learning is crucial for college students, their current level of social emotional learning may not be as satisfactory or optimistic as expected. Research suggests (Wu, 2021; Li & Wang, 2017) that under the traditional educational evaluation system in China, emotional intelligence education has been insufficiently emphasized, leading to deficiencies in college students' self-awareness and motivation, emotional management, willpower cultivation, and interpersonal communication. More attention should be given to these aspects.

Researchers conducted semi-structured interviews with five professors specializing in education and psychology. Based on the interview results, the researchers concluded that social emotional learning is essential for college students. It not only helps them establish healthy interpersonal relationships and manage emotions but also fosters teamwork abilities and a sense of social responsibility, laying a solid foundation for their growth and future career development. The communication skills of Chinese college students mainly include five aspects: self-awareness, social awareness, self-management, relationship skills, and responsible decision-making. Based on this, researchers hope to develop a learning model that integrates the theory of active learning to provide a reference for enhancing the social emotional learning capabilities of college students.

The culmination of this research problem centers on addressing the insufficiency of traditional educational models that primarily focus on cognitive and academic skills, often neglecting the comprehensive development of social and emotional competencies essential for effective personal and professional life. Despite the recognized importance of SEL for enhancing interpersonal skills and emotional intelligence among students, there exists a notable gap in the application of active learning strategies specifically aimed at improving these skills in college settings. This gap highlights the critical need for innovative educational models that integrate active learning principles to foster a more holistic development of students. Thus, this study seeks to fill this void by designing and evaluating an active learning model tailored to enhance the social emotional learning capabilities of college students, thereby contributing significantly to their overall well-being and success.

Research Objectives

1. To study the definition and components of Social Emotional Learning among college students.
2. To develop an active learning model to enhance the social emotional learning capabilities of college students.
3. To evaluate the effectiveness of this active learning model on the social emotional learning of college students.

Literature Review

This section aims to provide a theoretical foundation and an overview of prior research that supports this thesis. The elements studied by researchers include:

Active learning is a teaching approach designed to engage students in the learning process actively, moving away from passive information reception. Bonwell & Eison (1991) highlighted several characteristics of active learning, including student engagement in higher-order thinking and various learning activities, as well as exploring personal attitudes and values. Scholars like Felder & Brent (2009) define it specifically within classroom activities, while Collins & O'Brien (2011) emphasized the depth of student thinking and participation. Matsushita (2019) linked it to the externalization of cognitive processes. After a comprehensive study, Freeman et al. (2014) defined active learning as engaging students in learning through activities and discussions, emphasizing higher-order thinking and group work. Handelsman et al. (2007) viewed active learning as involving students in constructing new knowledge and scientific skills. AUSSE/NSSE (2007) considered it an effort by students to actively construct knowledge, and Fink (2003) saw it as providing opportunities for reflection and evaluation. Vanhorn et al. (2019) emphasized the essence of active learning, suggesting that learning involves not just passive reception but engagement in writing, application, and other activities that make the acquired knowledge a part of the student.

The concept of Social Emotional Learning (SEL) stems from research on emotional intelligence, initiated by psychologists and educators exploring the importance of emotions, including contributions from scholars like Daniel Goleman and Peter Salovey. The term "Social Emotional Learning" was officially coined at a 1994 conference at the Fetzer Institute, attended by researchers, educators, and child advocates from various educational fields, who addressed issues of insufficient school planning and lack of project coordination. Founded in 1994, CASEL (Collaborative for Academic, Social, and Emotional Learning) is dedicated to

promoting and advancing SEL, marking the beginning of SEL as an independent field. Projects like the UK Department for Education and Skills' "Social and Emotional Aspects of Learning" and the international symposium on "Social Emotional Learning and the Improvement of Basic Education Quality" organized by China's Ministry of Education and UNICEF have further defined and applied the concept of SEL. Moreover, the OECD's 2021 definition of social emotional skills underscores their importance to individual success and social functioning. Globally, educational policies have incorporated the SEL concept, and scholars continue to advance research, enhancing the effectiveness and sustainability of SEL. Overall, as an independent discipline, SEL has made significant progress, playing a crucial role in education and mental health, and promoting the comprehensive development and capabilities of students.

Learning, as described by De Houwer et al. (2013) and Lave (2009), is an enduring transformation resulting from experiences, expanding beyond traditional boundaries to encompass various life contexts. Pedagogical models, as outlined by Dakhi et al. (2020), provide structured frameworks rooted in established theories, aiming to optimize learning outcomes. Notably, diverse learning models—behaviorist, cognitive, social, constructivist, and connectionist—offer distinct lenses into the multifaceted nature of learning, emphasizing stimuli, cognition, social interactions, individual construction, and neural connections, respectively. These models collectively enrich our understanding of the dynamic learning process, offering methodologies to enhance educational practices.

Currently, there is relatively little research on enhancing college students' social emotional learning based on an active learning model. Researchers are attempting to develop an active learning model to provide strategic guidance for improving college students' social emotional learning. The most important factors affecting college students' social emotional learning include self-awareness, social awareness, self-management, relationship skills, and responsible decision-making. Therefore, the active learning model developed in this study will evaluate the social emotional learning capabilities of college students in China across these five domains.

Conceptual Framework

This study aims to explore the effectiveness of an active learning model in enhancing students' social emotional learning capabilities. The learning model was designed based on theories of active learning, social emotional learning, and constructivist learning. The conceptual framework for this study is outlined below:

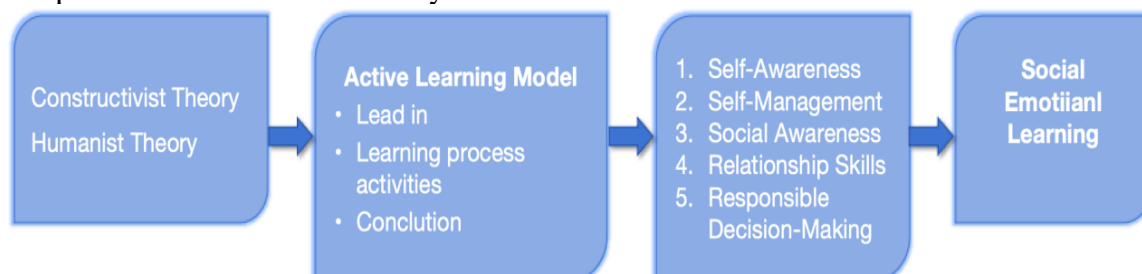


Figure 1 Conceptual Framework (Source: Constructed by the researcher)

Research Methodology

1. Research Methods

The study employed both qualitative and quantitative research methods to achieve a comprehensive understanding of social emotional learning among college students. This multi-method approach included literature reviews, semi-structured interviews, development of research instruments, data collection, and data analysis.

2. Population and Sample Group

The population for this research comprised college students from various departments at Guangdong Baiyun University. A sample of 304 students from the preschool education department was selected using simple random sampling for the pre-test, ensuring an unbiased representation of the target population.

3. Research Tools

3.1 Literature Review

At the beginning of the study, researchers collected a wide range of literature through multiple channels including CNKI, VIP Data, Wanfang Data, Google Scholar, the Srinakharinwirot University library platform, and websites related to educational departments and academic research in China. Using "social emotional learning" as the keyword, a systematic search of domestic and international literature on the topic was conducted. This helped to create a comprehensive interview plan aimed at deeply exploring the definition and components of social emotional learning among college students.

3.2 Semi-Structured Interviews with Professors

Gathering insights from frontline educators is crucial when developing an active learning model to enhance students' social emotional learning. Semi-structured interviews were conducted with five distinguished professors from the education and psychology departments of Srinakharinwirot University and Guangdong Baiyun University. The interview probes focused on:

(1) Defining the components of social emotional learning among college students in the Chinese context.

(2) Obtaining guidelines for developing an active learning model to enhance social emotional learning among college students in China.

(3) Developing research measurement instruments to evaluate social emotional learning among college students in China.

3.3 Development of Research Instruments

(1) Construction of a Survey Tool

Based on the literature review and interviews with teaching staff, the authors deemed social emotional learning crucial for the personal development, academic success, and future career paths of college students, as well as for effectively enhancing self-awareness, interpersonal relationships, emotional management, and responsible decision-making. The social emotional learning of Chinese college students primarily encompasses five aspects: self-awareness, social awareness, self-management, relationship skills, and responsible decision-making. Under the guidance of teachers, the author drafted 35 questions across these five areas, with each domain containing 6-7 questions. Each question was phrased in the first person and designed with four response options, reflecting how closely each statement matched the respondent's experience.

(2) Assessment of Measurement Tools

Reliability and validity are fundamental standards for measuring the effectiveness in qualitative research. Data collection and testing were conducted among a non-experimental group of 262 students from the same region as the experimental group in Guangdong province.

The collected data were analyzed for reliability and validity using SPSS, with reliability indices above 0.70 and validity indices above 0.7, indicating good quality of the questionnaire suitable for formal testing (Table 1).

Table 1 Result of assessment of Measurement Tools

Evaluation at a glance	Results (N=262)			
	Mean	S.D	Reliability	Validity
Self-awareness	2.10	0.57	0.738	0.936
Self-management	2.48	0.24		
Social awareness	2.19	0.42		
Relationship skills	2.04	0.58		
Responsible decision-making	2.59	0.22		
Mean value	2.28	0.41		

4. Establishment of a Learning Model

(1) Participant Selection

Using simple random sampling, 304 students from the preschool education department of Guangdong Baiyun University (2023 cohort) were selected as pre-test participants. Based on the final survey results, 40 students were chosen to participate in the actual teaching activities.

(2) Design Steps of the Learning Model

Based on suggestions from five educational and psychological experts obtained through semi-structured interviews, the learning model was implemented over six weeks, with 2-3 sessions per week, each lasting 90 minutes. The model included five phases: lead-in, learning activities process, and conclusion (Figure 2).

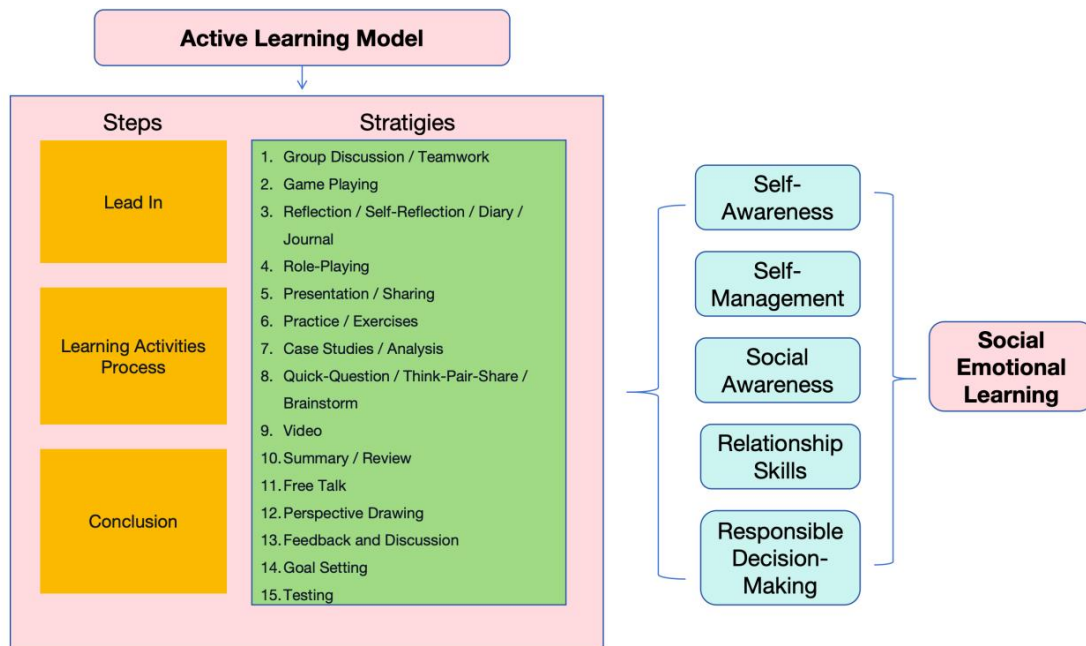


Figure 2 Learning model (Source: Constructed by the researcher)

The quality of the learning model was assessed for consistency and applicability by three experts. After data collection, the data were analyzed and evaluated. The Project Objective Consistency Index (IOC) ranged from 0.6 to 1.0, all above the standard value of 0.5, indicating good consistency in the components of the learning model. The applicability scores ranged from 3.8 to 4.8 with standard deviations between 0.447 and 0.894, indicating high applicability as the average scores exceeded 3.51.

5. Data Collection and Analysis

In 2024, the active learning model to enhance college students' social emotional learning was implemented at the preschool education department of Guangdong Baiyun University, running over six weeks with 2-4 sessions per week, each lasting 90 minutes. Before and after implementing the learning model, a social emotional learning survey was conducted among all students in both the control and experimental groups. The survey covered five dimensions, reflecting the five key aspects of social emotional learning: self-awareness, social awareness, self-management, relationship skills, and responsible decision-making. Each section included 6-7 questions, with each question scoring up to 4 points. A total of 40 students participated in the testing, achieving a 100% participation rate. Descriptive statistics were performed using SPSS to assess the students' social emotional learning intervention. (Table 2).

Table 2 Result of students' social emotional learning the intervention

Evaluation at a glance	Results (N=40)					
	Pre-test		Post-test		T	P
	Mean	S.D	Mean	S.D		
Self-awareness	1.72	0.21	3.21	0.31	-17.37	.000
Self-management	1.85	0.11	3.08	0.32	-23.66	.000
Social awareness	2.30	0.18	3.13	0.26	-13.88	.000
Relationship skills	1.67	0.11	3.12	0.25	-24.83	.000

Responsible decision-making	2.49	0.14	3.21	0.26	-13.56	.000
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As shown in the table above, the significant increase in the post-test scores compared to the pre-test scores indicates a notable improvement in students' social emotional learning following the intervention with the active learning model. This improvement is further supported by the calculated t-values, which are statistically significant at the $p < .05$ level, indicating a significant correlation between the pre-test and post-test scores.

Moreover, as indicated in the table, the average scores for self-awareness, social awareness, self-management, relationship skills, and responsible decision-making after the experiment were all higher than before the intervention. The corresponding t-values are -17.37, -23.66, -13.88, -24.83, and -13.56, respectively, with p-values all less than 0.001. This shows that the learning model significantly enhances various aspects of students' social emotional learning.

Research Results

Objective 1: Understanding the Components of SEL among College Students

The findings confirm that Social and Emotional Learning (SEL) is a multifaceted educational approach that aids college students in developing essential skills for emotional management, interpersonal relationships, and decision-making. The analysis identified five critical components of SEL as perceived by the students: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. These components were quantitatively assessed using the survey tool, which showed that students acknowledge the importance of these elements but experience varying degrees of proficiency in each area. Statistical analysis of the survey responses indicated a general awareness of SEL components, with mean scores ranging from 2.10 to 2.59 on a 4-point scale, suggesting moderate engagement with these concepts.

Objective 2: Development and Description of an Active Learning Model

The study successfully developed an active learning model tailored to enhance SEL among college students. This model was designed through iterative feedback from educational experts and was structured into three primary phases: lead-in, learning activities, and conclusion. Each phase was aimed at engaging students in practical and reflective learning activities that promote the development of the five key SEL components. The model's implementation involved interactive sessions that encouraged active participation, group discussions, and personal reflections, which were facilitated by trained educators.

Objective 3: Evaluating the Effectiveness of the Active Learning Model

The effectiveness of the active learning model was evaluated through a pre-test and post-test design. The SEL capabilities of students were measured before and after the implementation of the model. The results demonstrated significant improvements in all five SEL domains. Statistical tests, specifically paired t-tests, were conducted to compare the pre-test and post-test scores. The results were statistically significant ($p < .001$ for all domains), with t-values ranging from -13.56 to -24.83, indicating a substantial enhancement in SEL capabilities post-intervention. These findings underscore the model's efficacy in improving students' SEL skills.

Summary of the Findings

The results from this study provide robust evidence supporting the effectiveness of an active learning model in enhancing the social emotional learning of college students. The integration of active learning, constructivist theories, and social emotional learning principles has proven to significantly improve the SEL levels among participants. This comprehensive approach not only addressed the initial educational need but also demonstrated substantial improvements in students' abilities to manage emotions, foster relationships, and make responsible decisions. The success of the model fills a significant gap in existing research and offers a viable method for educators looking to integrate SEL more effectively into their curricula.

Discussions

Active learning is defined as "instructional activities involving students in doing things and thinking about what they are doing" (Bonwell & Eison, 1991), embodying "students' efforts to actively construct their knowledge" (Carr et al., 2015). Its theoretical foundation is rooted in constructivist learning theory, which emphasizes that individuals learn by constructing their own knowledge, connecting new ideas and experiences with existing knowledge to form new or enhanced understandings (Bransford et al., 1999). Active learning requires the manifestation of students' cognitive work, which includes engaging in activities and/or class discussions to facilitate learning, emphasizing higher-order thinking and often involving group work (Freeman et al., 2014). Common teaching strategies include the Pause Procedure, Think-Pair-Share, Minute Papers, and concept mapping, among others. Thus, the active learning model enables students to actively participate in knowledge construction, deepening their understanding through various activities and social interactions (Brame, 2016), thereby enhancing their learning and social emotional learning.

These theories have provided substantial guidance for the development of the learning model in this study. The experimental results from this research confirm the effectiveness of these theories: the active learning model was applied to guide first-year students from the preschool education department of Guangdong Baiyun University in 2023. After one and a half months of implementation, the college students participating in the active learning model experiment showed significant improvements in self-awareness, social awareness, self-management, relationship skills, and responsible decision-making. Furthermore, the trend of social emotional learning development in China indicates that an increasing number of educators and policymakers recognize the importance of emotional education and are incorporating it into educational objectives. Simultaneously, the student-centered educational philosophy in higher education has gained wide recognition and praise. This philosophy emphasizes the activeness and participation of students in the learning process, aiming to cultivate their comprehensive qualities and innovative abilities. Therefore, the theories, concepts, and teaching strategies of active learning can be broadly applied across various subject courses, combining to enhance the overall quality of students. In course designs based on active learning, students are able to engage in more experiential, proactive communication and interaction with educators or peers, thereby enhancing learning effectiveness. Specifically, active learning methods foster active participation in the classroom, encouraging students to ask questions, participate in discussions, and engage in practical activities. This teaching method not only helps improve students' academic performance but also nurtures their critical thinking and problem-solving skills.

Future research could further explore the application effects of active learning at different educational stages and across different subjects, as well as how to design personalized active learning approaches for diverse student groups. Additionally, research could investigate how to integrate modern technologies, such as Virtual Reality (VR) and Augmented Reality (AR), into the active learning model to enhance teaching effectiveness.

Recommendations

1. Theoretical Suggestions

Integration of Learning Theories: Future research should continue to explore how the integration of active learning, constructivist learning, and social emotional learning theories can be optimized to further enhance the educational outcomes. Examining how these theories interact and complement each other could provide deeper insights into the mechanisms behind effective learning processes.

Expansion of Learning Frameworks: It is advisable to explore additional psychological and educational frameworks that could complement the current model. Incorporating aspects of cognitive behavioral theory, for example, could enhance the understanding and application of SEL in managing emotional responses and behavior.

2. Policy Suggestions

Curriculum Development: Educational policymakers should consider incorporating structured SEL and active learning modules into the national curriculum guidelines. This would standardize the approach across educational institutions, ensuring that all students benefit from these proven methods.

Teacher Training Programs: There should be a focus on developing comprehensive teacher training programs that equip educators with the necessary skills and knowledge to effectively implement SEL and active learning strategies. These programs should emphasize the importance of fostering both academic and emotional intelligence.

3. Practical Suggestions

Classroom Application: Educators should apply active learning techniques such as problem-based learning, project-based learning, and cooperative learning to promote social and emotional competencies. Practical implementations could include workshops, role-playing activities, and group projects that require active engagement and emotional investment from students.

Technology Integration: Schools should leverage technology to enhance active learning environments. Using tools like virtual reality (VR) and augmented reality (AR) can create immersive learning experiences that foster deeper emotional and social understanding.

Community Involvement: Establish partnerships with local communities to provide students with real-world experiences that enhance their social emotional skills. Community service projects and internships can serve as practical applications of SEL, promoting empathy, teamwork, and responsibility.

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