Exploration and Experiment on Implementation of "Social and Emotional Learning" in China for College Students

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Abstract: It is the essential premise and basis of promoting school emotional quotient (EQ) education to explore and formulate scientific EQ educational curriculum system. “Social and Emotional Learning” (SEL) is an educational program aiming to enhance students' EQ and social skills proposed by American scholars, which has been widely implemented and promoted in developed countries such as Europe and America. This paper testified the actual influence of SEL on Undergraduates' EQ cultivation by experimental study on the object of undergraduates students. There were 57 participants and 29 in the control group. Emotional Intelligence Scale (EIS) was administered before and after intervention. After a semester of social and emotional learning courses, the EQ level of the experimental group was significantly improved. Five dimensions which P <0.05 and the average value of the experimental group was greater than the control group. This result shows that SEL curriculum is of great significance to Undergraduates' EQ training. The results of this study provide a theoretical basis and reference for the creation of EQ education curriculum in China.

Keywords: College Students, Social and Emotional Learning, Emotional Quotient, Explorative Experiment

1. Introduction

Since emotional intelligence theory has been brought in China in the late 1990s, EQ has been widely recognized and accepted by the academic field and the general public. With the importance of EQ being confirmed constantly, demands for implementing EQ education become more and more imperative. The mention of EQ education from the Academy was almost as early as the introduction of the concept of emotional intelligence, such as Cui W. and Cui H. T. (1997) expounded the importance of emotional education for adolescents' psychological quality improvement in the article named "Attach Importance to EQ Education, Cultivate Fine Psychological Quality" [1]. Around 2005, newspapers also began to appear the discussion about the importance of EQ education, such as "The Importance of Children's EQ Education" in Democratic Consultative Paper and the "EQ Education, never be neglected" in Tianjin daily. With the influence and promotion of academia and public, more and more parents began to pay attention to children's EQ education and training. Training organizations related to children and youngsters’ EQ education were also brought into being. According to the pertinent survey by East China Normal University in 2014, 78.2% of the Chinese parents are concerned about children's EQ education (“Parents' Views on Children's EQ” 2017). Parents who are more mature with higher educational background pay more attention to children's EQ development and training than others [2]. However, the survey also shows that the concept of EQ education still quite fuzzy for Chinese parents. Furthermore, parents were lack of a comprehensive understanding for the scientificity and effectiveness of various EQ education training organizations [3]. As for ultimate reason, there is no uniform understanding on how to carry out emotional education and even the lack of feasibility plan in the domestic academic circle and the educational world.

Therefore, it is a significant but difficult subject to enact EQ education standards and to do research into the feasibility program of EQ education. “Social and Emotional Learning” (SEL) was put forward by American scholars, which is an educational program to enhance students' emotional and social skills [4]. Foreign studies show that “social and emotional learning” has a positive impact on improving students' EQ and social skills, promoting psychological
health and reducing problem behavior and so on [5]. This study conducted an experimental research on the object of college students in China, and testified the effectiveness and feasibility of SEL on college students' EQ training for providing theoretical guidance and decision-making reference for EQ education implementation in China.

2. Research Design

SEL programs are most widely implemented in the United States which being integrated into the education system by various forms such as curriculum projects, teaching methods and others. According to the related research and tracking investigation, it is revealed that SEL has achieved good effects in promoting students' emotional intelligence, preventing psychological problems, developing their personality [6] and establishing good interpersonal relationship [7]. In 2002, the United Nations Educational, Scientific and Cultural Organization (UNESCO) promulgated ten basic principles about the implementation of SEL to 140 countries all over the world which not only advanced SEL a faster development in the United States, but also radiated to many other countries and regions including Europe, South America, North America, Southeast Asia and Oceania. Nowadays, it has become a hot issue in many countries in fields of EQ training and students' comprehensive quality improvement [8]. There are five core competencies and many other sub-dimensions towards different settings (Table 1) aiming at bringing up students’ ability to identify emotions, recognize strengths and establish interpersonal relationships through diverse activities in order to level up students' EQ finally [9].

| Core Competence | Sub-dimension | Connotation |
|-----------------|---------------|-------------|
| 1. Self Awareness | Emotions Identification | The ability to accurately recognize one’s own emotions and others'. |
|                  | Strengths Recognition | The ability to acknowledge and cultivate one's and others' strengths and positive qualities. |
| 2. Self-Management | Emotions Management | The ability to successfully monitor and regulate one's emotions in order to deal with different situations. |
|                  | Goal Setting | The ability to set up and realize the prosocial goals in the short or long term. |
|                  | Communication | The ability to use verbal or nonverbal words to express and communicate clearly, listen actively and cooperate with others. |
| 3. Relationship Skills | Building up Interpersonal Relationships | The ability to establish and maintain healthy and rewarding relationships with diverse individuals and groups. |
|                  | Negotiation | The ability to effectively negotiate and reach win-win solution plan. |
|                  | Refusal | The ability to improve the effectiveness of communication, to make decisions in accordance with social norms, and to learn to reject appropriately. |
| 4. Social Awareness | Opinions Adoption | The ability to listen and understand others' opinions and to judge and act according to concrete situations. |
| 5. Responsible Decision Making | Appreciation Diversity | The ability to understand differences between the individual and social groups and learn to cooperate and draw on each others’ merits. |
|                  | Analyzing Situations | The ability to accurately perceive the decision-making situation and assess the factors that may influence the reaction. |
|                  | Taking Responsibility | The ability to acknowledge and understand individual moral, security and legal obligations or responsibilities. |
|                  | Respecting Others | The ability to give others the respect they need, be empathetic and actively create a better environment. |
|                  | Solving Problems | The ability to put forward, execute and assess constructive problem solutions. |

This study refers to the SEL curriculum program prevalently implemented in the United States which designs a series of SEL courses according to the actual characteristics of college students in China. The curriculum includes 13 classes, each one with a different theme. The objectives, course contents and related activities are determined according to different subjects (Table 2).

| Lesson | Theme | Objective |
|--------|-------|-----------|
| Lesson 1 | Course Introduction | A preliminary understanding of SEL, introduce the main content of the course, class hours and other related arrangements. |
| Lesson 2 | Emotions Recognition | Learn to understand different emotions, understand the characteristics of negative emotions and possible negative effects and study how to analyze the cause of bad emotions rationally. |
| Lesson 3 | Understanding Others’ Emotions | Learn to understand others’ emotions by observing facial expressions, body movements, tone, etc. |
| Lesson 4 | Emotion Management | Take the right attitude towards yourself and others' negative emotions, master the skills of emotional management, and learn to how to cope with negative emotions. |
| Lesson 5 | Releasing Stress | Improve students' self-awareness of stress levels, understand the techniques of releasing stress and reduce the adverse effects caused by stress. |
| Lesson 6 | Strengths Recognition | Learn to recognize self-strengths and shortcomings bravely, accept gaps or differences between yourself and others and develop personal strengths actively. |
| Lesson 7 | Find Others’ Advantages | Learn to treat others with appreciation, recognize the strengths of others, understand and respect the


| Lesson  | Theme                          | Objective                                                                 |
|---------|-------------------------------|---------------------------------------------------------------------------|
| Lesson 8 | Change-Place-Reflect          | learn to look at problems from a variety of viewpoints, think from others' standpoints, and try to understand the different views of others. |
| Lesson 9 | Self-Motivated Communication and Opinions Adoption | Learn to face everything with positive attitude and think positively. |
| Lesson 10 | Negotiation and Rejection     | Communicate effectively with others and learn to appreciate and adopt others’ opinions moderately. |
| Lesson 11 | Maintain Good Interpersonal Relationships | Reach win-win situation to the existing problems through effective communication and learn to refuse others in an appropriate manner. |
| Lesson 12 | Summary Conclusion            | Establish and maintain good relationships with individuals or groups, learn to deal with problems that may happen in interpersonal relationships, and be good at sharing and working with people. |

3. Methods

3.1. Objects

Two classes of freshmen are selected as subjects who major in engineering management of a university in Jiangsu. One is randomly selected as the experimental group and the other as the control group. There are 29 students in the experimental group, including 19 males and 10 females. The control group is composed of 28 students, including 19 females and 9 females. In addition to the SEL interventions exerted in this study, there are no significant differences in the other respects of the two classes, such as teaching arrangements, study schedule, and daily life.

Table 3. Basic information of the experimental group and the control group.

| Subject          | Male | Female | Total | Average Age | Major                |
|------------------|------|--------|-------|-------------|----------------------|
| Experimental group | 19   | 10     | 29    | 19.6        | Engineering Management |
| Control group    | 19   | 9      | 28    | 19.8        | Engineering Management |

3.2. Research Tool

Teaching materials and content

Based on SEL curriculum in USA and the characteristics of universities in China, this study designs the SEL teaching curriculum for college students, which is divided into 13 classes.

EQ measurement scale

In this study, EIS (Emotional Intelligence Scale) was used as an EQ measurement instrument, which was a self-report questionnaire developed by Schutte, et al. (Schutte et al. 1998). It was translated into Chinese by Wang C. A. (2002) from South China Normal University. Wang verified its a coefficient to be 0.83 with high reliability and validity [10]. In that scale, which consists of 33 items, using the five-point scoring method of Likert, 1 is very inconsistent, 2 is not consistent, 3 is undecided, 4 is more consistent, and 5 is very consistent. Participants read each item and decide whether they ‘strongly disagree’, ‘disagree’, ‘undecided’, ‘agree’, or ‘strongly agree’ with the item. The score for each dimension is given by the sum of their item punctuation. 1-5 are respectively recorded as 1 point, 2 points, 3 points, 4 points, 5 points, of which 5, 28, 33 as reverse score. The scale has a total of five dimensions, namely, self-emotional awareness, others’ emotional awareness, self-emotional management, others’ emotional management and the utilization of emotion.

3.3. Procedure

3.3.1. Pre-Test

Students in the experimental group and the control group respectively participated the test and filled the Emotional Intelligence Scale before the experiment.

3.3.2. Curriculum Implementation

The curriculum was divided into 13 classes according to different subjects, 40-50 minutes per class, once a week. The course was conducted in the second semester of the freshman year, from May to July. The participants were 29 students in the experimental group while students in the control group did not participate in the experimental curriculum.

3.3.3. Post-Test

After finishing the experimental course, students in the experimental group and the control group were asked to fill the Emotional Intelligence Scale again.

3.3.4. Data Analysis

In this study, the experimental data was processed by SPSS21.0. The paired samples T test was used to inspect the difference in the same group while the independent samples T test for difference test among the different groups.

3.4. Research Design

Pretest-posttest equivalent group design was used in this study. Pre-test of EQ level was performed in both of the experimental group and the control group before the research. During the course of the experiment, the experimental group received intervention of the designed curriculum, and the control group wasn’t given any special intervention. After the end of the experiment, the two groups were respectively received post-test. The effect of the curriculum was analyzed by the difference of EQ level before and after the curriculum. The experimental design model is as follows:
Table 4. Basic model of the experiment design.

|                | Pre-test | Intervention | Post-test |
|----------------|----------|--------------|-----------|
| Experimental group | T1       | X1           | T2        |
| Control group    | T3       | T4           |           |

Note: T1 experimental group pre-test, T2 experimental group post-test, T3 control group pre-test, T4 control group post-test, X1 curriculum intervention in the experimental group.

4. Findings

4.1. Comparison of EQ Level of Two Class Students Before Experiment

The two pre-test datum of Emotional Intelligence Scale were compared between the experimental group and the control group. Descriptive datum of the two groups are displayed in Table 5. There is no significant difference of the EQ level between the experimental group and the control group before the experiment in five dimensions, P>0.05, which is basically homogeneous.

4.2. Comparison of EQ Level of Two Class Students Before and After Experiment

In order to further explain the impact of social emotional learning experimental curriculum on the level of students' EQ, this study also examined the difference of pre-test and post-test Emotional Intelligence Scale datum between the experimental and control groups before and after the experiment. Comparative results of the experimental group in EQ levels before and after the experiment are displayed in Table 6. Five dimensions of P<0.05 and the post-test average value of the experimental group is greater than its post-test average, which means after the intervention of SEL curriculum, the EQ level in the experimental group is significantly improved compared with that before the experiment. In addition, the comparative results of others’ emotional perception P<0.001 indicates that the difference before and after the intervention is extremely conspicuous.

Table 5. The test results of pre-test independent sample T for experimental and control groups.

| Dimension               | Group          | AVG  | SD   | T     | P    |
|-------------------------|----------------|------|------|-------|------|
| Self-Emotional Awareness| Experimental Group | 3.729| 0.428| 0.663 | 0.510|
|                         | Control Group  | 3.655| 0.425|       |      |
| Others’ Emotional Awareness | Experimental Group | 3.425| 0.493| -0.212| 0.833|
|                         | Control Group  | 3.452| 0.471|       |      |
| Self-Emotional Management | Experimental Group | 3.828| 0.433| 0.472 | 0.639|
|                         | Control Group  | 3.772| 0.450|       |      |
| Others Emotional Management | Experimental Group | 3.845| 0.569| 0.589 | 0.558|
|                         | Control Group  | 3.762| 0.487|       |      |
| Emotion Utilization     | Experimental Group | 3.616| 0.521| 0.223 | 0.824|
|                         | Control Group  | 3.587| 0.457|       |      |

Table 6. Paired samples T test results of experimental group between pre-test and post-test.

| Dimension               | Pre-test and Pro-test | AVG  | SD   | T     | P    |
|-------------------------|-----------------------|------|------|-------|------|
| Self-Emotional Awareness| Pre-test              | 3.730| 0.428| -2.163| 0.039|
|                         | Post-test             | 3.931| 0.322|       |      |
| Others’ Emotional Awareness | Pre-test              | 3.425| 0.493| -4.795| 0.000|
|                         | Post-test             | 3.781| 0.409|       |      |
| Self-Emotional Management | Pre-test              | 3.828| 0.434| -2.767| 0.010|
|                         | Post-test             | 4.069| 0.354|       |      |
| Others’ Emotional Management | Pre-test              | 3.845| 0.569| -2.339| 0.027|
|                         | Post-test             | 4.069| 0.317|       |      |
| Emotion Utilization     | Pre-test              | 3.616| 0.521| -3.027| 0.005|
|                         | Post-test             | 3.872| 0.351|       |      |

Table 7 shows the results of the comparison of EQ level in the control group before and after the experiment. There is no significant difference in the five dimensions of P<0.05. It can be seen that there is no significant change in the level of EQ of students without accepting the intervention of the experimental course of social emotional learning.

Table 7. Independent sample T test results of control group between pre-test and post-test.

| Dimension               | Pre-test and Pro-test | AVG  | SD   | T     | P    |
|-------------------------|-----------------------|------|------|-------|------|
| Self-Emotional Awareness| Pre-test              | 3.655| 0.425| -0.169| 0.867|
|                         | Post-test             | 3.673| 0.429|       |      |
| Others’ Emotional Awareness | Pre-test              | 3.452| 0.471| -0.463| 0.647|
|                         | Post-test             | 3.506| 0.407|       |      |
| Self-Emotional Management | Pre-test              | 3.772| 0.450| -0.469| 0.643|
|                         | Post-test             | 3.817| 0.440|       |      |
| Others’ Emotional management | Pre-test              | 3.762| 0.487| -0.094| 0.926|
|                         | Post-test             | 3.774| 0.543|       |      |
| Emotion Utilization     | Pre-test              | 3.587| 0.457| -0.378| 0.708|
|                         | Post-test             | 3.628| 0.357|       |      |
4.3. The Variation of EQ Level Between the Experimental Group and the Control Group after the Experiment

During the experiment, the experimental group was received the intervention of SEL curriculum while the control group was not given any special intervention. The two groups were examined again at the end of the experiment. Results are displayed in Table 8, P<0.05, which can be seen the marked difference between the two groups. Further observation of the two groups’ mean values demonstrates that the mean value of each dimension in the experimental group is greater than that of the control group. After the experimental intervention, the EQ level of the experimental group is evidently higher than the control group.

| Dimension                | Group         | AVG   | SD    | T     | P     |
|--------------------------|---------------|-------|-------|-------|-------|
| Self-Emotional Awareness | Experimental  | 3.931 | 0.323 | 2.575 | 0.013 |
|                          | Control       | 3.673 | 0.429 |       |       |
| Others’ Emotional Awareness | Experimental | 3.782 | 0.409 | 2.552 | 0.014 |
|                          | Control       | 3.506 | 0.407 |       |       |
| Self-Emotional Management | Experimental | 4.056 | 0.354 | 2.262 | 0.028 |
|                          | Control       | 3.817 | 0.440 |       |       |
| Others’ Emotional Management | Experimental | 4.069 | 0.317 | 2.496 | 0.015 |
|                          | Control       | 3.774 | 0.543 |       |       |
| Emotion Utilization      | Experimental  | 3.872 | 0.351 | 2.606 | 0.012 |

5. Discussion and Future Implications

In 1994, representatives of American emotional intelligence, Goleman, etc established the Collaborative for Academic, Social and Emotional Learning (CASEL), and actively promoted the implementation of the “Social and Emotional Learning” to try to enhance students' EQ, improve their attitudes towards study and life, and correct their problematic behavior through systematic teaching or training (CASEL 2010). After more than 20 years practice and investigation, SEL in American has been more mature in teaching content, teaching practice and so on. Its teaching standards are gradually moving from relative independence to unity [11]. Overseas experiences showed that promoting the implementation of SEL in schools can greatly improve students’ social and emotional ability, help students to improve academic achievements, cultivate good habits and cut down on mental health problems, which brings students positive effects in many aspects [12]. At present, Illinois, West Virginia and Kansas have proposed SEL standards for all grades students in the state while other states are increasingly concerned about that ability of students. However, research on SEL in China has just begun, and there is still no enough knowledge about its content and process especially about the educational function and so on.

To this end, this research takes college students as the object to carry out teaching experimental activity, focusing on the effect of SEL on the college students’ EQ training. The results of comparison between the experimental group and the control group show that SEL has a significant effect on college students' EQ training. With the increase of age and the improvement of experiences, the EQ level in the control group also increases after one semester, but the improvement does not reach significant degree. The EQ level is significantly changed in the experimental group including self-emotional awareness, others’ emotional awareness, self-emotional management, others’ emotional management and the utilization of emotion. After a semester’s study of SEL education, the EQ level is significantly higher than the control group, which indicates that SEL had positive significance to college students' EQ cultivation.

In essence, the initial philosophy and the ultimate goal are to teach students how to understand and control emotions, how to care about others, establish and maintain good interpersonal relationships, make responsible decisions and deal with all kinds of problems effectively, etc.[13]. Therefore, it is important to grasp their internal feelings, external tendencies, behavior characteristics, adjustment methods, etc. through SEL. When students’ emotions arise, their understanding of themselves would no longer just stay at a vague and perceptual level. Teaching methods like discussion, situation simulation, etc. are used in the teaching process to help students to master a variety of emotion adjustment methods. Finally, students would no longer suffer from agony passively or feel helpless when they face the interference of negative emotions. More importantly, SEL mainly helps integrating emotions, cognitions, and behaviors by guiding the study of emotions. When SEL help students improve abilities of identifying, adjusting and applying emotions, students could be more aware of understanding others and more likely to be positive and optimistic. They may also have more harmonious interpersonal relationships, and their problem-solving abilities could be strengthened.

Compared with the general psychological counseling courses, SEL orients towards all students, and its main concern is conducting widespread prevention and promotion. All the students are able to benefits a lot from SEL guidance activities, including sound students, the students with negative psychological tendencies and the students who show serious problematic behavior. Compared with the general social courses, SEL not only focuses on students’ practical skills like social skills, but also pay more attention to the education and guidance of emotion and other psychological
factors.

This study confirms the effectiveness of SEL for college students' EQ training which has a positive theoretical and practical significance. On the one hand, EQ education is scientific and systematic. Emotional intelligence is plastic and developing. It changes along with one’s age, knowledge and life experience. But the growth of individual EQ is not disordered, it has its particular inherent rules. EQ education should follow its rules and proceed in an orderly way without a rush advance. Children’s brain development affects their mental growth, and it also affects their emotional intelligence development. Therefore, the content and standards of EQ education should be different for individuals at different ages. For example, when identify the dimensions of other people's emotions with EQ, the students in primary school, junior, high school and university should be different. In the primary school stage, students in lower grades only need to be able to realize that others may have different emotional experiences from themselves, and students in higher grades should be able to further distinguish other students' emotional clues including language, body and scene, etc. Requirements for students in junior high school will be further improved, they should be able to predict other people's emotions and expectations in different circumstances. In high school, students would be able to analyze the similarities and differences between the expectations of themselves’ and others’, and they should use conversational skills to understand other people's feelings and expectations. At university stage, students should grasp the skills to express understanding and respect to others different views. On the other hand, it is necessary and feasible for schools to set up EQ educational courses. Concerning how to cultivate EQ, domestic and foreign scholars have carried out extensive research and discussion. The United States and other developed countries launched the teaching practice of EQ training in advance and have achieved abundant results which are worth learning. In China, the importance of EQ has been widely recognized by scholars and the community for a long time. However, there are only few private education and training institutions to practice EQ education. Therefore, we should speed up the study of the feasibility of establishing EQ courses in the future school education, including organizing experts to formulate learning standards, drawing up relevant learning materials, and training relative teaching staff.

6. Conclusions

Social and emotional learning has a significant positive impact on Chinese college students' EQ training. Specifically, students’ attitude, academic achievement, emotional repression, problem solving and other aspects have been significantly improved. It can be seen that social and emotional learning is mainly reflected in the improvement and improvement of students in various aspects. It is helpful to improve students' learning attitude and their academic performance. It can help students to understand and solve problems correctly and reduce the occurrence of problem behaviors. It helps students form pro-social skills and promotes social development. It is an effective way and direction for universities to strengthen students' EQ education in the future.

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