### The Growth Mindset and Student Social and Emotional Skill Development: An Empirical Analysis Based on the OECD's SSES

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Abstract: The mindset is a crucial factor influencing the behavior of individuals. This study aims to evaluate the growth mindset of 10- and 15-year-old adolescents and the relationship between their mindsets and social and emotional skills from the viewpoints of students, parents, and teachers, using OECD's SSES 2019 data from Suzhou City. The research results show that the growth mindset of students is affected by their socioeconomic status; and that the growth mindset of students, parents, and teachers can significantly and positively predict student social and emotional skills?

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#### Introduction

The growth mindset is a crucial mental attitude in promoting student social and emotional skill development. This study utilized China-related data from the OECD's Survey on Social and Emotional Skills (SSES) 2019 to explore developmental levels of the growth mindset among Chinese 10- and 15-year- old students and to examine the relationship between their growth mindset and social and emotional skills as well as the influence of the growth mindset of parents and teachers on student social and emotional skill development, in an effort to provide valuable insights for the improvement of future education.

### **Methodologies**

### Sample Selection

Stratified two-stage cluster sampling was employed to obtain data of 10- and 15-year-old Chinese students from primary and secondary schools (excluding schools for children of migrant workers and special education schools) in six districts and four counties of Suzhou City. A total of 7,550 subjects were investigated, with 3,800 students from the 10-year-old group (aged between 10 years and two months and 11 years and one month) and 3,750 students from the 15-year-old group (aged between 15 years and two months and 16 years and one month). Eventually, 7,268 students completed the procedure of the survey, making up 96.26% of the original participants, and were weighted to represent 150,964 primary and secondary students in Suzhou.

#### **Measurement Tools**

#### (i) Social and Emotional Skills

Based on the Big Five personality traits model, OECD's SSES developed a 96-item questionnaire, in which student social and emotional skills were categorized into five dimensions: task performance, emotional control, collaboration, openness, and interactions with others.

#### (ii) The Growth Mindset

In OECD's SSES, there were three items intended to measure individuals' growth mindset, corresponding to social skills, emotional skills, and intelligence, respectively. This study chose to incorporate the two items pertinent to social and emotional skills as it focused on these two aspects. To be specific, the following two items were used to measure the growth mindset of students, parents, and teachers: (1) You cannot make too much change to your social skills by yourself; (2) You cannot make too much change to your emotional skills by yourself.

#### (iii) Analysis Methods

The study conducted descriptive statistics, correlation, and regression analyses on the growth mindsets and social and emotional skills of students, parents, and teachers, using the software SPSS 25.0. The growth mindsets of students, parents, and teachers were the independent variables, skills included in the SSES were dependent variables, and students' gender, age, and socio-economic status (SES) were control variables in this study. Multi-variate linear regression analyses were performed to evaluate the impact of the growth mindsets of students in the two age groups as well as their parents and teachers on their social and emotional skills.

#### **Findings**

#### The Overall Status of Students' Growth Mindset

In terms of the growth mindset, the 15-year-old group scored slightly higher than the 10-year-old one, students scored higher than parents and teachers on average, and parents and teachers of the 15-year-olds scored higher than those of 10-year-olds.

# Differences in the Growth Mindset among Various Student Groups

There was no significant difference in the rating of the growth mindset between male and female students. The rating of the growth mindset of the 15-year-olds was remarkably higher than that of the 10-year-olds. Students with high SES scored significantly higher than those with low SES.

### Correlations between the Growth Mindset and Student Social and Emotional Skills

The growth mindset was positively correlated with the 15 social and emotional sub-competencies among students, and the correlation between the two aspects was stronger among the 15-year-olds than the 10-year-olds. The correlation between the stress resistance and the growth mindset was weaker among the 15-year-old group than the 10-year-old one. There was a close relationship between parents' growth mindset and the 15 sub-competencies of students, which was, nevertheless, weaker than that between students' own mindset and these competencies. Teachers' growth mindset showed a weak correlation with most social and emotional competencies of students and even a negative correlation with some of them such as sociableness, resilience, optimism, emotional control, and trust.

## Influences of the Growth Mindset of Students, Parents, and Teachers on Student Social and Emotional Skills

Students' growth mindset could significantly and positively predict their social and emotional skills, with a stronger predictive power on 15-year-olds' social and emotional

skills. Overall, parents' growth mindset had a significant positive predictive effect on students' social and emotional skills. Teachers' growth mindset had a positive predictive effect on some of the social and emotional skills of students while it had a negative predictive effect on the other ones, with the overall predictive effect being insignificant.

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