

Open-Mindedness

Report on the Study of Social and Emotional Skills of Chinese Adolescents (IV)

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AS one of the five dimensions of social and emotional ability, open-mindedness is derived from the openness factor of the “Big Five Personality”, which describes one’s willingness to try and accept novel experiences. People with a high level of open-mindedness are more creative and artistic, while those with low level of openness are more obedient to tradition and pragmatic, but lack of innovation. According to the OECD research framework, open-mindedness includes tolerance, curiosity and creativity. This study is based on data collected from 10-year-old and 15-year-old students in Suzhou city participating in the OECD social and emotional ability assessment. It uses descriptive statistics, difference testing and regression analysis to present the performance of Suzhou students’ open-mindedness. This allows the study to provide reference for the accurate assessment of teenagers’ social and emotional abilities, in addition to further developing the quality of education in China. The study presents data results from the following three parts: the first part presents the overall score of open-mindedness, the correlation between open-mindedness and other sub-abilities, and the age difference of open-mindedness (comparison between 10 and 15 years old group), gender difference, urban-rural difference, and the difference between general high and vocational high; the second part presents the factors influencing open-mindedness through regression analysis, including background variables, individual factors, family upbringing, teacher factors, and school factors; the third part presents the effects of tolerance, curiosity and creativity on academic achievement (Chinese, math, art), edu-

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cational expectation, global consciousness, closeness to family, closeness to others, health, life happiness, life satisfaction, test anxiety and other life outcome variables of 10 and 15 year old students through regression analysis. The results are as follows:

The Overall Status of Open Capacity

From the scores of openness, Suzhou students' self-evaluate open-mindedness at a higher level, indicating that their confidence in themselves is higher than the international average. At the same time, the self-rating of students in the 10-year-old group is lower than that in the 15-year-old group. The same is true for parents' and teachers' ratings, which are themselves similar. In the distribution graphs of each sub-ability score of the two age groups, there is a small peak in the high end of the distribution graph of the 10-year-old group. The reason for this phenomenon may be that some elementary school students are susceptible to social expectations, leading them to be more likely to give what they think society may deem the "best" option.

From the perspective of the correlation between open-mindedness and other sub-abilities and compared with the international sample, the Suzhou sample has a higher correlation between tolerance, curiosity, and creativity in its openness. Moreover, the correlation coefficients are all higher than 0.5. There are also higher correlation coefficients between open-mindedness' sub-abilities and the sub-abilities of other abilities. Among them, open-mindedness has a higher correlation with task ability and collaboration ability. The correlation coefficient between curiosity and perseverance in the 10-year-old group is 0.69, and the correlation coefficient with cooperation score is 0.67. In contrast, the correlation is low between openness and emotional regulation and communication skills, while the correlation coefficient of the 15-year-old group is slightly lower than that of the 10-year-old group.

From the perspective of the difference in openness, the scores of openness of 15-year-old boys and girls are significantly lower than those of 10-year-olds. This is especially the case for the curiosity and creativity scores, with an effect size of about 0.8. Here, compared with boys, girls experience a decline. This result is particularly serious and deserves focused attention; gender differences in the openness of the 10-year-old group are small, with the only significant differences in tolerance scores (girls are higher than boys). The effect is weak, and there is a gender difference in the 15-year-old group. As a result, girls are more tolerant than boys, but they score significantly lower than boys in curiosity and creativity in these groups. In both urban and rural areas, the openness of students in schools in central urban areas is significantly higher than schools in rural areas, but the effect size is not large; in general, they are higher in vocational schools except for girls' creativity scores, while other indicators are significantly higher than those of vocational high school students.

Influencing Factors of Openness

Use multiple regression to analyze the factors that affect openness, including the effects of background variables, student variables, teacher variables, school variables, and family variables on tolerance, curiosity, and creativity.

Regarding background variables, among the 10-year-old students, parents' highest education level, family possessions and family book collection significantly positively affect tolerance, curiosity and creativity. The positive influence coefficients of the parents' highest educational background were 0.01, 0.01, and 0.04, respectively. The positive influence coefficients of family possessions were 0.45, 0.49, 0.47, respectively, and the positive influence coefficients of family book collection were 0.07, 0.06, and 0.09, respectively. Among students in the 15-year-old group, age, parents' highest education, family possessions, and family collections significantly positively affect tolerance, curiosity, and creativity. The positive coefficients of age are 0.61, 0.66, and 0.51, respectively, with parents being the highest. The positive influence coefficients of educational background were 0.02, 0.02, and 0.03, respectively. The positive influence coefficients of family possessions were 0.31, 0.31, 0.38, respectively, while the positive influence coefficients of family book collection were 0.05, 0.05, and 0.06, respectively.

Regarding student variables, among the 10-year-old students, security, friendships, and good habits significantly positively affect tolerance, curiosity, and creativity. Friends' high expectations and online time significantly negatively affect tolerance, curiosity, and creativity. Among the students in the 15-year-old group, one's sense of security, friendships, good habit friends, extensive social relationships, outdoor activity time, and growth-oriented thinking all significantly positively affect students' tolerance, curiosity and creativity. Friends' high expectations and online time significantly negatively affect students' tolerance, curiosity and creativity.

Regarding teacher variables, the teacher-student relationship significantly positively affects the tolerance, curiosity and creativity of students in the 10-year-old group and the 15-year-old group ($p < 0.01$; 10-year-old group: β is 0.12, 0.14, 0.11, respectively; 15-year-old group; $\beta = 0.14, 0.15, \text{ and } 0.13$). The training frequency has a significant positive effect on the three abilities of the 10-year-old group ($p < 0.01$, $\beta = 0.01, 0.01, \text{ and } 0.01$, respectively). Among the three abilities of the 15-year-old group, the influence is significantly negative ($p < 0.01$, $\beta = -0.01, -0.00, -0.01$, respectively).

Regarding school variables, except that the standard regression coefficient of school bullying on curiosity scores is insignificant, other factors including school belonging, school cooperation atmosphere, school competition atmosphere, and extra-school activities all significantly positively affect the tolerance of the 10-year-old and 15-year-old students Degree, curiosity and creativity.

Regarding family variables, whether it is a 10-year-old or a 15-year-old student, understanding mothers, understanding fathers, and parents' high expectations all significantly positively affect students' tolerance, curiosity, and creativity. Parent-child issues significantly negatively affect three abilities (p

< 0.01; 10-year-old group: $\beta = -0.04, -0.07, -0.04$, respectively; 15-year-old group; $\beta = -0.05, -0.07, -0.04$ respectively).

Openness and Life Outcomes

Among the 10-year-old students, tolerance, curiosity and creativity have significant positive effects on educational expectations, global awareness, health, happiness, satisfaction, and closeness to family and others. Among the 15-year-old students, tolerance, curiosity and creativity have significant positive effects on global awareness, health, happiness, satisfaction, and closeness to others. In addition, whether it is a 10-year-old or a 15-year-old group, the regression coefficients of curiosity scores on various variables of life outcomes have reached an extremely significant level, indicating the high importance of curiosity in students' lives.

It is therefore necessary to strengthen encouragement and guidance for high school girls, rural school students, and vocational school students to prevent "stereotype threats" caused by various gaps. During the enrollment stage of freshmen, we should protect students' curiosity and creativity, set reasonable course difficulty and academic burden, and prioritize inspiring freshmen's curiosity and cultivating students' active learning spirit. In addition, protecting and developing the curiosity of students is the key to the development of social and emotional abilities.

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