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An Experimental Study of a Role-playing Intervention on Self-Concept and Career Maturity in Children's Career Initiation

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Abstract: Purpose: The study examines the effect of a role-playing intervention on the self-concept and career maturity of Chinese primary school students. The research issue is if a role-playing-based education paradigm improves students' self-concept and career maturity compared to conventional methods. **Method:** The study involved a sample of 112 children aged 10 to 12 years from a primary school in inland China, who were randomly assigned to either the experimental or control group. Adapted versions of the *Chinese Career Maturity Questionnaire - Children* (CCMQ-C) and the *Chinese Self-Concept Scale - Children* (CSCS-C) were used to assess self-concept and career maturity, respectively. ANOVA was used to analyze the data, with gender as a factor. **Results:** (1) The experimental group demonstrated significant improvements in both career maturity ($t=-22.624$, $p<0.001$) and self-concept ($t=-12.973$, $p<0.05$), while the positive effects of the intervention were sustained over time. (2) The experimental group, retested after one month, demonstrated a small but significant increase in career maturity ($t=-2.383$, $p<0.05$) and a significant elevation in self-concept ($t=-12.57$, $p<0.05$) compared to the pre-experimental test. In contrast, the control group did not experience significant changes in career maturity or self-concept after the same period. (3) Despite not being statistically significant ($p>0.05$), it was found that self-perception had a greater impact on women than on men, and this effect persisted even after one month. **Conclusions:** Role-playing was statistically significantly superior to traditional teaching methods in improving self-concept and career maturity, but gender was not affected.

Keywords: Role-playing; Career Exploration; Career Initiation; Self-concept; Career Maturity.

1. Introduction

Learning is a lifelong process (Dunn & Thrall, 2012; Quendler & Lamb, 2016). Individuals shape their careers through their thoughts, feelings, perceptions, and actions. (Watson & McMahon, 2005; Patton & McMahon, 1999; Lent & Brown, 1996; Bosley et al., 2009). Children who engage in early career exploration activities are more likely to make early motivation and preparation for future career development. (Gysbers et al., 2014; Guay et al., 2003; Lapan et al., 2001; Ginevra et al., 2015).

1.1. Career Initiation for Children (CIC)

The emergence of the term career exploration in the US (Fan et al., 2012) is very different from the localized designation of *Career Initiation for Children* (CIC), probably due to ideological differences. Ginzberg et al. (1951) introduced the concepts of 'fanciful choice' and 'tentative choice' to describe the early stages of career development. According to them, children go through a period of fantasy choices, imagining themselves in a variety of different occupations without much regard for the reality of these occupations; as children grow older and gain more experience and knowledge, they move into a phase of tentative choices based on a more realistic understanding of the needs and requirements of different occupations (Ginzberg et al., 1951. Ginzberg, 1952; Trice et al., 1995). The mission of the CIC is not to prescribe a future career direction or make a definite career choice; instead, it is to develop the correct attitude towards work and gradually become aware of the connection between work and the self. Multiple factors, including a child's social and cultural background (Parham & Austin, 1994), familial and peer relationships (Liu et al., 2015), and exposure to various career information (Peila-Shuster, 2018), appear to influence the development of their careers. Therefore, educators and parents must provide opportunities for children to explore different career options, discover the educational and training requirements of various occupations, and engage in career-related activities to develop children's interests and talents (Blustein et al., 2004).

1.2. Self-Concept and Career Maturity

Numerous studies indicate that passive or active adoption of early career development activities can positively influence adolescents' self-concept and career maturity (Lim & You, 2019; Hsu et al., 2021; Whiston & Keller, 2004; Lau et al., 2022). Researchers' attention to primary school students must be more comprehensive globally than senior students. Defined as a collection of beliefs about the self (Mishra, 2016), the self-concept in the context of career development can be viewed as an account of an individual's perceptions of their career-related competencies (Freiburger, 2002), interests (Tokar et al., 2003) and values (Eyni et al., 2023), and confidence and motivation to pursue a career path (Komarraju et al., 2010). Students with a stronger self-concept have more clearly defined and realistic career objectives (Bardwell, 1984). Super (1953, 1957, 1980) introduced the concept of career maturity as part of the life-span, life-space theory of career development, which emphasizes that an individual's career development is compatible with age-related growth. Career maturity for children consists of a basic understanding of the world of work, the range of career options available to children (Howard & Walsh, 2011), and exploring potential

career routes (Arrington, 2000).

There is evidence that a connection exists between self-concept and career maturity. Zahra (2018) studied high school pupils in Pakistan and discovered that self-perception could be used as a predictor of career maturity. Career maturity, psychological resilience, and career self-concept were positively related in a cross-sectional study of Chinese nursing students (Lyu et al., 2022), suggesting that these factors may contribute to career readiness and positive career identity development in nursing students. While additional research cannot explicitly evaluate a causal relationship between self-concept and career maturity, it proves both are essential to positive career outcomes and development (Hasan, 2006; Abdinoor & Ibrahim, 2019). Intriguingly, the relationship between career maturity and self-concept varies across specific career categories among students (Jones et al., 1976). There is also a positive correlation between male and female self-concept and career maturity, with the majority of studies indicating that females express themselves at a higher level (McNair & Brown, 1983; Putnam et al., 1978; Mintzer, 1976), yet also bear an overall more negative academic self-concept (Michie et al., 2001). however, females rarely outperform males in specific science skills, such as computing and mathematics, as they develop through adolescence (Sáinz & Eccles, 2012), and boys receive more external encouragement for career pursuits and achievements (Hackett & Betz, 1981).

1.3. Role-playing-an 'Inquiry-Collaborative' Teaching Strategy

In recent years, role-playing has gained attention as an effective teaching strategy, with research showing its potential to promote problem-solving, communication abilities, social development, and more (Sancho et al., 2009; Zowghi & Paryani, 2003). Traditional teaching strategies such as direct instruction, lectures, independent learning, and textbooks are considered to be restricted (Alamrani et al., 2018). In recent years, the "Inquiry-Collaborative" teaching strategy has proven effective (Kusumawati & Hadi, 2019), in which students actively investigate and solve problems together, frequently by asking and answering questions and participating in discussions. A project-based learning activity in which students work in small groups to research and develop a solution to a real-world problem, with the teacher acting as a facilitator and providing guidance as required, is an example of this type of teaching strategy (Wiek et al., 2014). Another example would be a classroom discussion in which students are encouraged to pose questions and jointly explore a topic, with the teacher guiding the conversation toward a deeper understanding and more critical thought (Chin, 2006). Originally used to support people with mental health conditions, role-playing became widely accepted as one of the 'Inquiry-Collaborative' teaching methods in the late 1940s (Blatner, 2009) and has shown promise in vocational education (Joyner & Young, 2006; Armstrong, 2003). In fact, pretend play is a naturally occurring and universal activity for typically developing children (Goldstein & Lerner, 2018).

Despite the wide range of research into role-playing that has been conducted for nearly a century, its effectiveness with primary school children remains controversial. The social cognitive theory elicited by Bandura (1999) emphasizes the role of cognitive processes in learning and behavior, but younger children have the potential to confuse reality and fantasy in role-playing activities due to their limited cognitive abilities. Cultural attitudes toward cooperation and individualism may influence the efficacy of role-playing activities (Chen et al., 1998), which may result in variations in student participation in this instructional method across cultural contexts. In comparison, other researchers have argued that careful planning (Moore-Cox, 2017), guidance (Jackson & Back, 2011), and appropriate support (Çerkez et al., 2012) are crucial to the success of role-playing.

Self-Determination Theory (SDT), as a motivational framework, explains the importance of meeting the basic psychological needs of individuals for autonomy, competence, and relatedness (Niemiec & Ryan, 2009). Individuals experience positive psychological outcomes when their needs are satisfied, such as increased self-esteem, self-concept, and career maturity (Deci & Ryan, 2008). The role-playing method is a means of meeting these three psychological needs. In the pedagogical application of role-playing, students acquire considerable independence in assuming roles and participating in decision-making, allowing them to develop problem-solving and communication abilities (Tatiana & Valentina, 2018).

The interactive nature of role-playing encourages students to actively engage with others and make social connections, thus contributing to their social development (Van Hasselt et al., 1981). Researchers identified a positive relationship between the role-playing teaching method and self-concept and professional maturity development. For instance, Mary's (2021) research revealed that nursing students who participated in a role-playing intervention demonstrated significant improvements in self-concept and clinical competence compared to those who did not. Furthermore, the use of role-playing teaching methods was found to be consistent with the principles of SDT. Moller and Deci's (2010) findings indicate that interventions designed to promote self-determination and reduce interpersonal control may effectively reduce aggression and promote positive social behavior, consistent with role-playing activities resulting in higher participant engagement and motivation.

2. Objectives

Providing students with opportunities to develop their self-concept and career maturity at the elementary level is essential, as this sets the groundwork for their eventual pursuit of vocational education and career success. The trend of previous research shows that although role-playing is incorporated as a teaching tool in some vocational schools, universities, and academic programs, more research must be done on its effectiveness at the primary education level in China due to the lack of relevant experimental studies on this topic in the country.

This project aims to scrutinize the effects of a role-playing intervention on self-concept and career maturity in CIC. A realistic experimental design was adopted in this study to test the following three hypotheses: (1) Using a role-playing method to career initiation, participants in the experimental group were observed to have higher levels of career maturity and positive self-concept compared to participants in the control group. (2) Gender differences were noted in the results of the career initiation intervention using the role-playing method, with female participants showing higher levels of career maturity and positive self-concept than males. (3) Using the role-playing method for CIC, subjects in the experimental group maintained a high level of career maturity and a positive self-concept even after four weeks, which is a

typical duration for role-playing interventions in educational research studies.

3. Methodology

Participants were obtained from two randomly selected classes in grade six at a public primary school in Guizhou Province, China. The study recruited 120 primary school students in two classes (Class A: 30 boys and 30 girls; Class B: 30 boys and 30 girls), ranging in age from 10 to 12 years and receiving nine years of compulsory education in China (Zhang, & Minxia, 2006). The school headteachers were contacted, and the study's objectives, methods, and expected results were explained in detail.

We chose this school because its provision of quality CIC needs to be improved due to geographical and economic factors. CIC was only initially considered at the level of compulsory education in the 2017 iteration of the Chinese government's *13th Five-Year Plan for the Development of National Education* (Xinhua News Agency, 2017). The CIC program at the government level in China was implemented relatively late, so the proportion of students who have been privileged to receive systematic instruction in this area needs to be higher. Such a situation is detrimental to the career development of the students; however, the results of this study are highly reliable for the study.

Random sampling ensures that every member of the population has an equal chance of being selected for the sample, enhancing the representativeness of the sample and reducing sample bias (Acharya et al., 2013). The experimental and control groups consisted of the two classes, which were chosen at random.

During the experiment, eight people failed to attend one or more sessions or tests for various reasons; thus, only 112 participants (93.33%) had data available for subsequent analysis. Four boys and four girls were eliminated from the experimental group due to sporadic absences during the investigation, bringing the total number of participants in the experimental group down from 60 to 55. Similarly, there were 57 instead of 60 people in the control group.

3.1. Intervention

The experimental group received role-playing, while the control group received blackboard-writing, a lecture-based teaching method. The conventional teaching model is based on a standard curriculum developed by the lecturer using a didactic method, but role-playing is strictly restricted. The program is structured according to the theoretical principles of social learning theory and career development theory. The intervention lasts for eight weeks and has one 30-minute session per week. Trained classroom teachers hold these sessions in their classes during regular school hours.

A school-based CIC program has been designed based on the 'Inquiry Collaboration' theory. Before the session began, the Principal Investigator explained the objectives of the intervention, the role to be played, and the timing of the intervention. Each student was provided with a comprehensive information document outlining the study. Students were also given an informed consent form to obtain parental consent for participating in the study. Specifically, 120 experimental and control group students were given a pre-experimental test to assess their career maturity and self-concept.

The intervention is structured to allow students to explore various career-related activities. The program consists of eight common role-playing subjects - teacher, journalist, tour guide, chef, doctor, soldier, judge, and firefighter - with corresponding scenarios designed to teach specific general knowledge and skills. Students were instructed to form random teams of at least seven members each. Eight teams were formed, each assigned a unique role task. Students are required to work collaboratively to acquire knowledge or skills relevant to the role they have been given, present their findings to the group during a class that week, and participate in role-playing activities such as job interviews, job placements, and interactions with professionals from various fields. These scenarios, which involve researching various job alternatives, making decisions, and problem-solving, were created by students to mirror real-life circumstances they may meet in their future careers. In contrast, the control group also received eight role-playing learning tasks without any role-playing interventions, with the teacher as the primary source of information and the students as passive learners. All experimental and control group participants were given pretest and posttest to assess their career maturity and self-concept.

3.2. Data Collection

The data collection was conducted for two months. The data collection process was carefully designed to ensure that accurate and reliable data was collected. A survey protocol of demographic information, including age, gender, and educational background, was prepared by the research team prior to the experiment. Peers in the field reviewed standardized tests.

We used the *Chinese Career Maturity Questionnaire - Children* (CCMQ-C) adapted from Crites' (1995) *Career Maturity Inventory-Revised* (CMI-R) and Liu's (2004) *Career Maturity Questionnaire for Chinese Secondary School Students*. The questionnaire comprises 30 items with a five-point Likert-type scale (1 = very poorly matched, 5 = not very well matched). The questionnaire contains two dimensions: knowledge of career decision-making and attitude toward career decision making. The instrument has a total score of 150, with higher scores indicating higher career maturity. cronbach's $\alpha = 0.78$, test-retest reliability = 0.66.

Another *Chinese Self-Concept Scale - Children* (CSCS-C) is modified from Harter's (1982) *Self Perception Profile for Children* (SPPC) and consists of 28 items evenly distributed across four domains, namely physical, academic, social, and general self-concept. The test item measured responses on a four-point Likert-type scale (1=not at all like me, 2=somewhat like me, 3=mostly like me, and 4=exactly like me) with a total score of 112, with higher scores indicating higher self-concept. The test item was created to evaluate the child's self-evaluation in the abovementioned areas. Test-retest reliability is 0.77 with a Cronbach's $\alpha = 0.80$.

The questionnaire was adapted to accommodate these concerns using child-friendly language and Chinese presentation, considering that the official language of instruction in Chinese schools is Mandarin and that children have a limited grasp of domain-specific vocabulary. Children were assessed again one month after completing the self-administered two tests in pretest and posttest to measure retention benefits.

3.3. Ethical Approval

An informed agreement was sought from children and their parents or guardians for this study to ensure ethical

considerations. Additionally, the local municipal education department gave its permission. The objective of the experiment and the procedures that will be used are both covered by informed consent. It was known going into the experiment that none of the participants had any learning difficulties or mental health issues that may have prevented them from participating. The study strictly followed the ethical precepts of informed consent, confidentiality, and voluntary involvement. It was evident to participants that their involvement was completely optional and that they might discontinue at any time without suffering repercussions. Participants were urged to respect the privacy of their peers and to restrict discussions to topics covered in class, excluding any dissemination of information outside of their scope, in order to control the potential disclosure of discussions that took place during the study and the possibility of participants witnessing and sharing with others their peers' reactions or written outcomes produced during the activity.

3.4. Data Analysis

Statistical analysis of the total raw scores of self -concept and professional maturity of the experimental and control groups was conducted with IBM SPSS 27.0 software. The data collected in this study were analyzed using ANOVA. Instead of examining each dependent variable separately, these statistical tests allow the effects of the intervention to be analyzed in two ways at once. Significance levels were established at $P < 0.05$ and effect sizes (Cohen's d), with Cohen's d=0.2, 0.5, and 0.8 being considered small, medium, and large effect sizes, respectively.

4. Results

Before experimenting, the experimental and control groups' scores were analyzed using an independent samples t-test to determine if there were significant variations between the groups. Before starting a study, assessing the equivalence of the groups or conditions being compared is crucial to ensure that any observed differences are due to the intervention or treatment being studied and not due to pre-existing differences between the groups. (Thyer, 2010). Table 1 describes the means, standard deviations (SD), and p-values greater than 0.05 between the pretest variables. Although Blackboard -writing scored higher on self-concept than role-playing, the slight difference was considered acceptable; the raw values for both remained largely the same in career maturity. With effect sizes of 0.06 and 0.157, respectively, the differences between the groups in the pretests were modest.

Table 1. Pre-experimental tests of self-concept and career maturity

Variable	N	Mean	SD	t	P	Cohen's d
Career Maturity						
Role-playing	55	109.2	14.111	-0.317	0.752	0.06
Blackboard-writing	57	110	12.54			
Self-Concept						
Role-playing	55	78.2	10.215	-0.83	0.408	0.157
Blackboard-writing	57	79.93	11.762			
*p<0.05, * *p<0.01; indicates significant gender differences.						

The experiment examined the impact of a teaching intervention on experimental and control groups. The experimental group comprised 55 subjects and the control group comprised 57 subjects. After accepting the role-playing, Table 2 shows a highly significant t-value of -22.624 (df=54, p<0.001) and a sizeable adequate size of Cohen's d=3.051 compared to the control group. The experimental group showed significant improvements in career maturity and the findings indicate that the role-play intervention had a significant positive impact on the experimental group. The experimental group was retested one month later and the results revealed a small but significant increase in career maturity compared to the pre-experimental test (t=-2.383, p<0.05, Cohen's d=0.321). This positive effect of the intervention has been maintained over time, albeit to a lesser extent. Compared to the control group, there was no significant change in career maturity after the same period, as evidenced by a non-significant t-value of -0.753 (df=56, p=0.455) and a small effect size of Cohen's d=0.1. The results at one month also showed no significant change in career maturity, as indicated by the non-significant t-value of 0.256 (p>0.05) and the minor effect size of Cohen's d=0.034. These findings suggest that the lack of intervention did not affect the control group.

Table 2. Career maturity at Week 8 and One Month Later compared to pre-experimental tests

Variable	**df**	**t**	**P**	**Cohen's d**
Role-playing				
Week 8	54	-22.624	0.000* *	3.051
One Month Later	54	-2.383	0.021*	0.321
Blackboard-writing				
Week 8	56	-0.753	0.455	0.100
One Month Later	56	0.256	0.799	0.034
*p<0.05, * *p<0.01; indicates significant gender differences.				

The paired t-test in Table 3 shows that similar to Table 2, and there was a significant increase in self-concept in the experimental group between the pre-test and post-test (t=-12.973, df=54, p<0.05, Cohen's d=1.749). These results demonstrate that the role-playing intervention had a significant positive impact on the experimental group's self-

concept. The experimental group was retested one month later, and the results also showed that self-concept remained significantly higher over time (t=-12.576, p<0.05, Cohen's d=1.696). on the other hand, the control group showed no significant change in self-concept after the same period, exhibiting a non-significant t-value of -1.587 (df=56, p>0.05, Cohen's d=0.21). One month later, results also showed no significant change in career maturity (t=0.83, p>0.05, Cohen's d=0.11). These results imply that the intervention improved the experimental group's self-concept and that the effect was statistically and practically significant.

Table 3. Self-concept at Week 8 and One Month Later compared to pre-experimental tests

Variable	df	t	P	Cohen's d
Role-playing				
Week 8	54	-12.973	0.000* *	1.749
One Month Later	54	-12.576	0.000* *	1.696
Blackboard-writing				
Week 8	56	-1.587	0.118	0.210
One Month Later	56	0.83	0.410	0.110
*p<0.05, * *p<0.01; indicates significant gender differences.				

We compared the differences between boys and girls in the experimental group regarding career maturity and self-concept. This measurement includes pre- and post-intervention and a remeasurement at one month. A paired t-test was conducted to determine the differences between the groups. Table 4 shows that prior to the intervention, there were no significant differences between boys and girls in career maturity (t=0.083, p>0.1, Cohen's d=0.022) and self-concept (t=0.063, p>1, Cohen's d=0.017) by t-test. This suggests that at the beginning of the study, boys and girls had similar levels of both. After the intervention, boys' and girls' mean self-concept scores improved, with girls increasing more than boys. However, this difference was insignificant (t=1.774, p<0.1, Cohen's d=0.479). One month later, the girls' mean self-concept scores continued to rise, while the boys' mean scores decreased slightly. Again, the difference between the two groups was also not statistically significant, with a t-test value of t=1.676, p≤0.100, and Cohen's d=0.452. By contrast, in the career maturity study, both before and after the experiment and one month later, there was no significant difference in career maturity between male and female participants (p>0.10).

Table 4. Boys (N=27) and Girls (N=28) in terms of career maturity and self-concept

Variable	Object	Mean	SD	t	P	Cohen's d
Pre-experimental						
Career Maturity	Boys	109.037	13.71	0.083	0.934	0.022
	Girls	109.357	14.738			
Self-Concept	Boys	78.111	9.874	0.063	0.950	0.017
	Girls	78.286	10.715			
Week 8						
Career Maturity	Boys	114.148	13.035	0.248	0.805	0.067
	Girls	115.036	13.454			
Self-Concept	Boys	80.296	9.742	1.774	0.082	0.479
	Girls	82.778	10.326			
One Month Later						
Career Maturity	Boys	109.407	13.701	0.034	0.973	0.009
	Girls	109.536	14.477			
Self-Concept	Boys	80.037	9.788	1.676	0.100	0.452
	Girls	84.607	10.411			
*p<0.05, * *p<0.01; indicates significant gender differences.						

5. Discussion

This study aimed to examine the impact of role-playing methods on children's self-concept and career maturity at the primary school level of CIC. The combined results indicate that the intervention significantly impacted the experimental group's career maturity and self-concept. Pretest analyses prior to experimenting revealed a lack of significant differences in levels of career maturity and self-concept between children under the students' standard curriculum, suggesting that the impact of obtaining relevant CIC in this area needed to be increased.

Career development research in inland China is generally in its infancy (Wang & Zhang, 2010; Liu et al., 2014). It is widely recognized that traditional Chinese filial piety is China's most influential and fundamental social rule (Fung, 2006). However, the continued overemphasis on academic achievement (Li, 2004) and parents' restrictive or controlling role have led to an education system only concerned with other aspects of development (Liu et al., 2014). Furthermore, more attention has been focused on entry into universities rather than vocational colleges (Ling, 2015). Peng (2012) and Liu et al. (2014) agree that there is a need for more experimental evidence of career-related practices in Chinese primary schools, a gap that we attempted to fill in our previous experiment.

The experiment was designed to study the effects of a role-playing intervention on children. The children showed significant improvements in both career maturity and self-concept after receiving the intervention ($p<0.001$), proving that the role-playing intervention had a significant positive impact on the children in grade six. These findings are consistent with previous research by Matson & Wilkins (2007), where role-playing as a teaching method improved self-efficacy, communication skills, and social competence in children with autism spectrum disorders. Similarly, another study found that role-playing was a motivating strategy to promote social skills and emotional regulation in children and adolescents (Hetrick et al., 2015).

One month later, the experimental group was retested. The results showed that the children's career maturity and self-concept also increased to different degrees, respectively, compared to the initial levels ($p<0.05$). Satisfactory positive effects of the intervention persisted over time, albeit to a lesser degree in terms of career maturity. Regarding career maturity, the current findings agree with previous studies showing the importance of career interventions in promoting career development. For example, a study by Lau et al. (2021) discovered that career development interventions, including counseling and mentoring, effectively increased the career maturity of secondary school students. Another study by Rismawan & Gading (2021) found that career interventions involving self-reflection and goal setting improved secondary school students' self-efficacy in career decision-making. An essential role in career aspirations and decision-making has also been found in university student studies (Khasawneh et al., 2007). Promoting children's positive self-concept and career maturity can have long-term benefits (Choi et al., 2015), including improved academic performance (Skaalvik & Hagtvet, 1990) and career success (Wessel et al., 2003). We expect self-concept and career maturity to be maintained in children's long-term development and provide a predictor for future research.

The interaction effect of group and gender on CIC indicated that role-playing had a more significant impact on girls' self-concept than boys'. In contrast, there was no significant gender difference in career maturity. This finding is in keeping with previous research showing possible gender differences in self-concept development (Lau et al., 2021). Girls' self-concept scores in secondary English and mathematics (Awan & Naz, 2011) and preschool boys' interest levels in science are generally higher than those of girls than boys (Leibham et al., 2013). However, a German experiment examined girls' lower academic self-concept, interest, and motivation scores among primary school students (Preckel et al., 2008). Interventions that promote a positive self-concept need to be adapted to the gender-specific needs of participants. Various factors may influence career initiation, including personal interests, abilities, and socialization experiences.

The outcomes of this study guide the development of CIC in inland China. Long-term benefits of encouraging children's positive self-concept and career maturity include enhanced academic performance and career success (Betz & Fitzgerald, 1987; Lent et al., 1994). The role-playing intervention used in this study offers a promising method to achieving CIC, which is relatively simple to implement and can be easily incorporated into existing Chinese primary school curricula. Other scholars have proposed the construction of a tutorial framework similar to the National Model of the American School Counselors Association (2005) (Leuwerke & Shi, 2010) and the infusion of CIC into academic subjects such as Mandarin and Mathematics (Liu et al., 2014).

The study has several limitations: (1) The sample size is relatively inexpensive, which may limit the generalizability of the findings. Covering a more comprehensive age range would provide greater statistical power and increase the likelihood of detecting significant effects. (2) The study was conducted in one school, which may restrict the generalizability of the findings to other settings. (3) The study only examined the role-playing intervention's short-term effects, and it is still being determined whether the observed effects persisted over time. (4) The study did not investigate the mechanisms underlying the observed effects of the role-playing intervention. It is unclear whether the intervention works through direct effects on self-concept and career maturity or whether it has indirect effects through other variables, such as self-efficacy or motivation.

6. Conclusion

The results of this study suggest that a role-playing method could positively impact the self-concept and career maturity of children in CIC. Specifically, it was found that children who underwent role-playing experienced associated improvements in career maturity and self-concept that persisted over time, albeit to a lesser extent regarding career maturity. Gender differences were found in the impact of CIC on self-concept, with a higher impact on girls than boys. These results are significant, as they highlight the potential long-term benefits of promoting a positive self-concept and career maturity among children, such as improved academic performance and career success. However, the study has limitations, such as a small sample size, restricted areas, and a short experimental period, which may limit the generalizability of the results. Future studies could overcome these drawbacks and examine how role-playing affects other factors, such as academic achievement or mental health. In conclusion, the study's results guide the development of CIC in Mainland China, offering a promising method that is relatively simple to implement and can be easily incorporated into the existing Chinese primary school curriculum.

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