A Project entitled

***An Investigation of the Impact of Teaching Style on students' Social Competence***

Submitted by

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submitted to The Education University of Hong Kong

for the degree of *Mathematics Education (Primary)*

in 0*4/2023*

Declaration

I, *Kwok Wing Lam* declare that this research report/ project report represents my own work under the supervision of Dr. To Hing Kwan (*Lecturer I) , and* that it has not been submitted previously for examination to any tertiary institution.

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*4/4/2023*

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**Abstract**

The proposed study is designed to investigate the influence of teaching styles on students' social competence and mainly focuses on student-centered approach and teacher-centered approach. The students' social competence in different countries is compared based on their education culture and teaching style. Although the literature has demonstrated clear relations between education culture and teaching styles, little research has been conducted to explore the impact of teaching style on students' social competence. An experiment will be conducted, and the participants will be 40 primary students in junior classes. Questionnaires will be used to evaluate the changes on students' social competence. The measuring tool is The Perceived Social Competence Scale (PSCS) which can question students' prosocial behaviors, communication skills, and self-control. One-way ANOVA with repeated measures will be used to analyze to compare the social competence of students under different teaching styles. Statistical analysis revealed that the social competence scores of students under student-centered and teacher-centered teaching style are significantly different. Some factors such as gender difference and family income are considered in the analysis.

The proposed study will enhance the understanding of the importance of teaching styles. Student-centered approach develops an environment that creates desired children's social behaviors. It is preferred that the results of this study can update schools' and educators' policies on classroom management.

## Introduction

Education is a vital aspect of human development and progress. It is a mean of acquiring knowledge, skills, values, and attitudes that enable individuals to lead successful and fulfilling lives (American Psychological Association, 2017).

However, the way education is delivered varies from culture to culture, and this is particularly evident in the difference between Eastern and Western education.

Eastern education is often focusing on memorization and rote learning, with little emphasis on critical thinking or creativity (Kember & Damping, 2016). Students are expected to memorize large amounts of information and regurgitate it on exams. This approach is rooted in Confucian philosophy, which emphasizes respect for authority and the importance of discipline and hard work (Wang, 2018). Some results of comparative international tests show Chinese and East Asian students performing much better to those from Western countries in mathematics and science. In the report of Programme of International Students Assessment (PISA), Chinese students are reported to have higher average scale marks on Reading, Mathematics and Science. (Programme of International Students Assessment, 2018). While the academic results show the success of Chinese education, the social development of students has been overlooked by such pedagogical practices. A study conducted by Yang et. al (2019) enrolled 9,295 Beijing students aged from 6 years-old shows that the social competence problems are serious. The total detection rate of behavioral problems related to social competence was 16.7%; the detection rates of social competence abnormalities increased; and scores of social competences showed slight decline with age respectively. Students without siblings have higher scores on abnormal social competence.

On the other hand, western education tends to be more student-centered. Their focus is on developing critical thinking skills, creativity, and independent thought. Students are encouraged to

analyze and synthesize information, rather than simply memorizing. This approach is influenced by the philosophy of individualism, which places value on personal autonomy and self-expression (Arega, 2015). For example, the Canadian style of teaching encourages an integrated learning that considers both emotional, social, ethical, and academic needs of students rather than solely grades (Innova Design Group, 2022). Therefore, students in western countries are more socially active (e.g.: raising questions, discussing with classmates and answering questions) and generally have a higher social competence compared to those from Chinese due to these cultural value differences (Chen & French, 2008).

The education culture differences between Eastern and Western education may affect the role of the teacher. In Eastern education, the teacher is the authoritative figure and is expected to provide all the answers. In contrast, teachers in western education act as facilitators, guiding students through the learning process rather than dictating it. This leads to a more collaborative approach to learning in Western classrooms, where students are encouraged to share their opinions and ideas (González & Padilla, 2014).

***Significance of research***

The above research shows that the teaching style of Chinese and Western countries focus on different aspects of the development of students. Chinese teaching styles are academic based whereas western countries emphasize on both mental and academic fields. There is also a difference in the students' social competence in Chinese and western countries. It is shown that there is a limitation of the teaching method adopted by Chinese educators. It is reflected that the awareness of social competence development in Chinese education is not enough. Thus, this paper is going to investigate to what extent different teaching styles affect students' social competence and raise public awareness on students' social competence.

Children's social skills predict important outcomes, such as peer acceptance, friendships, and positive opinion by significant others (Nassau & Drotar, 1995). Students without these social skills will find it difficult to have social interactions with others such as classmates or even future colleagues in the workplace. Poor social competence can lead to difficulties with social information processing. Social information processing is the ability to interpret and understand social cues and interactions. It involves the cognitive processes that individuals use to perceive, interpret, and respond to social situations. This includes the ability to generate appropriate responses in social situations (Crick & Dodge, 1994). This research has shown that social competence and social information processing are closely related. Children with poor social competence are more likely to have difficulties with social information processing, which can lead to problems with social interactions and relationships. For example, children who have difficulty interpreting social cues may not be able to interpret facial expressions and body language and respond appropriately in social situations. This can lead to social misunderstandings and conflicts, which can further exacerbate emotional and behavioral problems.

Besides, children who struggle with social competence may suffer from emotional and behavioral problems. Poor social competence can lead to feelings of being socially isolated, rejected, and loneliness (Rubin, et. al., 2019). These feelings may contribute to emotional problems such as anxiety and depression. Furthermore, children who are rejected by their peers may be more likely to engage in aggressive or impulsive behavior as a way of coping with their negative emotions (Laursen & Hartl, 2013). This study focuses on the development of students' social competence which plays a crucial role in their future and prevents them from emotional and behavioral problems.

Even though there are many studies on social competencies and their importance for students' development and learning, very little research has been done on the impacts of teaching style on students' social skills across different settings (Junge et al., 2020). More research is needed to fully understand the impact of teaching style on students' social skills across different settings such as age, genders and family income groups. This paper could have important implications for teacher training and professional development, as well as for the design of educational interventions aimed at promoting social competencies in students. The study will add value to the existing literature and help educators conduct further research on the same topic.

The paper is divided into different chapters; the first part includes an introduction and research questions, and the second paper analyzes previous research on the same topic. The third chapter is the methodology and action plan to find the relationship; the fourth chapter is the discussion based on the findings; the last chapter is the limitation and implication of the topic.

## Literature review

### *Teaching styles*

Teaching styles can be defined as the techniques, methods, processes, and procedures used by teachers during instructions (Fatima & Azhar Majeed Qureshi, 2020). It is also called 'instructional strategies', are ways that teachers deliver knowledge to engage students and make them learn different skills (Rodriguez & Mundy, 2018). Teaching styles had been under investigation by numerous researchers (Rosenshine, 2012; Inoue & Frye, 2018; Johnson & Johnson, 2009; Krajcik & Czerniak, 2018; etc.), and studies tended to develop their own set of indicators for identifying the difference of teaching styles, which led to the development of a number of different methodologies for justifying teaching styles (Evans, Harkins & Young, 2008).

One of the famous teaching style indicators is teacher-centered and student-centered approach (Opdenakker & Van Damme, 2006). The teacher-centered approach makes students passive in the lesson. Teachers decide on the content that they teach, the way to teach this content and then assess the content (Schreurs & Dumbraveanu, 2014). This approach is based on the teacher's input and the assessments are conducted in terms of how well the students reproduced the material taught. This approach reflects the teacher's supreme authority in the classroom.

In China, teachers are the most important people in the classroom because of their expertise. Therefore, Chinese teachers have higher status than their students (Impact Teaching, 2021). The authoritative figure is built that the teacher is the main and the only source of subject-specific knowledge. In addition, there is a College Entrance Exam (gaokao) in China which can greatly affect a person's future career prospects and earning potential. The pressure of this examination appears from an early age of children as young as 6. The exam-oriented learning process requires students to memorize large amounts of information within a short period.

Memorization and repetition is widely regarded as the most effective route to acquire the large volumes of knowledge tested in the examination. So, students have limited opportunities to interact with each other or with the teacher. The focus is on the teacher delivering information, rather than on collaborative learning or discussion. Therefore, the 'expert' status of a teacher in the classroom makes them the only 'savior' of the students to confront the examination. In Hong Kong, the Diploma of Secondary Education Examination (DSE) is a public examination for students who completed the 3-year senior secondary curriculum (S.4 to S.6) (Big Exam, 2022). The obtained results are essential for applying to the 4-year bachelor's degree. The DSE results are the biggest components affecting the chance to enter the university. Therefore, exam-oriented education is adopted by Hong Kong educators too. The above information shows that both Hong Kong and Mainland China adopt a teacher-centered approach as the default teaching style.

Hong Kong education has traditionally been teacher-centered, with the teacher presented as the primary source of knowledge and the students expected to passively receive and memorize information. However, this approach has been criticized for its limited effectiveness in promoting deep learning, critical thinking, and student engagement (Baeten & Struyven, 2013). In contrast, the student-centered approach has emerged as a more effective and learner-focused approach to teaching and learning.

The student-centered approach is a teaching and learning approach that places the learner at the center of the educational experience. One of the key features of the student-centered approach is the focus on the individual needs and interests of the students. This approach recognizes that each student has unique learning needs, preferences, and strengths, and seeks to tailor the learning experience to meet these needs (King, 1993). For example, students may be given the opportunity to choose topics or projects that are of interest to them or to work at their own pace. Another key feature of the student-centered approach is the emphasis on active learning and student

engagement. This teaching style aims at developing students' autonomy and independence (Matthew, 2018). In this approach, students are encouraged to take an active role in their own learning, rather than passively receiving information. This may involve engaging in discussions, debates, projects, or other activities that require active participation and critical thinking (Larmer, et. al, 2015). It underlines the premise that learning is an active process in which students are active sense‐makers (Mayer, 2004). The student-centered approach also emphasizes collaboration and teamwork. In this approach, students are encouraged to work together to solve problems, complete tasks, and achieve common goals. This approach recognizes that collaboration and teamwork are essential skills in the 21st century workplace and seeks to prepare students for success in this context (King, 1993).

From the above, it is shown that the benefits of the student-centered approach are numerous. This approach has been shown to promote deep learning, critical thinking, creativity, and problem-solving skills. It also promotes student engagement and motivation, leading to improved academic performance and outcomes. Additionally, the student-centered approach promotes social and emotional learning, helping students develop important skills such as empathy, self-awareness, and social competence.

Examples of the student-centered approach in action include project-based learning, inquiry-based learning, and problem-based learning. In project-based learning, students work on an extended project that requires them to engage in research, problem-solving, and critical thinking (Prince, 2004).

International trends in education have been shifting from the traditional teacher-centered approach to a more student-centered approach (Schreurs & Dumbraveanu, 2014). This shift has

been driven by the recognition that a student-centered approach can lead to better student outcomes, including improved critical thinking skills, higher student engagement, and a greater sense of ownership over the learning process. This shift toward a student-centered approach is a global trend that has been observed in many countries around the world.

In Australia, a school demonstrates a student-centered teaching style through facilitating students-led discussion in the classroom (Lob, 2020). Several activities are conducted in the lesson such as Gallery Walk, which means that students can walk around the classroom to collect information from the posters or photos stuck on the wall related to assigned topics. They also have an opportunity to share their findings by forming a group. These above practices develop students' autonomy and initiative to learn.

***The Impact of teaching styles on student's social competence***

Social competence refers to a group of abilities that enable children to independently navigate their social world (Western Australian Department of Education, 2018). It helps young children to select and carry out their interpersonal goals in early childhood successfully and appropriately(Guralnick, 1990). According to Junge et al. (2020), social competencies can be categorized as the effectiveness of a student to engage in social interaction with adults and peers. It is a ‘behavioral manifestation’ of a student’s regulatory and emotional competencies while interacting with other students. Moreover, being efficient in different social interactions requires students to master multiple skills that underlie social competence, such as emotion regulations, perspective taking, and social problem solving (Bornstein, Hahn, & Haynes, 2010).

A study conducted by Pinar & Sucuoglbu (2013) shows there is a relationship between teachers’ strategies and students’ social competence development. The study concluded that after a social skill training program, students were more respectful in their manners and could

communicate effectively. Moreover, after the skill teaching program, students were able to make eye contact, and their listening skills were also enhanced. Teachers who use a student-centered approach that gives freedom to students to work in groups help students develop social skills like 'listening, sharing, and communication'. Such group work can help students with 'team building'. They also learn to listen and ask questions (Gigantiello, 2015).

As mentioned in the previous section, Chinese students have a better academic performance but a lower social competence level (Yeung, et al, 2019). In other Asian countries, a research with 332 participants involved shows that the Malaysian educators have a good understanding and moderate perception on children' social competence (Mohamed et. al, 2019). One of the popular teaching methods in Malaysia is flipped learning. Flipped learning focuses on meaningful learning, and it also promotes a student-centered teaching style (Abd Rahman, et. al., 2019). Students take the initiative in the classroom and are motivated to engage in interactive activities. Flipped learning facilitates the use of active learning methods including cooperative learning (Johnson, Johnson & Smith, 1998), which is less emphasis on Chinese education. Similarly, the Singapore Government provides a framework for schools to enhance students' social and emotional learning. Singapore students are able to develop a sense of responsibility, care and concern for others under the framework (Singapore Ministry of Education, 2022). They are guided to maintain a moderate level of social competence to face challenges in the future. Compared to Chinese students' poor performance on social competence, these two countries have better results on this aspect. Therefore, it brings to a hypothesis that teaching styles in different countries may be the reason affecting social competence.

## Research questions

• Do teaching styles affect students' social competencies?

• In what aspects does a student-centered approach affect students' social competence?

## Hypothesis

H0: The social competence scores of students under student-centered and teacher-centered teaching style are the same.

H1: The social competence scores of students under student-centered and teacher-centered teaching styles are significantly different.

## Methodology

### *Participants*

Participants in this research are the 40 primary students, who are P.2 students aged 6-7 years old. There are 20 girls and 20 boys participating in the experiment. One class of the students is the experimental group, and another is the control group. The classes were selected as the experimental group or control group randomly (i.e.: 2B was selected as the control group and 2E was as the experimental group on a random basis. ).

### *Procedure*

The experiment will take about 7 weeks. Students in both groups are required to complete a pre-test before the experiment. Student-centered teaching style will be presented in the experimental group and other students will be arranged in the control group. The characteristics of student-centered teaching styles will be demonstrated in the experimental group. The following tasks will be added to the experimental group:

1. 'Choose how you want to learn' activity per week: In the lesson, the teacher will create 4 study groups with different tasks related to the teaching topic. The tasks can be the completion of worksheets, case analysis, simple experiments or use of teaching tools. Students can choose the topic and task they are interested in and join the group with a first-come-first-serve basis. Students who finish the task can join another group. After explaining the instructions, the teacher will join the study group and complete the tasks with the students.
2. One Gallery Walk per week: Teacher will prepare the information related to the teaching topic in the forms of photos, drawings, news or posters. During the lesson, the teacher

will stick these materials on the wall of the classroom. Students will be given some time to walk around the classroom to collect related information stuck on the wall to finish the worksheet. Then, students will be divided into different groups and required to complete a worksheet. After completing the worksheet, students will be invited to share their findings in a group based.

For the control group, students will be taught under the traditional teaching method. The characteristics of teacher-centered teaching styles will be demonstrated in the control group. Teachers will decide the teaching topic and learning methods. Students should listen to the teacher passively and be silent in the class. At the end of the experiment (the 7$^{th}$ week), students in both groups will complete the post-test. The survey will be compared to see if teaching style impacts students' social competence.

### *Measurement*

Social competence can be evaluated by using The Perceived Social Competence Scale (PSCS), which is a brief 4-items measure to evaluate social competence skills and prosocial behaviors in children (Anderson-Butcher, Lachini & Amorose, 2007). The scale assesses how socially competent a child aged 4 years to 16 years is, by demonstrating behaviors such as helping others, showing concern for others, and giving support to others. There are four items in the survey: 'I help other people', 'I ask others if I can be of help', 'I am good at making friends' and 'I get along well with others'. The children respond to each of the items using a Likert-type scale of 1-5 marks (1=Not at all, 5 = Very much). The full mark of the survey is 20 marks.

### *Analysis*

ANOVA with repeated measures will be used to understand whether there is a difference in the social competence scores mean among students under student-centered teaching style and using student-centered teaching method.

## Result

The results presented here show the comparisons of the PSCS scores of all participants in different groups across sex, age and family income.

*Table 1 Descriptive statistics across groups*

| Descriptive Statistics | | | | |
|---|---|---|---|---|
| | Pre-test scores | | Post-test scores | |
| Group | 1 | 2 | 1 | 2 |
| Valid | 20 | 20 | 20 | 20 |
| Missing | 0 | 0 | 0 | 0 |
| Mean | 12 | 11.4 | 12.25 | 15.65 |
| Std. Deviation | 1.522 | 1.392 | 1.333 | 2.7 |
| Minimum | 9 | 9 | 9 | 10 |
| Maximum | 14 | 14 | 14 | 19 |

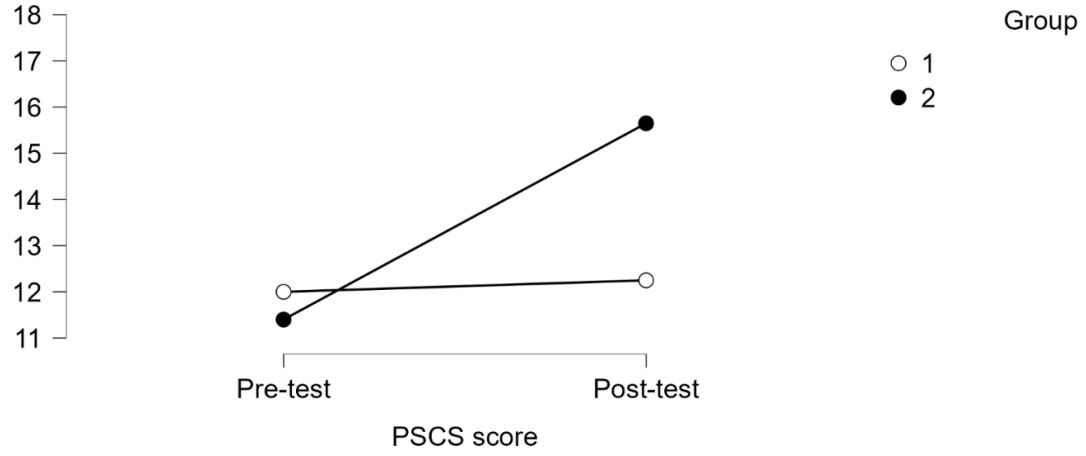


*Figure 1 Descriptive plots across groups*

Figure 1 shows the comparison of mean scores of experimental and control groups. The percentage change in mean for the experimental group is higher than that for the control group.

$(\Delta\bar{x}(1) = +2.08\% < \Delta\bar{x}(2) = +37.28\%)$.

*Table 2 ANOVA test on PSCS score across groups*

| Within Subjects Effects | | | | | |
|---|---|---|---|---|---|
| Cases | Sum of Squares | df | Mean Square | F | p |
| PSCS score | 101.25 | 1 | 101.25 | 48.857 | < .001 |
| PSCS score ✻ Group | 80 | 1 | 80 | 38.603 | < .001 |
| Residuals | 78.75 | 38 | 2.072 | | |
| Note. Type III Sum of Squares | | | | | |

Table 2 reveals the significant difference of PSCS scores of experimental groups on pre-test and post test. The calculated p-value is less than 0.001. The social competence scores of students between control group and experimental group are highly significantly different. Therefore, the null hypothesis 'The social competence scores of students under student-centered and teacher-centered teaching style are the same' is rejected.

*Table 3 ANOVA test on PSCS score across groups and sex*

| Within Subjects Effects | | | | | |
|---|---|---|---|---|---|
| Cases | Sum of Squares | df | Mean Square | F | p |
| PSCS score | 101.25 | 1 | 101.25 | 56.69 | < .001 |
| PSCS score ✻ Group | 80 | 1 | 80 | 44.79 | < .001 |
| PSCS score ✻ Sex_2 | 3.2 | 1 | 3.2 | 1.792 | 0.189 |
| PSCS score ✻ Group ✻ Sex_2 | 11.25 | 1 | 11.25 | 6.299 | 0.017 |
| Residuals | 64.3 | 36 | 1.786 | | |
| Note. Type III Sum of Squares | | | | | |

Table 3 shows that the PSCS score of boys and girls in both groups before and after the experiment are significantly different. The p-value is $0.031 < 0.05$. Independent Sample T-Test is adopted to have a further analysis on the difference on sex

*Table 4 Independent Sample T-Test on the PSCS score across sex*

| Independent Samples T-Test | | | |
|---|---|---|---|
| Cases | t | df | p |
| Pre-test scores | -2.556 | 18 | 0.02 |
| Post-test scores | -4.192 | 18 | < .001 |
| Note. Student's t-test. | | | |

PSCS scores of the experimental group are analyzed. In the above table, group F refers to Girls and group M refers to Boys. The p-value is less than 0.001. It is shown that the PSCS scores increased in boys is significantly higher than that of girls.

*Table 5 ANOVA test on PSCS score across groups and age*

| Within Subjects Effects | | | | | |
|---|---|---|---|---|---|
| Cases | Sum of Squares | df | Mean Square | F | p |
| PSCS score | 100.177 | 1 | 100.177 | 46.02 | < .001 |
| PSCS score ✻ Group | 80.101 | 1 | 80.101 | 36.8 | < .001 |
| PSCS score ✻ Age | 0.38 | 1 | 0.38 | 0.174 | 0.679 |
| PSCS score ✻ Group ✻ Age | 0.003 | 1 | 0.003 | 0.001 | 0.972 |
| Residuals | 78.367 | 36 | 2.177 | | |
| Note. Type III Sum of Squares | | | | | |

The p-value of the test on PSCS score across groups and age is larger than 0.05. It means that there is no significant difference between them.

*Table 6 ANOVA test on PSCS score across groups and family income*

| Within Subjects Effects | | | | | |
|---|---|---|---|---|---|
| Cases | Sum of Squares | df | Mean Square | F | p |
| PSCS score | 96.223 | 1 | 96.223 | 53.139 | < .001 |
| PSCS score ✻ Group | 68.285 | 1 | 68.285 | 37.71 | < .001 |
| PSCS score ✻ Family income | 11.072 | 2 | 5.536 | 3.057 | 0.06 |
| PSCS score ✻ Group ✻ Family income | 4.978 | 2 | 2.489 | 1.374 | 0.267 |
| Residuals | 61.567 | 34 | 1.811 | | |
| Note. Type III Sum of Squares | | | | | |

The p-value of the test on PSCS score across groups and family income is larger than 0.05. It means that there is no significant difference between them.

*Table 7 Descriptive statistics of PSCS scores across family income in the experimental group*

| Descriptive Statistics | | | | | | |
|---|---|---|---|---|---|---|
| | Pre-test scores | | | Post-test scores | | |
| Group | 1 | 2 | 3 | 1 | 2 | 3 |
| Valid | 6 | 8 | 6 | 6 | 8 | 6 |
| Missing | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean | 11.333 | 11.875 | 10.833 | 17 | 14.625 | 15.667 |
| Std. Deviation | 1.633 | 1.458 | 0.983 | 2.449 | 3.204 | 1.862 |
| Minimum | 9 | 10 | 10 | 13 | 10 | 13 |
| Maximum | 13 | 14 | 12 | 19 | 19 | 18 |

Group 1= family income below average

Group 2= average family income

Group 3= family income above average

It is shown that the PSCS scores of students from low-income families is larger than those from high income families in post-test. The percentage increase in PSCS score of students from low income families is larger than those from high income families. (+37.88% vs +28.81%)

## Discussion & Limitations

### *Discussion*

*Teaching style and social competence*

The experiment results give an answer to the research questions: a) Do teaching styles affect students' social competencies? b) To what extent does a student-centered approach affect students' social competence? From the experiment, it is shown that the PSCS score of students under student-centered approach and teacher-centered approach is significantly different.

According to Kimberly (2017), her paper 'Social and Emotional Learning and Teachers' states that classrooms with warm teacher-child relationships support deep learning and positive social and emotional development among students. Teachers who build warm and supportive relationships with their students create a sense of safety and trust in the classroom. It can enhance deeper learning and positive social and emotional development. The experiment result matches with this previous research. The social competence of students increased. In the experiment design, the student-centered activities create more opportunity for the teacher to interact with the students. The teacher in the activities acted as a 'participant' in the activities so that there is no 'authority' and 'hierarchy relationship' in the classroom. Therefore, there was no boundary between teacher and students. Students can express their ideas freely. This can enhance the social development of students and lead to an increase in their social competence.

Another research in 2018 (ISTE, 2018) suggests that it is important to provide opportunities for students' choice and voice, and foster collaboration among them. It mentions that

the student-centered approach is a powerful approach that can help students develop social skills such as critical thinking, problem-solving, and collaboration. In the experiment, 'choose how you want to learn' activity allows students in the experimental group to choose the task they want to do (worksheets, case analysis, experiments or use of teaching tools). Rogers (1969) suggests that students learn best when they have the freedom to pursue their own interests and are encouraged to ask questions and seek out answers for themselves. Therefore, the student-centered approach gives them the incentive to learn.

Besides, with the activity 'Gallery Walk', students were in control of their own learning and they had the autonomy to navigate the classroom. They could choose rather to work in pairs or small groups, and engage with the different information stations set up around the room. Seeking out and collecting information actively can help students develop the skills and confidence needed to take charge of their own learning process. Therefore, the effect of the Gallery Walk is reflected in the experimental results which shows that student-centered activity can significantly increase students' social competence. Also, group work was highly recommended in all the activities in the experiment. This can boost collaboration among students. In addition, 'Gallery Walk' made students more confident in their own abilities to analyze information, make decisions, and develop critical thinking (SERC, n.d.). During the activity, students used their own opinions and ideas about the topic at hand and completed the worksheet. Students are exposed to different perspectives and ideas from the information wall. So, after participating in the student-centered lesson for 7-weeks, this student-centered approach can help students become more confident in their own abilities to make decisions, analyze information, and think critically. The results show the improvement of students' social competence. To summarize, both the literature and experiment results support that the student-centered learning can positively affect students' social competence.

*Genders and social competence*

Both boys and girls are expected to develop social skills. In Chinese traditional values, there are deeply-rooted gender connotations that recognize female and male as 'dark and light' and 'soft and hard' (Zwart, 2017). These social expectations play a significant role in shaping children's development and socialization process. Therefore, cultural and societal norms have been developed to cause girls to have lower self-esteem and less assertive behavior while boys may be encouraged to be more competitive and assertive.

From the experiment result, it was shown that the PSCS scores increased in boys is significantly higher than that of girls. One of the reasons for the result is that there is a difference in socialization between them (Eisenberg et. al., 2006). Boys' values, habits, and attitudes beginning from childhood make them engage in more competitive and assertive behaviors. These activities such as sports and games can provide opportunities for social interaction and skill development. On the other hand, girls are often socialized to be more quiet and nurturing. They may spend more time engaging in individual and quiet activities such as reading and art. These activities may not provide the same level of social interaction as boys. This difference in socialization environments may contribute to the higher increase in social competence in boys.

*Family income and social competence*

Research indicates that children from higher income families tend to have higher levels of social competence than those from low-income families (Xiao, et. al., 2009). Journal of Child and Family Studies (2003) found that family income was a significant predictor of social competence in children. Higher-income families can provide more resources to their children, such as quality childcare, educational materials, and extracurricular activities. These factors can facilitate children's social development and lead to a higher level of social competence. In the experiment, it

is shown that the PSCS scores of students in the low-income group is higher than those in the high income group. Also, the percentage increase in PSCS scores of students with lower family income are higher than those with higher family income. The experiment results contradict the literature. There may be some specific intervention or programs used in the experiment that were more effective for students from lower-income families. Therefore, some factors were considered to explain the discrepancy.

First, the experience and the feeling of students during the experiment may be different based on their family income. As mentioned, higher-income families can provide more resources to their children whereas low-income parents are less child-centered and less nurturing. To compare, there is a higher chance that students from high income groups had tried those materials and participated in similar activities before. Thus, the effects of student-centered activities towards students from two income groups were different. To the low income family students, the teaching tools used and the activities under student-centered teaching style, as well as the social environment created by the teacher in schools are a fresh stimulus to them. In the end, the influence of those student-centered settings are higher for them.

The second reason may be the change in the closeness of students and the teacher. A study examined family income level moderated associations between children's affective social competence and teacher-child relationships (Garner & Mahatmya, 2015). The study found that children with lower family income had lower emotional regulation scores and they were less close to their teachers than those from high income families. In the experiment, students with lower family income had more chances to interact and be closer with the teacher compared to the past. The teacher can demonstrate a calm demeanor which can have a positive impact on students' emotional state, making them feel more comfortable and less guarded (Jennings & Greenberg,

2009). This can lead to an improvement in their ability to regulate their emotions and turns out to be a more significant improvement in their social competence.

*Implication*

The gender differences in social interaction styles can affect how students participate in classroom discussions and group work and even the social competence development. For example, girls may be less likely to speak up in a classroom discussion while boys may be more likely to dominate the conversation (Myra & David, 1994). Teachers should pay more attention to these tendencies and encourage students to participate equally in class activities. It is important to create a safe and inclusive classroom environment where all students feel valued and supported. This finding can help present educators to create student-centered activities that promote values diversity and avoid gender stereotypes.

Other than gender factors, socioeconomic status (SES) also plays a crucial role in students' social development. According to Muzamil. et al. (2021), socioeconomic status can have an impact on children as it integrates different dimensions that have their influence on health outcomes including education. It is important for teachers to be aware of the differences in students' SES and adapt their teaching styles to different students' needs in order to promote student-centered learning successfully.

***Limitations***

*Understanding of the survey*

In conducting research with children, it is important to consider the cognitive abilities of the participants and how this may impact their ability to complete surveys accurately. In the experiment, a pre-test and post-test survey were conducted on children aged 6 to 7 years old, it is

likely that response bias was present due to the participants' cognitive abilities. Response bias is a common issue in survey research that refers to the tendency of participants to answer survey questions inaccurately or incompletely. This can occur for various reasons, including social desirability bias or lack of understanding of the questions (Wetzel, et. al., 2016).

Children in this age group are still developing their cognitive abilities, particularly in the areas of attention, memory, and language (Anthony ,n. d.). This means that they may not fully understand the questions being asked in the survey or may struggle to remember details from the pre-test when completing the post-test survey. However, it was hard to separate the children with age (i.e. age 6 group and age 7 group). Since there is a mixture of ages in the same class, in which separating the class into two experimental groups is not feasible under the education institute's policy. Besides, more teachers will be required to be involved in the experiment even if students are divided into different age groups, and the human resources available for this experiment is not capable of this experimental setup.

*Teacher' social competence*

During the experiment, the teacher acted as the instructor and the participants in the activities. The teacher's own social skills is also an important factor in students' social competence development. Teachers with strong social-emotional competence and wellbeing can have a positive impact on their students' social-emotional learning (Kimberly, 2017). It is stated that teachers are the engine that drives social and emotional learning programs and practices in schools and classrooms. This is because teachers with higher emotional intelligence are better equipped to communicate with their students and understand their individuality (Practice, 2023). Therefore, it means that the outcome of the experiment result may not be accurate if the teacher did not

socialize with the students well. However, it was hard to ensure the teacher' social competence was at a high level throughout the experiment. Therefore, it is important to consider the teacher's social-emotional competence when designing and implementing social-emotional learning programs in schools. Teachers should be provided with training and professional development opportunities to enhance their social-emotional skills and wellbeing, which may in turn positively impact their students' social-emotional learning outcomes.

***Further study***

To address the issue, social-emotional learning programs for teachers should be introduced in school. Training programs in student-centered teaching may include workshops, conferences, and professional development sessions that provide teachers with the necessary skills and knowledge to implement student-centered strategies in the classroom. These training programs may also provide teachers with opportunities to collaborate with other educators and engage in reflective practice, which can help them refine their teaching practice over time. Pre-service teacher education can include social-emotional training to better prepare teachers to promote student well-being (Kimberly, 2017). Additionally, ongoing support and coaching from school administrators and colleagues can help teachers develop and maintain their social-emotional skills.

In conclusion, teachers' social skills and emotional intelligence are important factors in students' social competence development. It is possible to avoid potential negative effects by providing teachers with the necessary training and support to enhance their social-emotional competencies. This can ultimately lead to more effective social-emotional learning programs and better outcomes for students.

## Conclusion

This paper investigated the influence of student-centered approach and teacher-centered approach on student social competence. Information from literature suggests that teaching styles are different across countries because of the culture and value differences. Social competence of students' social competence was compared and the hypothesis on teaching style's influence on student social competence was made. An experiment was carried out to see if there is a significant difference in the social competence scores of students. After the data analysis, it was found that there is an increase in students' social competence under a student-centered approach. The results match the findings from literature which also support the positive relationship between student-centered approach and students' social development. Moreover, it is found that the influence of the student-centered approach on social competence is more significant among boys which can be explained by the socialization process of the gender. However, there is a contradiction between the literature and experiment results in comparing social competence across income groups. It can be explained by the experience difference of students from these income groups and the change in the closeness of students and the teacher. Some limitations are discussed and further studies are suggested based on the limitations.

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***Appendix A - Pre-test and Post-test Survey***

姓名: _____
班別: _____(  )
日期: _____
監護人聯絡電話: _____

## 自我感知社會能力量度問卷

被訪者為學生本人, 請同學在家長協助下完成第一至六題。

1. 請問你的年齡是:

☐ 7歲以下
☐ 7-11歲
☐ 11歲以上

2. 請問你的性別是:

☐ 女性
☐ 男性
☐ 其他

3. 請是你的家庭成員人數有:

☐ 2位或以下
☐ 3位
☐ 4位
☐ 5位或以上

4. 請問你的月均家庭收入為:

☐ $0 – $9,999
☐ $10,000 – $19,999
☐ $20,000 – $29,999
☐ $30,000 – $39,999
☐ $40,000 – $49,999
☐ $50,000 – $59,999
☐ $60,000 – $69,999
☐ $70,000 – $79,999
☐ $80,000 – $89,999
☐ $90,000 – $99,999
☐ $100,000 or more

5. 請問你的居住物業為:

☐ 家庭成員購入
☐ 私人租用單位
☐ 公共屋邨
☐ 居屋
☐ 其他(請註明:_____)

6. 請問是否屬於以下任何宗教？

☐ 天主教
☐ 基督教
☐ 佛教
☐ 道教
☐ 伊斯蘭教
☐ 回教
☐ 印度教
☐ 其他(請註明:_____)

請細閱下列句子，並在最能貼切形容你感受的空格內填上√。

| | 從來沒有 (1) | 很少時候 (2) | 有些時候 (3) | 大部份時候 (4) | 經常 (5) |
|---|---|---|---|---|---|
| 我善於交友。 | | | | | |
| 我會幫助別人。 | | | | | |
| 我會詢問別人是否需要我的幫助。 | | | | | |
| 我和別人相處得很好。 | | | | | |

***Appendix B - Script of Verbal Explanation***

**Script of Verbal Explanation to Children Aged Under 9**

接下來的七個星期, 你們將會協助參與由我設計的一個實驗。實驗目的主要研究一個有趣的教學模式如何影響你們的社會能力, 即是你們理解別人、與人溝通的能力。你們會被分成兩個組別, 一組採用以學生為本的教學模式, 令一組採用固有的以老師為本的教學模式。以學生為本的教學模式指學生在課堂上有比較大的自由, 可以選擇自己有興趣的知識, 而且學習模式也取決於你們本身。以下是一些以學生為本的班級會有的活動:

1）資訊展（每星期一次）：老師在課堂開始前準備有關課題的照片、圖畫、海報或報紙，並黏貼在課室的四處。在課堂中，學生會被分成不同的組別，並會被派發一張課堂工作紙。學生在課堂上可以四處行走，收集粘貼在壁報和牆壁上的有關海報和相片，並用以回答課堂工作紙上的問題。

2）自由學習工作坊（每星期一次）：在課堂上，老師會就同一課題建立四個學習小組，各個小組會有不同的學習方法，例如完成工作紙、個案分析、進行簡易實驗或使用教具等。學生可以自由選擇學習的方法並加入相應的組別。每個小組名額先到先得，學生完成該組別的活動後可以參加其他學習小組。

在對照組的學生，老師會使傳統教學模式，即「以老師為本」的方法上課，老師在課室中擁有最大權力，可以決定授教的課題及方法，學生需要安靜及專注地聆聽老師的講解，以及嚴格遵守老師定下的規則。

在實驗前後, 你們需要填寫一張問卷, 以研究這個學習模式如何影響你們的社會能力。

你們有權利選擇拒絕或中途退出實驗, 並且不會受到任何懲罰或不同的待遇。

***Appendix C - Consent form***

香港教育大學
**心理學系**
**參與研究同意書(學校)**

**研究關於教育模式對自我感知社會能力的影響**

茲同意敝子弟_____參加由陶慶焜導師負責監督，郭詠琳負責執行的研究計劃。她／他們是香港教育大學的教員和學生。

本人理解此研究所獲得的資料可用於未來的研究和學術發表。然而本人有權保護敝子弟的隱私，其個人資料將不能洩漏。

研究員已將所附資料的有關步驟向本人作了充分的解釋。本人理解可能會出現的風險。本人是自願讓敝子弟參與這項研究。

本人理解本人及敝子弟皆有權在研究過程中提出問題,並在任何時候決定退出研究，更不會因此而對研究工作產生的影響負有任何責任。

| | | |
|---|---|---|
| 簽署: | | |
| 父母／監護人*姓名： | | |
| 日期： | | |

**請刪去不適用者*

## 有關資料

## 研究關於教育模式對學生感知社會能力的影響

誠邀閣下及 貴子女參加由陶慶焜導師負責監督，郭詠琳負責執行的研究計劃。她／他們是香港教育大學的教員和學生。

### 研究計劃簡介

此研究旨在探索教學模式對學生自我感知社會能力的影響。此研究主要集中討論以學生為中心和以老師為中心兩種教學模式兩者之間的不同，並如何影響學生的自我感知社會能力。社會能力對於兒童發展十分重要，但近期並未有足夠文獻探討，模式對此的影響，因此，四十名小二至小三學生會被邀請進行實驗，以達到研究目的。

### 研究方法

實驗會邀請四十名小二至小三學生作為參加者，實驗時長七星期。參加者的聯絡資料會於實驗進行前收集（例如：年齡及姓名）。二十名學生會被分配到實驗組，而另外二十名學生會被分配到對照組。實驗需時大概七星期，兩組的參與者均需於實驗開始前完成前測。實驗組的參與者會被安排於教學模式是以學生為中心的班級上課，而對朝早會被安排與傳統而對朝早會被安排與傳統以老師為中心的教學模式的班級上課。以下為一些將在實驗組中實行的相關活動：

1）資訊展（每星期一次）：老師在課堂開始前準備有關課題的照片、圖畫、海報或報紙，並黏貼在課室的四處。在課堂中，學生會被分成不同的組別，並會被派發一張課堂工作紙。學生在課堂上可以四處行走，收集粘貼在壁報和牆壁上的有關海報和相片，並用以回答課堂工作紙上的問題。

2）自由學習工作坊（每星期一次）：在課堂上，老師會就同一課題建立四個學習小組，各個小組會有不同的學習方法，例如完成工作紙、個案分析、進行簡易實驗或使用教具等。學生可以自由選擇學習的方法並加入相應的組別。每個小組名額先到先得，學生完成該組別的活動後可以參加其他學習小組。

在對照組的學生，老師會使傳統教學模式，即「以老師為本」的方法上課，老師在課室中擁有最大權力，可以決定授教的課題及方法，學生需要安靜及專注地聆聽老師的講解，以及嚴格遵守老師定下的規則。最後，實驗結束階段時（第七個星期），後測問卷會被派發和收集並進行分析。

**說明任何風險 (若無, 請明確指出)**

此實驗不會對學生構成任何心理上、物理上或經濟上的風險。

貴校學生／教師的參與純屬自願性質。所有參加者皆享有充分的權利在研究開始前或後決定退出這項研究， 更不會因此引致任何不良後果。凡有關 貴校學生／教師的資料將會保密，一切資料的編碼只有研究人員得悉。

**描述將如何發佈研究結果**

研究結果有可能以畢業論文的形式被大學通過各種途徑分享（例如：網上資源）。

如閣下想獲得更多有關這項研究的資料,請以電郵 或電話 與本人或本人的導師陶慶焜 聯絡。

如閣下對這項研究的操守有任何意見,可隨時與香港教育大學人類實驗對象操守委員會聯絡(電郵: hrec@eduhk.hk; 地址：香港教育大學研究與發展事務處)。

謝謝閣下有興趣參與這項研究。

郭詠琳