The Difference of Chinese High School Students' Attitude Towards Chinese Traditional Learning Pattern and Project-based Learning

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Abstract: The exam-oriented Chinese education has a long history in China. After the introduction of Project-based learning, an educational method contrary to Chinese education, into China, many scholars and even parents began to compare the two methods and analyze their advantages and disadvantages. As the subject of education, students' opinions on educational methods are crucial. This study collected 31 participants who had experienced two educational methods, Chinese education, and project-based learning, and investigated their approval and affection of these two educational methods, as well as the effectiveness of their learning and their preference between the two methods through questionnaires. participants were asked what they thought were the advantages and disadvantages of the two methods of education using multiple choice questions. The survey results show that participants generally prefer project-based learning because of its relaxed classroom atmosphere. However, some of them think that in project-based learning, there are always team members who will delay the progress or quality of the project.

Keywords: Project-based learning, Chinese education, Student's preference, Teaching methods, Exam-oriented education

1.   Introduction

Exam-oriented education in China has a history of hundreds of years. Since ancient China, people have been used to deciding their fate by examinations [1]. In China, the purpose of studying is to pass exams. Starting at seven o'clock in the morning, students need to attend the morning reading class. In addition to morning reading, students go through eight 45-minute classes each day, with only a 10-minute break between each class. There are three or four exams for each subject [2]. In Chinese education, most of the work of students is to memorize, because Chinese education itself is exam-oriented, and whether the exam result is good or not depends on the memorization of knowledge[3]. Students who have experienced teaching methods in Chinese public schools usually respect the elderly, teachers and scholars. However, there are also some common negative characteristics, such as rote memorization and passive learning style [3]. The Chinese education system uses scores to evaluate the ability of students and teachers and even decides teachers' salaries and bonuses based on students' scores. This has led to a tense, busy atmosphere in many school classrooms [4].

Project-based learning (PBL) is a student-oriented and teacher-assisted learning method. Learners pursue knowledge by asking questions that stimulate their natural curiosity. Students gain knowledge and experience in project work [5]. Project-based learning is a teaching method based on constructivism learning theory which believes that learners construct knowledge through their own experiences. It allows students to complete projects to gain experience and thus construct and learn knowledge [6]. Project-based learning creates diversity and authenticity in the classroom. Because it closes the gap between knowledge and reality. The novel teaching method of project-based learning can increase students' sense of pleasure. However, organizing project-based learning is difficult because the process of a project is long. Then there are the regulatory difficulties. The most important thing is that students need to have strong self-management ability and patience [7].

The concept of project-based learning (PBL) has been introduced to the Chinese educational system. Compared with traditional exam-oriented education in China, project-based learning is a student-oriented teaching method rather than a teacher-oriented teaching method [8]. Zhou and Li experimented with project-based learning in a school in Suzhou, China, which had never practiced it before, and the results showed that students' sense of social responsibility and problem-solving ability were improved [9]. However, due to long-term cultural cognition problems, teachers find it difficult to adapt to the new teaching mode [10], and there is a bias in the overall cognition of project-based learning: Many teachers understand project-based learning as theme-based learning. In the classroom, there is a phenomenon of learning themes but no research questions. Students are only guided to design themes without design-driven questions or to understand project-based learning as interdisciplinary learning [11].

As the subject of education, students' opinions on educational methods are crucial. Although many studies are comparing Chinese education with project-based learning, there is no study from the perspective of students to analyze the advantages and disadvantages of the two-week education method and students' preferences between the two. Therefore, this study selected 31 high school students who had experienced two educational methods as participants and collected their acceptance and approval degree for these two educational methods by questionnaire, as well as their preference between the two and their perceived advantages and disadvantages of the two teaching methods.

2. Research Design

2.1. Methodological Approach

This study uses quantitative research to study the preferences of high school students who have experienced both Chinese education and project-based learning as well as their attitudes towards these two different educational methods. Data will be collected through online questionnaires. This approach involves designing a scale-based questionnaire that numerically represents the preferences of the participants between the two educational approaches. Researchers will conclude by analyzing important data such as the mean, mode, and median of the data.

Quantitative methods standardize data and make the results clearer so that participants' tendencies between two teaching methods can be accurately identified. And it's very intuitive to compare the results. Confidentiality is also well ensured through quantitative questionnaires.

2.2. Sampling and Participants

To be qualified to attend this study, purposed sampling has been used. Participants need to be high school students who have experienced both Chinese education and project-based learning. Such selection can ensure that each participant has a deep understanding of the two educational methods, which can further ensure the reliability of the data given by the participants. A convenient sampling method will be used in this study to select participants who have experienced both the Chinese

education method and project-based learning. The researcher has experienced Chinese education and then transferred to an international school that adopts Project-based learning teaching. Many students around him have experienced both Chinese education and project-based learning teaching methods. Therefore, the researchers selected students who had experienced two teaching methods, Chinese education and project-based learning, to participate in the experiment.

This study collected a total of 31 questionnaire results. At the beginning of the questionnaire, they will be asked whether they have all experienced Chinese education and project-based learning. If they choose "No", the questionnaire will be automatically ended, and the answer results will not be included in the data.

2.3. Data Source

The questions in the questionnaire are mainly divided into two sections: multiple-choice questions and scale questions. The scale questions were used to ask participants about their approval of a particular educational method, their effectiveness, and their preferences between the two. Multiple choice questions are used to ask participants specific reasons why they approve or disapprove of a certain educational method. The question setting of the scale questions is simple and easy to understand and provides a lot of choices, which can more specifically understand the participants' rating of the questions. Having intermediate terms of varying degrees also reduces some of the research bias. Multiple choice questions are simple and easy to understand, and researchers can more clearly know the choices of most participants so that the answer is more intuitive. At the same time, the researchers set the "other" option in the multiple-choice question, and when the participant selected the option, he/she was asked to further explain the reason. This gives researchers more complete information and reduces research bias.

The table 1 below shows the possible number and corresponding aim of questions each participant will answer:

Table 1: Questions and aims

	Number of questions	Aim of the questions
Scale question (scaled 1-10)	6	Participant's level of approval, affection, and effectiveness toward project-based learning and Chinese education.
Scale question (scaled 1-7)	1	Participant's preference between project-based learning and Chinese education
Multiple choice question (reason)	1-4	the reason why participants approve /disapprove with Chinese education / project-based learning
Multiple choice question (yes/no)	3	although participants approve / disapprove with Chinese education / project-based learning. But is there a part of it that participants approve/ disapprove with
Multiple choice question (preference)	1	Is project-based learning more helpful to participants in their future studies or Chinese education?

Data was collected via an online questionnaire, which was filled out by each participant. Questionnaires for this study will be collected via www.wenjuan.com. And use its system's built-in

functions to save the collected data. Questionnaires can quickly collect a large amount of data. Researchers can obtain the data they want through the questions in the questionnaire and standardize the research through the similarity of the questions in the questionnaire. Make sure each participant is answering the same questions. www.wenjuan.com is used as a questionnaire collection tool because it is more versatile. First, this website supports researchers to set logical Settings in the questionnaire. This function helps researchers to determine the following questions according to the answers given by the participants, avoiding some unimportant information, and it is also convenient to ask the participants the specific reasons for giving the choice. Second, the site provides data analysis services that can help researchers find the mean, median, and mode of the scale questions, as well as the highest and lowest frequency of choice in the multiple-choice questions. The most important thing is that the website includes different question Settings, including scale questions, multiple choice questions, etc., which well meets the needs of researchers. In the questionnaire, participants were separately asked about their level of approval of Chinese education and project-based learning, their effectiveness in personal learning, and their personal preferences. In addition, after they answered questions about their approval of both styles of education, they were further asked about their reasons for approving or disapproving of one of the styles of education. After that, they were asked whether they completely disagreed with an educational method, and what they agreed or disagreed with.

3. Results

3.1. Student's Preferences Between Chinese Education and Project-based Learning

Table 2 below describes the mean, median and mode of the points given by the participants. Including the level of approval, affection and effectiveness towards project-based learning and Chinese education. The rating scale is from 1-10, 1 means strongly disapprove, strongly dislike, and strongly ineffective. 10 means strongly approve, strongly like, and strongly effective.

Table 2: Central tendencies of student's level of approval, affection, and effectiveness toward project-based learning and Chinese education

	Approval			Affection			Effectiveness		
	Mean	Median	Mode	Mean	Median	Mode	Mean	Median	Mode
Project-based learning	7.6	8	8	7.9	8	8	7.2	7	8
Chinese education	4.6	5	5	3.8	4	5	4.9	5	4&7

In terms of the level of approval, project-based learning is higher than that of Chinese education. Among the 31 participants, only 10 participants approved of Chinese education, accounting for 32.2%. The remaining 21 participants, accounting for 67.8% disapproved of Chinese education. Looking at the degree of approval of project-based learning, only one participant disapproved of it, and the rest of the 30 participants all approved of project-based learning, accounting for 96.8%. According to the data, the mean of the approval degree of project-based learning is higher than that of Chinese education, as well as the median and mode. The mode of the approval level of project-based learning is 8, 11 participants chose it to account for 35.3% among the total 31 participants. Moving to the mode of the approval degree of Chinese education, 5 is the most popular number. 12 participants chose it, accounting for 38.7% of the total 31 participants.

Looking at the level of affection of the two educational methods, the mean of the affection degree of project-based learning, 7.9 is higher than that of the Chinese education, 3.8. 29 participants, accounting for 93.6% chose the number above 5 in the project-based learning section, which means they like it, only 2 participants rated under 6, which means they don't like project-based learning. The median of the two sets of data is also clear, that of Chinese education still lower than that of project-based learning. 8 is selected the most frequently for the affection of project-based learning. 10 participants chose 8 to represent their affection toward project-based learning. 5 is selected the most frequently to represent participants' affection toward Chinese education.

The effectiveness of project-based learning and Chinese education has also been collected. According to the data, the mean of the effectiveness of project-based learning is still higher than that of Chinese education, since 7.2 is greater than 4.9. Among the total 31 participants, 28 of them (90.3%) considered project-based learning to be effective for their study, while the other 3 of them didn't. For Chinese education, there are 13 participants considered it as effective to their study, accounting for 41.9%. The rest 18 of the participants believe that Chinese education is ineffective in their study. The median of the two sets of data is 7 (project-based learning) and 5 (Chinese education). 8 is selected most frequently by participants to rate the effectiveness of project-based learning in their study. 9 participants selected it, which holds a proportion of 29.0%. 4 & 7 are selected most frequently by participants to represent the effectiveness of Chinese education in their study, which both account for 19.4% of the total.

Next, participants need to rate whether they prefer project-based learning or Chinese education from 1 to 7. 1 represents Chinese education and 7 represents project-based learning. The mean, median and mode of the data in this question are all "6". This indicates that participants are more inclined to project-based learning.

Finally, the participants were asked which of the two different educational methods would be more helpful for their future education. 83.9% chose project-based learning, 6.5% chose Chinese education, and 9.7% chose "none". Overall, project-based learning is the most helpful to participants' future study.

3.2. Deeper Investigation

Among the participants who gave more than 5 points in the approval degree of project-based learning, the reason for them to approve project-based learning is that the most frequently selected option is a "relaxed atmosphere in class". Account for 26.7% The main reason why the participants who give a score of less than 6 to project-based learning do not approve of it is that "there are always people in the project who drag them down", in other words: negative peer collaboration. Even though most participants are more in favor of project-based learning, the researcher continues to ask the participants who agree with it whether there are points that they disagree with project-based learning. 76.7% of the participants chose "Yes". The point they disagree with most about project-based learning is that " there are always people in the project who drag them down ", which also refers to negative peer collaboration.

The main reason given by the participants who did not approve of Chinese education with a score below six was "fraction theory", accounting for 52.4%. It is to regard the grade as the most important factor to evaluate a student. The most frequently selected reason for participants who recognized public education was "educational fairness.", accounting for 40%. In China every school-age child can receive nine years of compulsory education. Although most of the participants did not agree with Chinese education, when they were asked if there was anything in Chinese education that they approved of, 85.7% of them chose "yes". The part they approve of Chinese education is "educational fairness".

Overall, the main reason why participants approve of Chinese education is because of the fairness of education, and the main reason for disapproving is "fractional theory". The main reason why participants approve of project-based learning is the "relaxed atmosphere in class". The reason for the disapproval is because of negative peer collaboration.

4.   Discussion

From the data, it is obvious that the main reason why participants like project-based learning is the "relaxed atmosphere in class." Research shows that students are more likely to find satisfaction in group activities [12]. Compared with the Chinese education teachers, blindly repeated knowledge points, resulting in a tense learning atmosphere. In project-based learning, the teacher's task is no longer to blindly instill knowledge in students, and the classroom atmosphere can also be eased, so there is more time to give students some social-emotional support, which will improve students' satisfaction with the classroom [13]. Studies have shown that if teachers respect students in class and maintain a good classroom atmosphere, students' class participation and discussion will be higher [14]. In addition, the classroom atmosphere also has a positive impact on students' grades. Studies have shown that a good classroom atmosphere and teacher-student interaction can stimulate students' learning motivation and improve academic performance. Classroom atmosphere plays an important role in students' learning motivation [15]. However, from the data, participants believe that there are still some flaws in project-based learning. The biggest one is that they are afraid there are always people who drag them down in the project, due to the negative peer collaboration. From a socio-constructivist perspective. Discussion comes when there is a cognitive conflict within a group. Everyone will try to prove that their views are correct. The usefulness of the input heard in the discussion determines the progress of the project. In another experiment, the students were divided into two groups. One group heard a relatively high level of advice in the discussion, and their subsequent project progress was also high. The other group heard a relatively low level of responses in the discussion, and the quality of their follow-up group work was also relatively low [16]. Therefore, participants may worry that low-quality suggestions from group members will affect the final score of the whole group. In addition, research has shown that in group cooperation, both praise and criticism of team members will have an impact on project quality. Praise has a negative impact, while criticism has a positive impact [17]. Negative evaluation will undoubtedly cause harm to team members and affect the project experience. Social loafing can also easily occur on group tasks. Social loafing is when someone performs worse in a group than they normally do individually. When group cooperation occurs, people's social loafing characteristics will be stimulated, and the higher the level of this trait, the more negative impact it will bring to the quality of the group [18].

According to the data, the main reason given by participants for disapproving of Chinese education is "fractional theory": putting scores as the only criterion for judging students. Due to the large population base, the examination is the most direct and fair way to get an education, so there are national examinations like "Gaokao". Grades are the way to stand out from the examination [4]. The benefits of Chinese education were mainly attributed to "educational fairness". In June 2006, the Chinese government issued the Compulsory Education Law, which allows school-age children in China to receive nine years of compulsory education, that is, from grade 1 to the end of grade 9, free of charge, regardless of their family status or gender. This also ensures equity in education in China [4].

5.   Conclusion

In general, compared with Chinese education, students prefer and approve of project-based learning and think it is more effective than Chinese education. However, there are some limitations in this

paper. For example, the sample size is not enough; only 31 data are collected, but the participants who fill in the questionnaire have all experienced two teaching methods: Chinese education and project-based learning, which is representative enough for this research. The significance of this paper is that it is hoped that in the future, more schools will also refer to the ideas of students when choosing the overall teaching method and try to introduce project-based learning into more Chinese schools, to improve the overall happiness of students in school study and life.

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