# INFLUENCE OF TEACHING APPROACHES, SOCIOECONOMIC STATUS AND GENDER ON CLASSROOM ENGAGEMENT OF COLLEGE STUDENTS' IN THE CITY OF XINGTAI IN CHINA

## YANG XIAOHAN

A project report submitted in partial fulfilment of the requirements for the award of the degree of Master of Education (Educational Psychology)

School of Education
Faculty of Social Sciences and Humanities
Universiti Teknologi Malaysia

## **DEDICATION**

"Learning is more than the acquisition of the ability to think; it is the acquisition of many specialized abilities for thinking about a variety of things."

#### **ACKNOWLEDGEMENT**

In the one year since I finished this study, the person I am most grateful to is my supervisor, Professor Yeo Kee Jiar. Without her encouragement, guidance and feedback, I could not have finished this study so far. For me, any experience is summed up in failure, and the same is true for this study. I am constantly learning in revision after revision. Professor Yeo's feedback was very serious and careful. She took pains to point out the flaws in my research, provided me with correct references, and told me to "never give up". It was because of my persistence and her encouragement that I was able to complete this work.

Thus, I am also grateful to myself for not backing down when faced with difficulties, but choosing to do what I can. Of course, I can't do this without the help of my family. My parents have always supported my passion for academics. I hope that with their support and my undying enthusiasm, I can carry on my academic research in the future.

Finally, I would like to thank all the people who helped me with my research, including the respondents who answered my questionnaire, the faculty and staff of the schools I surveyed, and the scholars who produced literature I could refer to. Thanks to their contributions in the academic field, we can stand on the shoulders of giants as we do today.

#### **ABSTRACT**

Effective teaching has a direct and indirect influence on students' daily life and future success. The use of effective teaching methods can stimulate students' classroom engagement, and students' engagement is related to positive learning outcomes. In this research, the teaching approaches studied were divided into student-centered and teacher-centered. In China, many teachers tend to adopt a teacher-centered approach, and students' engagement in the classroom seems unsatisfied. This research aims to explore the influence of teaching approaches, socioeconomic status and gender on classroom engagement of college students in Xingtai City, Hebei Province, China. In this quantitative study, a cluster sampling method was used to conduct a questionnaire survey on 302 students from a college in Xingtai City and then collect data. Data analysis showed that teaching approaches have an impact on students' classroom engagement. At the same time, research has found that female students have higher classroom engagement than male students. However, the socioeconomic status of students and classroom engagement did not show a significant correlation. In general, this research provides support for exploring the influence of teachers' teaching approaches, students' gender and socioeconomic status on students' classroom engagement. Future research needs to use different instruments and more variables (such as students' culture or sibling rankings, etc.) to investigate the issue of student engagement in order to enrich the information on this issue.

#### **ABSTRAK**

Pengajaran berkesan mempunyai pengaruhan langsung dan tidak langsung terhadap kehidupan dan kejayaan masa depan pelajar. Penggunaan kaedah pengajaran berkesan dapat merangsang penglibatan pelajar dalam aktiviti kelas dan penglibatan ini dapat menghasilkan kesan pembelajaran yang positif. Dalam penyelidikan ini, pendekatan pengajaran telah dibahagikan kepada berpusatkan pelajar (students centred learning) dan berpusatkan guru (teacher centred learning). Di China, banyak guru menggunakan pendekatan berpusatkan guru, dan penglibatan pelajar dalam aktiviti kelas kurang memuaskan. Penyelidikan ini bertujuan untuk mengetahui pengaruh pendekatan pengajaran, status sosioekonomi dan jantina terhadap penglibatan kelas pelajar kolej di Bandar Xingtai, Provinsi Hebei, China. Dalam kajian kuantitatif ini, kaedah persampelan kluster digunakan untuk melakukan tinjauan soal selidik terhadap 302 pelajar dari sebuah kolej di Xingtai City dan kemudian mengumpulkan data. Analisis data menunjukkan bahawa pendekatan pengajaran memberi kesan terhadap penglibatan pelajar di kelas. Pada masa yang sama, penyelidikan mendapati bahawa pelajar perempuan mempunyai penglibatan kelas yang lebih tinggi daripada pelajar lelaki. Walau bagaimanapun, status sosioekonomi pelajar dan penglibatan kelas tidak menunjukkan hubungan yang signifikan. Secara amnya, penyelidikan ini memberi sokongan untuk meneroka pengaruh pendekatan pengajaran guru, jantina pelajar dan status sosioekonomi terhadap penglibatan kelas pelajar. Penyelidikan masa depan perlu menggunakan instrumen yang berbeza dan lebih banyak pemboleh ubah (seperti budaya pelajar atau kedudukan saudara, dll.) Untuk menyiasat masalah penglibatan pelajar untuk memperkaya maklumat mengenai isu ini.

# TABLE OF CONTENTS

	TITLE		<b>PAGE</b>
D	DECLARATION		
$\Gamma$	DEDICATION		
A	CKN	NOWLEDGEMENT	iv
A	ABSTRACT		
A	ABSTRAK		
Т	TABLE OF CONTENTS		
LIST OF TABLES			xi
LIST OF FIGURES			xii
I	LIST	OF APPENDIX	xiii
CHAPTER	. 1	INTRODUCTION	1
1	.1	Introduction	1
1	.2	Background of the Study	
1	.3	Statement of Problem	
1	.4	Research Objectives	7
1	.5	Research Questions	8
1	.6	Research Hypotheses	8
1	.7	Significance of the study	9
1	.8	B Theoretical Framework	
		1.8.1 Lev Vygotsky's Social Constructivism Theory	10
		1.8.2 Piaget's Assimilation and Accommodation Theory	11
1	.9	Conceptual Framework	13
1	.10	Scope of The Study	15
1	.11	Delimitation of The Study	16
1	1.12 Definition of Terms		16
	1.12.1 Influence16		
		1.12.2 Teaching Approaches	17
		1.12.3 Teacher-centered Approach	17

	1.12.4 Student-centered Approach	18
	1.12.5 Student Engagement	18
	1.12.6 Socioeconomic Status	19
1.13	S Summary	19
CHAPTER 2	REVIEW OF LITERATURE	21
2.1	Introduction	21
2.2	Social Constructivism Theory	21
2.3	Assimilation and Accommodation Theory	24
2.4	Student Engagement	26
2.5	Gender Differences	28
2.6	Socioeconomic Status	29
2.7	Teaching Approach	31
	2.7.1 Teacher-centered Approach	32
	2.7.2 Student-centered Approach	33
2.8	Previous Studies	34
2.9	Summary	35
CHAPTER 3	METHODOLOGY	37
3.1	Introduction	37
3.2	Research Design	37
3.3	Variables in the Study	38
	3.3.1 Independent Variable	38
	3.3.2 Dependent Variable	38
3.4	Population and Sample	39
	3.4.1 Population39	
	3.4.2 Sample	40
	3.4.3 Sample Size	41
3.5	Research Instruments	42
	3.5.1 Pilot Study43	
	3.5.2 Reliability of the Instrument	44
	3.5.3 Validity of the Instrument	45
3.6	Data Collection Procedures	46

3.7	Data Analysis		
	3.7.1	Descriptive Statistics	47
	3.7.2	Inferential Statistics	48
3.8	Summ	nary	49
CHAPTER 4	DAT	A ANALYSIS AND RESULTS	50
4.1	Introd	uction	50
4.2	Descr	iptive Analysis of Respondents' Demography	50
	4.2.1	Gender	50
	4.2.2	Age	51
	4.2.3	Socioeconomic Status	52
4.3	Descr	iptive Analysis of the Research Question	54
	4.3.1	What is the Dominant Level of teaching approaches (Teacher-centred and Student-centred) and Engagement in Classroom Among College Students?	54
4.4	Inferential Analysis of the Research Questions		
	4.4.1	Is there an significant relationship between teaching approaches (teacher-centred and student-centred) and college students' engagement in classroom?	62
	4.4.2	Are there any significant difference in engagement in classroom across female and male college students?	64
	4.4.3	Are there any significant difference in engagement in classroom across socioeconomic differences of college students?	65
4.5	Summ	nary	66
CHAPTER 5		MARY, DISCUSISON, IMPLICATION AND COMMENDATION	67
5.1	Introduction		67
5.2	Summary of Main Findings		67
	5.2.1	Objective (i): To identify dominant level of teaching approaches (teacher-centred and student-centred) and classroom engagement among college students	67
	5.2.2	Objective (ii): To determine any significant relationship between teaching approaches (teacher-centred and student-centred) and engagement in classroom among college students	68

	5.2.3	difference in classroom engagement across female and male college students	69
	5.2.4	Objective (iii): To determine any significant difference in classroom engagement across socioeconomic status of college students	69
5.3	Discus	ssion	70
	5.3.1	Level of teaching approaches (teacher-centred and student-centred) and classroom engagement among college students	70
	5.3.2	Relationship between teaching approaches (teacher-centred and student-centred) and engagement in classroom among college students	71
	5.3.3	Difference in classroom engagement across female and male college students	73
	5.3.4	Difference in classroom engagement across socioeconomic status of college students	74
5.4	Concl	usion of the Findings	75
5.5	Implications		75
	5.5.1	Theoretical Implications	76
	5.5.2	Practical Implications	77
5.6	Limita	ation of the Study	79
5.7	Recon	nmendations for Future Research	80
5.8	Concl	usion of the Study	81
ENCES	S		85
	5.4 5.5 5.6 5.7 5.8	5.2.4  5.3 Discu 5.3.1  5.3.2  5.3.3  5.3.4  5.4 Concl 5.5 Implie 5.5.1 5.5.2  5.6 Limits 5.7 Record	difference in classroom engagement across female and male college students  5.2.4 Objective (iii): To determine any significant difference in classroom engagement across socioeconomic status of college students  5.3 Discussion  5.3.1 Level of teaching approaches (teacher-centred and student-centred) and classroom engagement among college students  5.3.2 Relationship between teaching approaches (teacher-centred and student-centred) and engagement in classroom among college students  5.3.3 Difference in classroom engagement across female and male college students  5.3.4 Difference in classroom engagement across socioeconomic status of college students  5.4 Conclusion of the Findings  5.5 Implications  5.5.1 Theoretical Implications  5.5.2 Practical Implications  5.6 Limitation of the Study  5.7 Recommendations for Future Research  5.8 Conclusion of the Study

# LIST OF TABLES

TABLE NO	D. TITLE P.	AGE
Table 3.1	Sample size determining table by Krejcie and Morgan's (1970)	41
Table 3.2	Cronbach's alpha values and levels of internal consistency reliabilit	y 45
Table 3.3	Reliability of the instrument	45
Table 3.4	Validity of the instrument	46
Table 3.5	Data analysis for descriptive statistics	48
Table 3.6	Data analysis for inferential statistics	49
Table 4.1	Frequency and percentage distribution of the respondents' gender	50
Table 4.2	Frequency and percentage distribution of the respondents' age	51
Table 4.3	Frequency and percentage distribution of the respondents' SES leve	1 52
Table 4.4	Frequency and percentage of the respondents' response of teaching approaches	54
Table 4.5	Frequency and percentage of the respondents' response of engagem in classroom	ent 58
Table 4.6	Pearson Chi-Square of teaching approaches and students' engagement classroom	ent in 62
Table 4.7	Pearson correlation coefficient of teaching approaches and students engagement in classroom	, 63
Table 4.8	Results of linear regression analysis of teaching approaches and students' engagement in classroom	63
Table 4.9	ANOVA on the engagement in classroom across female and male college students	64
Table 4.10	Results of Pearson correlation coefficient of engagement in classroo across female and male college students	om 64
Table 4.11	ANOVA on the engagement in classroom across socioeconomic stat of college students	tus 65
Table 4.12	Results of Pearson correlation coefficient of socioeconomic different and students' engagement in classroom	nces 66

# LIST OF FIGURES

FIGURE NO	D. TITLE	PAGE
Figure 1.1	Lev Vygotsky's Theory of Zone of Proximal Development	11
Figure 1.2	Conceptual Framework of the Influence of teaching approaches Students' Engagement in Classroom	on 14
Figure 3.1	Cluster Sampling	40
Figure 3.2	The data collection procedure of this study	47
Figure 4.1	Percentage of the respondents' gender	51
Figure 4.2	Percentage of the respondents' age	52
Figure 4.3	Percentage of the respondents' socioeconomic status	53
Figure 4.4	Percentage of the respondents' classroom engagement	61

# LIST OF APPENDIX

APPENDIX NO.	PAGE
Appendix A	103
Appendix B	109

#### **CHAPTER 1**

#### INTRODUCTION

#### 1.1 Introduction

Effective teaching has a direct and indirect effect on students' daily lives and their later success in lives. It improves students' engagement in classroom and may result in increased achievement. The status of teachers and students in classroom teaching is a bilateral interactive relationship between the leading role of teachers and the main role of students. Effective teaching means that teachers have systematic, logical, explicit and clear contents and objectives in their teaching activities. Teachers can effectively apply the psychological principles of teaching, produce effective teaching, guide students to obtain effective learning, and then achieve the predetermined teaching objectives (Lin Jincai, 2006).

In the teaching process, teachers should use various teaching activities, teaching methods to deliver teaching contents. Through the process of teacher-student interaction, a series of complex and logical strategic actions are used to change students' behavior and achieve teaching objectives. Students' learning is very complicated, and teachers need to understand this complexity in order to design the maximally effective pedagogy (Stephen L. Chew & William J. Cerbin, 2020). Students' engagement is inseparable from effective teaching.

The realization of students' active engagement in the classroom allows them to perceptually experience their own status and significance of subject engagement in order to achieve the perceptual realization of the subject. "Engagement" has become an effective foothold for the realization of student subjective operation. The more engagement, the more active, the stronger the perceptual experience of the subject's status, and the stronger the consciousness of the subject, which promotes its development in the direction of rational understanding, and in turn further enhances

the enthusiasm and consciousness of engagement. Research shows that the use of effective teaching methods can stimulate student participation, and student participation is related to positive learning outcomes (Christine M. Collaço, 2017).

Furthermore, engagement in classroom assists students to make insightful comments and interesting connections. Also, it fosters a high level of energy and enthusiasm in the classroom learning environment. When students are interested in the classroom, they have the motivation to gain a deep understanding of knowledge, which achieves the original intention of effective teaching: after a period of teaching by the teacher, the students have made specific progress or development. Studies have shown that students who experience effective teaching will reach a higher level (Omoteso & Semudara, 2011 & Stronge et al, 2011), and student engagement in classroom is an important aspect of effective teaching (Westergård et al., 2018).

In today's Chinese college classrooms, the performance of students' engagement does not seem to be ideal. This may be related to the teaching approach adopted by teachers - in China, most teachers still prefer the traditional teacher-centered approach (Ding Songshuang, Li Songwei, Yang Huijuan & Liu Pengfei, 2019). A number of studies have shown that student-centered approaches are easier to improve students' classroom engagement (Foldnes, 2016; Lujan & DiCarlo, 2006; Parsons, Caroline S., 2017; Vercellotti, Mary Lou, 2017). In addition, students' gender and socioeconomic status (SES) may also have an impact on their classroom engagement. Because females than males are more often concentrate (Jaymes Pyne, 2020), and in many areas, students with lower SES develop more slowly (Morgan, Farkas, Hillemeier & Maczuga, 2009). Next, these possible influencing factors will be discussed one by one.

## 1.2 Background of the Study

The subjects of this study were mainly college students in Xingtai City, Hebei Province, China. There are a total of 4 universities in Xingtai City. In this study, one of the colleges was selected as the research object. After getting to know the teachers

and administrators of Xingtai University, the researcher learned that most students of Xingtai University have a low level of engagement in classroom, and this behavior will become more obvious with grade. That is, freshman students show a relatively high level of engagement in classroom, while sophomores and junior students' engagement in classroom will decrease year by year. Until the seniors, they rarely choose to interact with the teacher in the classroom. According to the research of Ding Songshuang et al. (2019), most Chinese college classroom teaching still uses the traditional teaching approach. When teachers instill knowledge to the students, the students are regarded as the pure object existence, thus neglecting the teacher-student interaction in classroom teaching.

Some Chinese scholars (Wang Aiqin, Zhang Yongli & Zhang Jin, 2017) have studied the development of disciplines in universities and colleges in China. The findings revealed that the number of professional courses in universities is increasing, the courses are many and miscellaneous, and students are required to take all of the courses. As a result, the class hours of each course are gradually reduced, many of the original 60 hours of professional courses can only be arranged for 30 hours, but to complete the same teaching tasks. It can be seen from this that in order to keep up with the progress, some knowledge points cannot be explained thoroughly by teachers, and they can only pass through the area. Students do not understand well, do not remember well, and have unclear concepts. The above reasons cause the classroom atmosphere to be very boring, and students' engagement in the classroom is not high.

According to the opinions of several prior researches, it was revealed that the challenge faced by many teachers is to increase students' engagement in classroom and provide students with motivation to succeed in recent years. This challenge is more obvious in the higher education environment (Cavanagh, 2011; Mandernach, 2015; O'Flaherty & Phillips, 2015). Studies have also found that students' low engagement in classroom will have a negative impact on their learning outcomes and overall academic success (Hanus &Fox, 2015; Meguid &Collins, 2017).

Students' engagement in classroom is closely associated with teaching

approaches applied in the classroom. There are many advantages associated with cooperative learning and active student engagement in lectures. According to Wigfield et al (2015), behavioral engagement is a good indicator of student performance-related choices. Active learning will also improve student learning outcomes (Freeman S et al, 2014). In Foldnes's (2016) opinion, cooperative learning with classroom participation can improve students' academic performance better than traditional lecture-based teaching. Students who contribute enthusiastically in lectures retain information for longer than if they simply see or hear it (Lujan & DiCarlo, 2006).

There are also many ways to engage students in the classroom. In addition to actively communicating with the teacher during the lecture, lectures and class discussions are also considered by students to be more useful for learning than group activities (Vercellotti, Mary Lou, 2017). Moreover, study found that roundtable classrooms also facilitate dialogue between students and community buildings (Parsons, Caroline S., 2017).

It can be seen that the application of active teaching approaches is very useful. Active teaching approaches can not only enable teachers to teach knowledge better, but may also improve students' engagement in classroom to a certain extent. As Bonwell & Eison (1991) researched, teaching activities allow students to think about what they are doing while doing things. Because the approach of promoting active learning pays more attention to cultivating students' skills, rather than transmitting information, and requires students to do things that require higher-level thinking-reading, discussion, and writing. They also tend to emphasize students' exploration of their own attitudes and values (Brame C, 2016).

However, there are still many students, especially Chinese students, who prefer to remain silent in class. There is a widespread phenomenon of silence in undergraduate class, and habitual silence is dominant (Xu Yiju, 2020). Classroom silence is a situation where students are unwilling to ask and answer questions in class. It may also be a phenomenon in which students are unable or afraid to ask or answer questions to teachers. When comparing the above two reasons for being

silence, the unwillingness to express seems to be the main cause of classroom silence. It is both a cause and a result, and it is a practical starting point to overcome classroom silence (Su Kaimin & Zhou Yubin, 2020).

Many scholars in China have conducted research on the status quo of college students' classrooms. For example, Chen Fan (2017) after investigating the class situation of 51 universities in China, found that a common problem in college classes is that students seem to have less interest and motivation in what they are learning; students and teachers have little communication, and there is almost no interaction; the key abilities of students such as innovation and critical thinking have not been improved. Study have also found that many students sleep in the classroom, play the smart phones, even ignore their teachers' questions, let alone taking the initiative to ask questions to teachers (Hu Xiaoling, 2017).

According to the study by Zhu Lianwen & Sun Xianhui (2020), the most serious classroom problem from the perspective of students is "the content of the class is boring", and the first requirement of the students to the teacher is "humorous and funny in class". Hu Xiaoling (2017) also points out in her research that compared with personal reasons, non-personal reasons have a greater impact on college students' classroom misconduct, especially the harmonious relationship between teachers and students, class atmosphere, teaching methods, teaching content and other indicators.

Meanwhile, there are also some problems with students' gender and SES on classroom engagement. Study have found that the gender of college students significantly affects classroom engagement (Wu Linfang, He Chuan & Wang Yang, 2018), because compared with female students, the teacher-student relationship of male students is more worthy of attention (Hu Yuanyan & Li Qiqi, 2014). According to Zhang Xing (2019), although The self-efficacy of female students was slightly higher than male students, females are more prone to silence than males, but no significant difference has been reached. On the other hand, students' SES also affect students' academic performance, innovation ability and even classroom engagement to a certain extent (Luo Changyuan & Si Chunxiao, 2020; Li Xianyin, Zhang

## 1.3 Statement of Problem

Until now, many parents and teachers in China still love to use the word "obedient" to praise children and students. For learning, eastern culture, including Chinese culture, emphasizes obedience and acceptance, while western culture emphasizes criticism and questioning (Jin Li, 2012). Empirical studies have shown that Chinese students do not like asking questions in class like western students. The reason is that Chinese culture treats teachers as students' mentors, rulers and role models. Teachers speak on the podium, students just listen and this is in a way being obedient. Teacher-centered teaching is not useless. The obvious benefits are that it is more controllable, quicker to get started, more efficient, and lower in cost, and can impart more knowledge in a relatively short period of time.

However, many researches showed that teacher-centered teaching has obvious deficiencies in promoting deep learning, changing attitudes or values, cultivating critical thinking, mastering operation techniques, and improving communication skills (Jin Li, 2012). In teacher-centered classrooms, students are in a passive position, unwilling or unable to speak. Over time, habits become natural and learned silent forms. This is habit-oriented conservative learning behavior in the class, which has a negative impact on deep learning and thinking, and is detrimental to the improvement of academic achievement (Lv Linhai, 2016).

Previous studies have shown that engagement in class is a kind of externalization and expression, which has a positive role in promoting learning. From the perspective of students, the main obstacles to communication in class include being accustomed to being silent in class, anxious about communication in class, insufficient preparation, and teachers are not good at creating opportunities for students, not easy to stimulate students' interest in speaking in class during the course, etc.

However, most of the research is based on the researchers', or teachers' perspective. Few researches are from the student's perspective to explore students' true inner thoughts about engagement in classroom. For example, we don't know what is the reason why students do not interact when the teacher makes a request for interaction. Is it because they refuse to communicate in class because of their lack of preparation, or are they actually not taking the class seriously and missing the teacher's questions. The same is true of studies on gender and SES. Few studies have mentioned how gender and SES influence classroom engagement in the Chinese education system, and whether this influence can be changed.

From the perspective of students and China's education system, this study discussed different factors of teaching approaches, students' gender, and SES of on students' classroom engagement.

## 1.4 Research Objectives

The objective of this study was to examine the college students' low engagement during classroom learning in colleges in Xingtai City, Hebei Province, China. The study was carried out to achieve the following objectives:

- To identify dominant level of teaching approaches (teacher-centred and student-centred) and engagement in classroom among college students.
- ii. To determine any significant relationship between teaching approaches (teacher-centred and student-centred) and engagement in classroom among college students.
- iii. To determine any significant difference in classroom engagement across female and male college students.

iv. To determine any significant difference in classroom engagement across socioeconomic status of college students.

## 1.5 Research Questions

Based on the research objectives, this study was conducted to answer several questions below:

- i. What is the dominant level of teaching approaches (teacher-centred and student-centred) and engagement in classroom among college students?
- ii. Is there an significant relationship between teaching approaches (teacher-centered and student-centered) and college students' engagement in classroom?
- iii. Are there any significant difference in engagement in classroom across female and male college students?
- iv. Are there any significant difference in engagement in classroom across socioeconomic status of college students?

## 1.6 Research Hypotheses

According to Hilborn, Ray & Mangel, Marc (1997), a hypothesis is a proposed explanation of a phenomenon, a temporarily accepted presupposition proposed for further research. It is a process that starts with educated guessing or thinking (Richard Feynman, 1965). This study tests the following null hypotheses at a significance level of 0.01.

H<sub>0</sub>1: There is no significant relationship between teaching approach with

engagement in classroom among college students.

H<sub>0</sub>2: There are no significant differences in engagement in classroom across female and male college students.

H<sub>0</sub>3: There are no significant differences in engagement in classroom across socioeconomic status of college students.

## 1.7 Significance of the study

The findings and conclusions of this study provide relevant knowledge about the factors causing the college students' low engagement during the lesson in the city of Xingtai in China. The expected findings of this research will directly benefit students' academic performance, teachers' sense of efficacy, and indirectly affect students' self-confidence.

Above all, this research can increase the school's emphasis on student engagement class, so that students no longer "study for graduation", but really gain knowledge through class.

Secondly, the teacher's lack of interaction during class is also a loss of confidence for the teacher. Increasing the engagement of students in class can also allow teachers to prepare more comprehensively and carefully prepare each class instead of simply treating lectures as a job.

Last but not least, engagement in classroom can give students an opportunity to show themselves, stop them from curling up in their own shells, boldly express their ideas to others, and enhance students' self-confidence.

## 1.8 Theoretical Framework

For a long time, the teacher's teaching style and the concept of improving students' engagement in classroom have been the focus of many researches. It is undeniable that teaching methods and student participation in the classroom do have a great impact. Therefore, this research uses Social Constructivism Theory by Lev Vygotsky (1896-1934) as the theoretical framework. In addition, the active learning theory advocated by Piaget can also be used as a reference.

## 1.8.1 Lev Vygotsky's Social Constructivism Theory

Vygotsky's theory believes that knowledge is constructed together and individuals can learn from each other. It is called the Social Constructivism Theory (SCT), because in Vygotsky's view, learners must participate in the learning process. Learning is done with the help of others and therefore contributes to the social aspect of the theory. According to Vygotsky, the individual's cognitive structure is formed in the social interaction, and development is the process of transforming the external and existing things between subjects into or internalizing the internal and unique things for the individual. Vygotsky(1978, p. 90) argued that learning is a necessary and universal aspect of the process of developing culturally organized, specifically human psychological function.

A fundamental aspect of Vygotsky's theory is the Zone of Proximal Development (ZPD). He mentioned that a series of tasks that are difficult for one person to complete alone, but can be completed with the help or guidance of adults or more skilled peers (Vygotsky, 1962). ZPD is the most intimate and direct area of learners' psychological development, including their extensive emotional, cognitive and volitional psychological processes. However, in contemporary educational research and practice, it is often interpreted as the distance between what learners can do without help and what they can do with the support of people with more knowledge or expertise (Zone of proximal development, 2009). Vygotsky argued that students have dialogues with "more knowledgeable people", through social

interaction and understanding, and gradually develop the ability to solve problems independently, and complete certain tasks without help. Following Vygotsky, some educators believe that the role of education is to give children experience in their most recently developed area, thereby encouraging and advancing their personal learning, such as skills and strategies (Berk, L & Winsler, A, 1995).

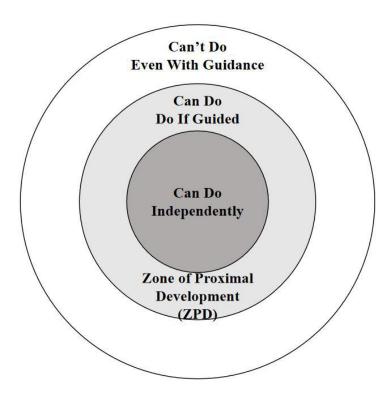


Figure 1.1 Lev Vygotsky's Theory of Zone of Proximal Development

Another part of this theory is the scaffolding, which is to give learners the right amount of help at the right time. If the learner can complete the task with some help, then he or she is closer to mastering it. This theory is related to the healthy development of adolescents, because if students learn in pairs, they are interacting with others, so they can learn different academic ideas from each other. This theory suggests that students learn from each other; they can help each other and build knowledge together.

## 1.8.2 Piaget's Assimilation and Accommodation Theory

The Cognitive Development Theory proposed by Jean Piaget (1936; 1950), a

famous developmental psychologist, refers to the process in which the individual's cognition of things and the way of thinking and ability performance in the face of problem situations change with the growth of age during the activities of adapting to the environment after birth. Piaget was particularly interested in the study of cognitive development because he regarded children's cognitive development as a bridge between biology and epistemology. He believed that the understanding of children's individual cognitive development could reveal the law of the occurrence of human cognition, thus constructing his whole theory of "generative epistemology".

Therefore, Piaget's theory has a profound influence on the formulation of educational policies and teaching practice. For example, the British government's review of elementary education in 1966 was strongly based on Piaget's theory. The results of this review led to the publication of the Plowden Report (1967). The report repeatedly emphasized in the report are: personal learning, curriculum flexibility, the centrality of games in children's learning, the use of the environment, learning through discovery, and the importance of evaluating children's progress - teachers should not assume that only what is measurable is valuable.

According to Piaget (1958), assimilation and accommodation require an active learner, not a passive learner, because problem-solving skills cannot be taught, they must be discovered. Accommodation refers to the process by which individuals adjust their internal structure to adapt to specific stimuli. When an individual encounters a new stimulus that cannot be assimilated by the original schema, the original schema must be modified or reconstructed to adapt to the environment. This will force the individual to change the existing cognitive schema, form some new schema suitable for new experience, and cause the continuous development and change of cognitive structure.

Assimilation is the process by which an organism integrates elements of its environment into its original organization. Piaget used assimilation to illustrate the psychological process by which individuals incorporate new stimuli into their original schemata. For the whole organism, there are three levels of assimilation: physical assimilation; At the action level, it's the assimilation of behavior; On the

intellectual level, it's the assimilation of ideas. From a psychological point of view, assimilation is the integration of external elements into a forming or formed structure. Thus, the assimilation process is limited by the schema already available to the individual. The more schemas an individual has, the wider the range of things to assimilate; On the contrary, the range of assimilation is relatively narrow.

The development and enrichment of schemas are realized through two mechanisms: assimilation and accommodation. According to Piaget (1952), the filtering or alteration of the stimulus input is called assimilation; The change of internal schema to adapt to reality is called accommodation. Assimilation is a process of quantitative change, while accommodation is a process of qualitative change. In the development of cognitive structure, assimilation and accommodation are not only opposite to each other, but also interrelated and interdependent. In terms of people's cognitive growth, if there is only assimilation without accommodation, there is no development of cognition. If there is no assimilation, there is no accommodation to speak of, and knowledge is always the assimilation of external objects into internal schemas. The internal schema conforms to the outcome of the two processes of the unity of opposites.

Therefore, teachers should encourage the following behaviors in the classroom: (1) Focus on the process of learning, not the final result of learning; (2) Use positive methods that require rediscovering or rebuilding the "truth"; (3) Use collaboration and personal activities (so students can learn from each other); (4) Design situations that can bring about useful problems and create disequilibrium in students; (5) Evaluate students' development level in order to formulate appropriate tasks (Saul McLeod, 2020).

## 1.9 Conceptual Framework

The conceptual framework of this research provides a perspective on the influence of teachers' different teaching approaches on students' engagement in classroom, as well as the influence of students' gender and socioeconomic

differences on students' engagement in classroom. According to previous research, this conceptual framework is based on assumptions related to teaching approaches and student engagement in classroom. Figure 1.2 shows a conceptual framework that illustrates the main components of the research.

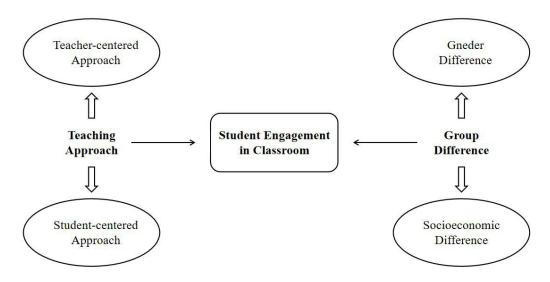


Figure 1.2 Conceptual Framework of the Influence of teaching approaches on Students' Engagement in Classroom

This study considers two types of teaching approaches, namely teacher-centered teaching approaches and student-centered teaching approaches. As the two pillars of traditional education and modern education, teacher-center and student-center have experienced a long process of evolution from the beginning of their emergence to the present, and in the process of continuous enrichment the two schools of thought, which were teacher-center represented by Herbart and student center represented by Dewey have been formed. From the perspective of curriculum design, Nunan (1989) pointed out that student-centered courses differ from traditional courses mainly in the following aspects: these courses are jointly developed by teachers and students; students' opinions run through every stage of curriculum design and they engagement in the selection of teaching content, teaching methods and final teaching evaluation. Scilicet, if learning activities are controlled and managed by students, then such teaching is "student-centered", otherwise, it is "teacher-centered".

In addition, the gender and socioeconomic status of the students are also

taken into account. In this study, the gender of the students is restricted to males and females of the biological sex, which means that gender dysphoria and transgender people are not considered. On the other hand, socioeconomic status (SES) includes not only income, but also education, financial security, and subjective views of social status and social class. Studies have shown that children from low socioeconomic status families and communities develop learning skills more slowly than children from high socioeconomic status groups (Morgan, Farkas, Hillemeier & Maczuga, 2009).

Different teaching approaches and students' engagement in classroom were investigated in this study. In addition, the study also found the influence of gender and socioeconomic status on students' engagement in classroom. According to past studies, the teaching tasks of most subjects in China are very heavy, and most teachers adopt traditional teaching methods in order to catch up with the teaching progress (Wang Aiqin, Zhang Yongli & Zhang Jin, 2017). Therefore, the results of this study will show the dominant level of different teaching approaches on students' engagement in classroom, as well as whether teachers' teaching approaches, students' gender and socioeconomic differences have an influence on students' engagement.

## 1.10 Scope of The Study

The purpose of this quantitative study was to explore the relationship between Chinese college teaching approaches, students' SES and gender on classroom engagement. In order to make the research more effective, considering that in China, the engagement of students generally declines with age (Zhao Yue, 2018) and that schools generally require major courses to start from sophomore year, all sophomores in a college in Xingtai City, Hebei Province, China, with a population of about 1400, were selected for this study. Cluster sampling method was used to select 302 students to fill out the questionnaire survey, then used Statistical Package for Social Sciences (SPSS) to do the data analysis.

collation and analysis were distributed from April 2021 to the end of June of the same year. Meanwhile, Vygotsky's Social Constructivism Theory and Piaget's Assimilation and Accommodation Theory were used as theoretical guidance to put forward research questions, research objectives and research hypotheses.

## 1.11 Delimitation of The Study

Since the purpose of this quantitative study was to explore the influence of teaching approaches, students' SES and gender on classroom engagement in Chinese colleges, other variables such as whether the students were ethnic minorities or whether the students were the only child were not considered in this study. Teaching approaches were only divided into student-centered and teacher-centered. Gender of students did not consider the gender other than biological gender (male and female), and SES was divided according to China's national conditions.

### 1.12 Definition of Terms

There are a few terms worth noting based on the research questions in this study. The following is a detailed description of seven terms to ensure the distinction between conceptual and operational definitions of keywords.

#### 1.12.1 Influence

Influence usually refers to the capacity to have an effect on the character, development, or behavior of someone or something, or the effect itself.

In this study, influence refers to the extent of effect of different teaching methods (teacher-centered and student-centered) on students' engagement in classroom, as well as the extent of gender differences and socioeconomic differences on students' engagement in classroom.

## 1.12.2 Teaching Approaches

teaching approaches is a set of principles, beliefs or concepts about the nature of learning, which are transformed into the classroom. An approach is a way of looking at teaching and learning(Md. Enamul Hoque, 2016).

In this study, teaching approaches were divided into teacher-centered approach and student-centered approach. In the former, the teacher plays the role of the familiar classroom lecturer, and the students are expected to passively accept the knowledge provided. The latter shift the focus of teaching from the teacher to the student and put the student's interest in the first place.

## 1.12.3 Teacher-centered Approach

The teacher-centered approach means that classroom activities are teacher-centered. It can be compared with a learner-centered approach. Teacher-centered courses are usually associated with traditional language learning methods, but teacher-centered activities can play a role in teaching in many ways. The teacher is an effective model of the target language and an important source of information to understand the learning situation of the learner (British Council, 2020).

In this study, the teacher-centered approach refers to the approach in which teachers give lectures unilaterally to students with traditional methods, systematically plan learning plans for students, and students passively accept the knowledge provided.

#### 1.12.4 Student-centered Approach

Student-centered approach refers to a variety of educational programs, learning experiences, teaching methods, and academic support strategies that are designed to meet individual students and student groups with different learning needs, interests, ambitions, or cultural backgrounds. To achieve this goal, schools, teachers, guidance counselors, and other education experts may use a variety of educational methods, from modifying classroom assignments and teaching strategies to completely redesigning student groups (Education Reform, 2014).

In this study, the student-centered teaching approaches refers to the method that teachers focus on attracting students' interest and adding active atmosphere to the classroom. For example, students are allowed to speak freely, have group discussions or make presentations in class, and use methods such as role-playing to assist teaching.

## 1.12.5 Student Engagement

In education, student engagement refers to the degree of attention, curiosity, interest, optimism and enthusiasm that students show when studying or receiving education, which extends to their level of motivation for learning and making progress in education. The underlying basis for engagement is the relationship between students' learning and the time, effort, and resources they put into education (All Answers Ltd, 2018). In general, the concept of "student engagement" is based on the belief that learning improves when students are curious, interested, or inspired; learning often suffers when students are bored, calm, dissatisfied, or otherwise "disengaged". Stronger student engagement or increased student engagement is a common teaching goal expressed by educators (Education Reform, 2016).

In this study, student engagement refers to the interaction between students and teachers in the classroom. For example, students actively answer or ask

questions to the teacher and students are curious about the knowledge imparted by the teacher and will actively explore. Not just "participating" in the classroom.

#### 1.12.6 Socioeconomic Status

Socioeconomic status (SES) is a comprehensive economic and sociological measurement of a person's work experience and the relationship between an individual's or family's economic and social status and others (National Center for Educational Statistics, 2008).

In this study, according to China's national conditions, students' socioeconomic status (SES) is divided into six levels. They are affluent (annual family income over RMB800,000), middle class (annual family income RMB500,000 to RMB800,000), better-off (annual family income RMB360,000 to RMB500,000), subsistence (annual family income RMB100,000 to RMB360,000), poverty (annual family income RMB50,000 to RMB100,000), and hardship (annual family income below RMB50,000).

#### 1.13 Summary

The first chapter provides an overview of current research. The importance of effective education and its close relationship with student engagement were discussed. As previous studies have shown, Chinese teachers tend to use traditional teaching approach and students' engagement in classroom is dissatisfactory. The research background and problem statement highlight the phenomenon of students' engagement in classroom. Through research objectives, research questions, and conceptual framework, could give a deeper understanding of the nature of the research.

The rest of this report includes the following: Chapter 2 reviews the literature

on definitions and concepts of students' engagement as well as teaching approaches, gender and SES as independent variables. Then, the third chapter defines the research methods, research design, research procedures, tools and data analysis framework. Chapter four and chapter five are the analysis and conclusion of the research results.

#### REFERENCES

- A. N. Leontyev. (1980). Activity, Consciousness, and Personality.
- Aikens, N. L., & Barbarin, O. (2008). Socioeconomic differences in reading trajectories: The contribution of family, neighborhood, and school contexts. Journal of Educational Psychology, 100, 235-251. http://dx.doi.org/10.1037/0022-0663.100.2.235
- Akey, T. M. (2006, January). School context, student attitudes and behavior, and academic achievement: An exploratory analysis. New York: MDRC. Retrieved April 23, 2007, from http://www.mdrc.org/publications/419/full.pdf
- Alexander S.Browman, Mesmin Destin, Kathleen L. Carswell, Ryan C. Svoboda. (2017). Perceptions of socioeconomic mobility influence academic persistence among low socioeconomic status students. https://doi.org/10.1016/j.jesp.2017.03.006
- Ali & Sheeba Sardar. (2019). Problem Based Learning: A Student-Centered Approach.
- Almarghani Eman M. & Mijatovic Ivana. (2017). Factors affecting student engagement in HEIs it is all about good teaching. Teaching in Higher Education, 1–17.
- Altermatt Ellen Rydell, Jovanovic Jasna & Perry Michelle. (1998). "Bias or responsivity? Sex and achievement-level effects on teachers' classroom questioning practices". Journal of Educational Psychology. 90 (3): 516 527. doi:10.1037/0022-0663.90.3.516. ISSN 0022-0663.
- Alves Pedro Ferreira. (2014). Vygotsky and Piaget: scientific concepts. Psychology in Russia: State of the art. Науки об образовании.

- Anna Therese Steen-Utheim & Njål Foldnes. (2017). A qualitative investigation of student engagement in a flipped classroom.
- Anne M. E. (1984). Vive la Différence: A Comparison of Male-Female Academic Performance.
- Balkis M. & Duru E. (2017). Gender Differences in the Relationship between Academic Procrastination, Satisfaction with Academic Life and Academic Performance.
- Barbara E. Bechter, James A. Dimmock & BenJackson. (2019). A cluster-randomized controlled trial to improve student experiences in physical education: Results of a student-centered learning intervention with high school teachers. https://doi.org/10.1016/j.psychsport.2019.101553
- Benatar David. (2003). "The Second Sexism". Social Theory and Practice. 29 (2): 177 210. doi:10.5840/soctheorpract200329213. ISSN 0037-802X.
- Bergen, E., Zuijen, T., Bishop, D., & Jong, P. F. (2016). Why are home literacy environment and children's reading skills associated? What parental skills reveal. Reading Research Quarterly, 52, 147-160. doi:10.1002/rrq.160
- Berk, L & Winsler, A. (1995). Vygotsky also felt that social interaction was very important when it came to learning. "Vygotsky: His life and works" and "Vygotsky's approach to development". In Scaffolding children's learning: Vygotsky and early childhood learning. Natl. Assoc for Educ. Of Young Children. p. 24
- Blanck G. (1990). Vygostky: The Man and His Cause. In L.C. Moll (Ed.), Vygotsky and Education: Instructional Implications and Applications of Sociohistorical Psychology. Cambridge, New York: Syndicate of University of Cambridge.
- Bomia, L., Beluzo, L., Demeester, D., Elander, K., Johnson, M. & Sheldon, B. (1997). The impact of teaching strategies on intrinsic motivation. Champaign, IL: ERIC Clearinghouse on Elementary and Early Childhood Education.

- Bonwell, C. C., and Eison, J.A. (1991). Active learning: creating excitement in the classroom. ASH#-ERIC Higher Education Report No. 1, Washington, D.C.: The George Washington University, School of Education and Human Development.
- Brame, C. (2016). Active learning. Vanderbilt University Center for Teaching. Retrieved [todaysdate] from https://cft.vanderbilt.edu/active-learning/.
- Braun Virginia & Clarke Victoria (2006). "Using thematic analysis in psychology". Qualitative Research in Psychology. 3 (2): 77–101. doi:http://dx.doi.org/10.1191/1478088706qp063oa
- British Council. (2020). Teacher centred. Teaching Knowledge Database. https://www.teachingenglish.org.uk/article/teacher-centred
- Brophy, J. (1999). Perspectives of classroom management: Yesterday, today and tomorrow. In H. Freiberg (Ed.), Beyond behaviorism: Changing the classroom management paradigm, 43–56. Boston: Allyn and Bacon.
- Brown, M. G., Wohn, D. Y., & Ellison, N. (2016). Without a map: College access and the online practices of youth from low-income communities. Computers & Education, 92, 104-116. doi:10.1016/j.compedu.2015.10.001
- Bruner J. (1985). Vygotsky: A Historical and Conceptual Perspective. In J. V. Wertsch (Ed.), Culture, Communication and Cognition: Vygotskyian Perspectives (pp. 21-35). Cambridge: Cambridge University Press.
- Bryman, Alan (2012). Social research methods (4th ed.). Oxford: Oxford University Press. ISBN 978-0-19-958805-3. OCLC 751832004.
- Buckingham, J., Wheldall, K., & Beaman-Wheldall, R. (2013). Why poor children are more likely to become poor readers: The school years. Australian Journal of Education, 57, 190-213. doi:10.1177/0004944113495500
- Cabi, E. (2018). The Impact of the Flipped Classroom Model on Students' Academic Achievement. International Review of Research in Open and Distributed Learning, 19 (3). https://doi.org/10.19173/irrodl.v19i3.3482

- Cavanagh, M.(2011) .Students'experiences of active engagement through cooperative learning activities in lectures. Active Learning in Higher Education, 12(1), 23-33.
- Chen Fan. (2017). How to Make Student-centered Teaching Possible: An Empirical Study on the Status Quo of Undergraduate Classroom Teaching in 51 Universities.
- Chickering and Gamson. (1987). Seven Principles for Good Practice in Undergraduate Education. American Association for Higher Education Bulletin.
- Christine M. Collaço, (2017)"Increasing Student Engagement in Higher Education," Journal of Higher Education Theory and Practice, Vol. 17, Iss. 4, pp. 40-47
- Collinson Eric. (2000). A Survey of Elementary Students Learning Style Preferences and Academic Success. Contemporary Eduication, 71(4), 42-48.
- Creswell, J. W. (2014). A concise introduction to mixed methods research. SAGE publications.
- Cullen Deborah L. (2003). "Women mentoring in academe: Addressing the gender gap in higher education". Gender and Education. 5 (2): 125 137. doi:10.1080/0954025930050201.
- Daniel B. Hajovsky, Benjamin A. Mason & Luke A. McCune. (2017). Teacher-student relationship quality and academic achievement in elementary school: A longitudinal examination of gender differences. https://doi.org/10.1016/j.jsp.2017.04.001
- Davies Bronwyn. (2007). "Gender economies: literacy and the gendered production of neo-liberal subjectivities". Gender and Education. 19 (1): 1 20. doi:10.1080/09540250601087710.
- DeVellis, R. (2017). Scale development: Theory and applications. In Applied Social Research Methods Series: Vol. 26 (4th ed.). Thousand Oaks, CA: SAGE.

- Dewey J. (1915). The school and society. Chicago, IL: University of Chicago Press.Google Scholar.
- Dewey J. (1933). How We Think. Boston: D.C. Health.
- Dewey J. (1938). Experience and Education. New York: Collier Books.
- Dewey J. (1997). Democracy and education. New York: The Free Press.
- Diaz R., Neal C & Amaya-Williama M. (1990). The Origins of Self-regulation. In L. C. Moll (Ed.), Vygotsky and Education: Instructional Implications and Applications of Sociohistorical Psychology (pp. 127-154). Cambridge, New York: Cambridge University Press.
- Ding Songshuang, Li Songwei, Yang Huijuan & Liu Pengfei. (2019). On the reform of university classroom teaching. EDUCATION TEACHING FORUM. doi: 1674-9324(2019)17-0100-02
- Doerschuk, P., Bahrim, C., Daniel, J., Kruger, J., Mann, J., & Martin, C. (2016). Closing the gaps and filling the STEM pipeline: A multidisciplinary approach. Journal of Science Education and Technology, 25, 682-695. doi:10.1007/s10956-016-9622-8
- Duffy Jim. (2001). "Classroom Interactions: Gender of Teacher, Gender of Student, and Classroom Subject". Sex Roles. 45 (9/10): 579 593. doi:10.1023/A:1014892408105.
- Ed Boyapati. (2000). Learning: Student-Centred vs Teacher-Centred.
- Education Reform. (2014). STUDENT-CENTERED LEARNING. <a href="https://www.edglossary.org/student-centered-learning/">https://www.edglossary.org/student-centered-learning/</a>
- Espenshade, T. J. & Radford, A. W. (2009). No longer separate, not yet equal: Race and class in elite college admission and campus life. Princeton: Princeton University Press. p.12-20
- Fletcher A. (2005). Meaningful Student Involvement Guide to Students as Partners in School Change. Olympia, WA: SoundOut.

- Flinders, D., & Thornton, S. (2013). The curriculum studies reader. (4th Ed.). New York: Routledge.
- Flinders, D., & Thornton, S. (2013). The curriculum studies reader. (4th Ed.). New York: Routledge.
- Foldnes N (2016) The flipped classroom and cooperative learning: Evidence from a randomized experiment. Active Learning in Higher Education. 17(1): 39–49.
- Fowler Jr, F. J. (2013). Survey research methods. Singapore: Sage publications.
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2011). How to design and evaluate research in education. New York: McGraw-Hill Humanities/Social Sciences/Languages.
- Franzis Preckel, Thomas Götz & Anne C. Frenzel. (2010). Ability grouping of gifted students: Effects on academic self-concept and boredom. https://doi.org/10.1348/000709909X480716
- Fredricks, J. A., P. C. Blumenfeld, and A. H. Paris. 2004. "School Engagement: Potential of the Concept, State of the Evidence." Review of Educational Research 74 (1): 59–109.
- Freeman S, Eddy SL, McDonough M, Smith MK, Okoroafor N, Jordt H, et al. (2014). Active learning increases student performance in science, engineering, and mathematics. Proc Natl Acad Sci U S A. 2014; 111: 8410–15.
- Freiberg, H. J. (Ed.). (1999). Beyond behaviorism: Changing the classroom management paradigm. Boston: Allyn and Bacon.
- Gault, RH (1907). "A history of the questionnaire method of research in psychology". Research in Psychology. 14 (3): 366–383.
- Glossary of statistical terms: Population. (2016). Statistics.com.
- Goodnow, J. J. (2010). Culture. In M. H. Bornstein (Ed.), Handbook of cultural developmental science (pp. 3–19). New York, NY: Psychology Press.

- Grummel Bernie. (2009). "The care-less manager: Gender, care, and new managerialism in higher education". Gender and Education. 21 (2): 191 208. CiteSeerX 10.1.1.553.6704. doi:10.1080/09540250802392273.
- Guest Greg, MacQueen, Kathleen & Namey, Emily (2012). Applied thematic analysis. Thousand Oaks, California: SAGE Publications. p. 11.
- Gunuc, S. & Kuzu, A. (2014). Student engagement scale: Development, reliability and validity. Assessment & Evaluation in Higher Education, DOI: 10.1080/02602938.2014.938019.
- Gutek, G. (2014). Philosophical, ideological, and theoretical perspectives on education. (2nd Ed.). New York: Pearson.
- Hamdi Serin. (2018). A Comparison of Teacher-Centered and Student-Centered Approaches in Educational Settings. September 2018 · International Journal of Social Sciences and Educational Studies 5(1). DOI: 10.23918/ijsses.v5i1p164
- Hanus M. D., & Fox J. (2015). Assessing the effects of gamification in the classroom: A longitudinal study on intrinsic motivation, social comparison, satisfaction, effort, and academic performance. Computers & Education, 80, 152-161.
- Harper, S. R. & Quaye, S. J. (ed.) (2009). Student Engagement in Higher Education. New York and London: Routledge.
- Heale, R., & Twycross, A. (2018). What is a case study? Evidence Based Nursing, 21(1), 7-8. doi: 10.1136/eb-2017-102845.
- Heimlich, J. E. & Norland, E. (2002). Teaching style: where are we now? New directions for adult and continuing education, 2002(93),17-26.
- Hilborn Ray & Mangel Marc (1997). The ecological detective: confronting models with data. Princeton University Press. p. 24. ISBN 978-0-691-03497-3. Retrieved 22 August 2011.

- Hossein Karimi Moonaghi & Maryam Bagher. (2017). Jigsaw: A good student-centered method in medical education. 10.22038/FMEJ.2017.8757
- Houle, J. N. (2014). Disparities in debt: Parents' socioeconomic resources and young adult student loan debt. Sociology of Education, 87(1), 53-69. doi:10.1177/0038040713512213
- Hu Xiaoling. (2017). College classroom management status quo and countermeasure analysis.
- Hu Yuanyan & Li Qiqi. (2014). The Current Situation of Teacher-student Relationship and Its Relationship with Classroom Silence. Chongqing Higher Education Research, No. 4, 2014.
- Ikha Brillyani Widyaswara , Wardono Wardono & Tri Sri Noor Asih. (2019).

  Mathematical Literacy Ability Viewed from Student Engagement on
  Formulate Share Listen Create Model with Reciprocal Teaching Approach
  Assisted by Edmodo.

  <a href="https://journal.unnes.ac.id/sju/index.php/ujmer/article/view/28093">https://journal.unnes.ac.id/sju/index.php/ujmer/article/view/28093</a>
- Indicators of Gender Equality in Education OECD. (2018). www.oecd.org.
- Ive Emaliana. (2017). TEACHER-CENTERED OR STUDENT-CENTERED

  LEARNING APPROACH TO PROMOTE LEARNING?

  <a href="https://dx.doi.org/10.12962/j24433527.v10i2.2161">https://dx.doi.org/10.12962/j24433527.v10i2.2161</a>
- James M. Royer , Robert Stephen Feldman. (1984). Educational Psychology: Applications and Theory. Publisher, Knopf.
- James V. Wertsch. (1988). Vygotsky and the Social Formation of Mind Reprint Edition.
- Jaymes Pyne. (2020). Gender Test Score Gaps Under Equal Behavioral Engagement. https://doi.org/10.3102/0013189X20930203
- Jin Li. (2012). Cultural Foundation of Learning: East and West[M]. New York: Cambridge University Press.

- Jolly Sahni (2019)," Does Blended Learning Enhance Student Engagement? Evidence from Higher Education ", Journal of e-Learning and Higher Education, Vol. 2019 (2019), Article ID 121518, DOI: 10.5171/2019.121518
- Kahu, E. R. 2013. "Framing Student Engagement in Higher Education." Studies in Higher Education 38 (5): 758–773.
- Keller, Stefanie; Conradin, Katharina.(2020). "Semi-Structured Interviews | SSWM Find tools for sustainable sanitation and water management!". Sustainable Sanitation and Water Management Toolbox. Archived from the original on 16 February 2020. Retrieved 25 February 2020.
- Kerry & Bland (1998). Statistics notes: The intracluster correlation coefficient in cluster randomization. British Medical Journal, 316, 1455–1460.
- Kimberlin, C. L., & Winterstein, A. G. (2008). Validity and reliability of measurement instruments used in research. American Journal of Health System Pharmacy, 65(23), 2276-2284.
- Kotrlik, J. W. K. J. W., & Higgins, C. C. H. C. C. (2001). Organizational research: Determining appropriate sample size in survey research appropriate sample size in survey research. Information technology, learning, and performance journal, 19(1), 43.
- Krause, K. and Coates, H. (2008). Students' engagement in first-year university. Assessment and Evaluation in Higher Education, 33(5), 493-505.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. Educational and Psychological Measurement, 30, 607-610.
- Kristen C. Elmorea & Daphna Oyserman. (2012). If 'we' can succeed, 'I' can too: Identity-based motivation and gender in the classroom. <a href="https://doi.org/10.1016/j.cedpsych.2011.05.003">https://doi.org/10.1016/j.cedpsych.2011.05.003</a>
- Krzanowski, W. (2007). Statistical principles and techniques in scientific and social research. Oxford University Press.

- Kuh, G. D. (1999). How are we doing?: Tracking the quality of the undergraduate experience, 1960s to the present. The Review of Higher Education, 22(2), 99–120.
- Kuh, G. D. (2001a). Assessing What Really Matters to Student Learning. Inside the national survey of student engagement. <a href="http://cpr.iub.edu/uploads/Assessing What Really Matters To Student Learning %28Kuh,%202001%29.pdf">http://cpr.iub.edu/uploads/Assessing What Really Matters To Student Learning %28Kuh,%202001%29.pdf</a>
- Kuh, G. D. (2009a). What student affairs professionals need to know about student engagement. Journal of College Student Development. 50(6), 683 706.
- Labinovicz E. (1980). The Piaget Primer: Thinking, Learning, Teaching. Ontario: Addison-Wesley.
- Li Xianyin, Zhang Baofang & Jiang Liping. (2019). An Empirical Study on the Constitutive Factors of College Students' Innovative Behavior. China Academic Journal Electronic Publishing House.
- Lin Jincai. (2006). Jiaoxue Lun[Teaching and Learning Theory].
- Liu, Q. X., & Shi, J. F. (2007). Analysis of language teaching approaches and methods: effectiveness and weakness. US-China Education Review, 4, 1, 69–71. ERIC online document ED497389.
- Lloyd D. I. (1976). Traditional and Progressive Education. In D. I. Lloyd (Ed.), Philosophy and the Teacher. London: Routledge & Kegan Paul.
- Lujan HL and DiCarlo SE. First-year medical students prefer multiple learning styles. Adv Physiol Educ 30: 13–16, 2006.
- Luo Changyuan & Si Chunxiao. (2020). Does online education widen the gap between students with different family conditions? a quasi-natural experiment based on covid-19[J]. Journal of Finance and Economics, 2020, 46(11): 4-18.

- Lv Linhai. (2016). Behind the Turn to Silent Behavior: Chinese Students'

  Conservative Learning Tendency in Classroom and Its Influencing

  Mechanism: An Empirical Study of Nanjing University Physics

  Undergraduate[J]. Distance education journal.
- Mandernach, B.J.(2015) .Assessment of student engagement in higher education: Asynthesis of literature and assessment tools. International Journal of Learning, Teaching and Educational Research, 12(2).
- Mann Prem S. (1995). Introductory Statistics (2nd ed.). Wiley.
- Markus, H. R., & Hamedani, M. G. (2007). Sociocultural psychology: The dynamic interdependence among self systems and social systems. In S. Kitayama & D. Cohen (Eds.), Handbook of cultural psychology (pp. 3–39). New York, NY: Guilford.
- Maryam Lak, Hassan Soleimani & Farid Parvaneh. (2017). The Effect of Teacher-Centeredness Method vs. Learner-Centeredness Method on Reading Comprehension among Iranian EFL Learners.
- Mauricio Castillo-Vergara, Nicole Barrios Galleguillos, Laura Jofré Cuello, Alejandro Alvarez-Marin & Christian Acuña-Opazo. (2018). Does socioeconomic status influence student creativity? https://doi.org/10.1016/j.tsc.2018.07.005
- McLaughlin, K. A., & Sheridan, M. A. (2016). Beyond cumulative risk: a dimensional approach to childhood adversity. Current Directions in Psychological Science, 25, 239-245. doi:10.1177/0963721416655883
- Md. Enamul Hoque. (2016). Teaching Approaches, Methods, and Techniques-Enamul Hoque. doi: 10.13140/RG.2.2.21377.66400
- Meguid, E.A., &Collins, M.(2017) .Students' perceptions of lecturing approaches: traditional versus interactive teaching.Advances in Medical Education and Practice, 8, 229.

- Moll I. (1994). Reclaiming the Natural Line in Vygotsky's Theory of Cognitive Development. Human Development, 37: 333-342.
- Morgan, P. L., Farkas, G., Hillemeier, M. M., & Maczuga, S. (2009). Risk factors for learning-related behavior problems at 24 months of age: Population-based estimates. Journal of Abnormal Child Psychology, 37, 401-413. doi:10.1007/s10802-008-9279-8
- National Center for Educational Statistics. (31 March 2008). http://nces.ed.gov/programs/coe/glossary/s.asp
- Nunan D. (1989). Designing Tasks for the Communicative Classroom. Cambridge:Cambridge University Press.
- O'Connor, H., & Gibson, N. (2003). A step-by-step guide to qualitative data analysis.

  Journal of Aboriginal and Indigenous Community Health, 1(1), 64-90.

  https://www.researchgate.net/publication/292432218
- O'Flaherty, J & Phillips, C.(2015) .The use of flipped classrooms in higher education: A scoping review.The Internet and Higher Education, 25, 85-95.
- OECD. (2020). Student engagement and motivation. <a href="https://gpseducation.oecd.org/revieweducationpolicies/#!node=44131&filter=all">https://gpseducation.oecd.org/revieweducationpolicies/#!node=44131&filter=all</a>
- Omoteso B. A., & Semudara, A. (2011). The relationship between teachers' efectiveness and management of classroom misbehaviours in secondary schools. Psychology, 02, 902–908.
- P. Suresh & S. Suman Rajest. (2019). An analysis of psychological aspects in student-centered learning activities and different methods.
- Parsons, Caroline S. (2017). Reforming the Environment: The Influence of the Roundtable Classroom Design on Interactive Learning. Journal of Learning Spaces, v6 n3 p23-33 2017.

- Paul Barron & Constantia Anastasiadou. (2009). Student part-time employment: Implications, challenges and opportunities for higher education. https://doi.org/10.1108/09596110910935642
- Pearson Jennifer. (2008). "Gender, Education and." Blackwell Encyclopedia of Sociology. Ritzer, George (ed). Blackwell Publishing, 2007. <a href="http://www.blackwellreference.com/subscriber/tocnode?id=g9781405124331">http://www.blackwellreference.com/subscriber/tocnode?id=g9781405124331</a> <a href="https://www.blackwellreference.com/subscriber/tocnode?id=g9781405124331">http://www.blackwellreference.com/subscriber/tocnode?id=g9781405124331</a> <a href="https://www.blackwellreference.com/subscriber/tocnode?id=g9781405124331">https://www.blackwellreference.com/subscriber/tocnode?id=g9781405124331</a> <a href="https://www.blackwellreference.com/subscriber/tocnode?id=g9781405124331">https://www.blackwellreference.com/subscriber/tocnode?id=g9781405124331</a>
- Peck Roxy, Olsen Chris & Devore Jay (2008), Introduction to Statistics and Data Analysis (3rd ed.), Belmont, Cal.: Thomson Brooks/Cole, p. 8, ISBN 978-0-495-11873-2, LCCN 2006933904, retrieved 2009-08-04.
- People's Daily Online. (2015). China has fully lifted the "two-child" policy. 29/10/2015. people.com.cn.
- Peter S. Westwood. (2008). What Teachers Need to Know about Teaching Methods.
- Peyton, J. K., More, S. K., & Young, S. (2010). Evidence-based, Student choice instructional practices. Center for Applied Linguistic. 20-25. Retrieved from http://cal.org/caelanetwork
- Piaget J. (1953). Origins of Intelligence in the Child. London: Routledge & Kegan Paul.
- Piaget J. (1971). The Psychology of Intelligence: Sicth Impression. London: Routledge & Kegan Paul.
- Piaget, J. (1932). The moral judgment of the child. London: Routledge & Kegan Paul.
- Piaget, J. (1936). Origins of intelligence in the child. London: Routledge & Kegan Paul.
- Piaget, J. (1945). Play, dreams and imitation in childhood. London: Heinemann.
- Piaget, J. (1957). Construction of reality in the child. London: Routledge & Kegan Paul.

- Piaget, J. (1973). To understand is to invent. New York: Grossman.
- Piaget, J., & Cook, M. T. (1952). The origins of intelligence in children. New York, NY: International University Press.
- Plowden, B. H. P. (1967). Children and their primary schools: A report (Research and Surveys). London, England: HM Stationery Office.
- Press Academia. (2018). Definition of case study. Retrieved from https://www.pressacademia.org/definition-of-case-study/
- Ragin C C.(1987). The comparative method: Moving beyond qualitative and quantitative strategies[M]. Berkeley: University of California Press.
- Reeve J., Jang H., Carrell D., Jeon S. & Barch J. (2004). Enhancing Students' Engagement by Increasing Teachers' Autonomy Support. Motivation and Emotion, Vol. 28, 147 169.
- Richard Feynman. (1965). The Character of Physical Law p.156.
- Ruiqi Deng, Pierre Benckendorff & Deanne Gannaway. (2020). Linking learner factors, teaching context, and engagement patterns with MOOC learning outcomes. <a href="https://publons.com/publon/10.1111/jcal.12437">https://publons.com/publon/10.1111/jcal.12437</a>.
- Saul McLeod. (2020). Piaget's Theory and Stages of Cognitive Development.

  Background and Key Concepts of Piaget's Theory.

  <a href="https://www.simplypsychology.org/piaget.html">https://www.simplypsychology.org/piaget.html</a>
- Skinner, B. F. (1969). Contingencies of reinforcement: a theoretical analysis. New York: Appleton-Century-Crofts.
- Skinner, B. F. (1974). About behavioralism. Random House, New York.
- Slavin, R. E. (1994). Educational Psychology: Theory and Practice(4th Ed). Boston: Allyn and Bacon.

- Smallhorn, M. (2017). The flipped classroom: A learning model to increase student engagement not academic achievement. Student Success, 8(2). doi: 10.5204/ssj.v8i2.381
- Sofie Lietaert, Debora Roorda, Ferre Laevers, Karine Verschueren & Bieke De Fraine. (2015). The gender gap in student engagement: The role of teachers' autonomy support, structure, and involvement. October 2015 British Journal of Educational Psychology 85(4). DOI:10.1111/bjep.12095
- Stephen D. Whitney & David A. Bergin. (2018). Students' Motivation and Engagement Predict Reading Achievement Differently by Ethnic Group. https://doi.org/10.1080/00221325.2018.1527754
- Stephen L. Chew & William J. Cerbin (2020): The cognitive challenges of effective teaching, The Journal of Economic Education, DOI: 10.1080/00220485.2020.1845266
- Stronge, J. H., Ward, T. J., & Grant, L. W. (2011). What makes good teachers good? A cross-case analysis of the connection between teacher efectiveness and student achievement. Journal of Teacher Education, 62, 339–355.
- Stovall, I. (2003). Engagement and Online Learning. UIS Community of Practice for E-Learning. http://otel.uis.edu/copel/EngagementandOnlineLearning.ppt
- Su Kaimin & Zhou Yubin. (2020). The implicit activation of teacher's classroom interaction to college students' classroom silence.
- Sun, J. C. Y., & Wu, Y. T. (2016). Analysis of learning achievement and teacher-student interactions in flipped and conventional classrooms. The International Review of Research in Open and Distributed Learning, 17(1). doi: 10.19173/irrodl.v17i1.2116
- T Talhelm, X Zhang, S Oishi, C Shimin, D Duan, X Lan, S Kitayama. (2014). Large-scale psychological differences within China explained by rice versus wheat agriculture.

- Tao Xingjuan & Cui Yan. (2007). Study on the Correlation between Learning Style and Academic Performance of Nursing Students. Journal of Nursing. 22(3), 7-9.
- Tim Newman. (2018). Sex and gender: What is the difference? MEDICAL NEWS TODAY. https://www.medicalnewstoday.com/articles/232363
- Van Bavel Jan, Schwartz Christine R., Esteve, Albert. (2018). "The Reversal of the Gender Gap in Education and its Consequences for Family Life". Annual Review of Sociology. 44 (1): 341 360, doi:10.1146/annurey-soc-073117-041215. ISSN 0360-0572.
- Van Geert P. (1994). Vygotskyian Dynamics of Development. Human Development. (37): 346-365.
- Vercellotti, Mary Lou. (2017). Do interactive learning spaces increase student achievement? A comparison of classroom context. Active Learning in Higher Education.
- Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. Cambridge, MA: Harvard University Press.
- Wang Aiqin, Zhang Yongli & Zhang Jin. (2017). Use the teaching models of foreign universities for reference to explore the reform ideas of classroom teaching in Chinese universities.
- Wang Huarong & Tan Xiangliang. (2008). Review of Western Learning Style Research in Recent Ten Years. Foreign primary and secondary education 4, 15-20.
- Wang Shujing. (2014). Exploratory Study on China's Northern-Southern intercultural Friendship Development Among University Students.
- Wertsch J. (1985). Vygotsky and Contemporary Developmental Psychology. Developmental Psychology, 28 (4): 584-557.

- Westergård, E., Ertesvåg, S. K., & Rafaelsen, F. (2018). Preliminary validity of the classroom assessment scoring system in Norwegian lower secondary schools. Scandinavian Journal of Educational Researach. Advance online publication. https://doi.org/10.1080/00313831.2017.1415964
- Wigfield, A., Eccles, J. S., Fredricks, J. A., Simpkins, S., Roeser, R. W., & Schiefele, U. (2015). Development of achievement motivation and engagement. In R. M. Lerner (Ed.), Handbook of child psychology and developmental science. 7th ed. (pp. 657–700). Hoboken, NJ: John Wiley & Sons, Inc.
- Wilson, M., & Gochyyev, P. (2013). Psychometrics. In Handbook of quantitative methods for educational research (pp. 3-30). Sense Publishers.
- Wu Linfang, He Chuan & Wang Yang. (2018). Study on Measures to Improve College Students' Classroom Engagement. Modem Vocational Education.
- Wu Sa & Tang Lingzhi. (2011). The Relationship between Perceived Learning Style and English Academic Achievement of Middle School Students. Psychological Exploration. 5, 63-65.
- Xiong Lanping. (2020). Study on the Situation of Classroom Silence of Land-lost Farmers' Children and its Countermeasures. https://cdmd.cnki.com.cn/Article/CDMD-10636-1020747322.htm
- Xu Yiju. (2020). Benkesheng ketangchenmo de chengyin jiqi dui jiuyezhiliang de yingxiang yanjiu[The Causes of Classroom Silence of Undergraduates and Its Influence on Employment Quality][D].
- Yates Daniel S., Moore David S & Starnes Daren S. (2003). The Practice of Statistics (2nd ed.). New York: Freeman. ISBN 978-0-7167-4773-4. Archived from the original on 2005-02-09.
- Yazzie-Mintz, E. (2009). Charting the pathfrom engagement to achievement: A report on the 2009 High School Survey of Student Engagement. High School Survey of Student Engagement website.

- Zengin, Y. (2017). Investigating the use of the Khan Academy and mathematics software with a flipped classroom approach in mathematics teaching. Journal of Educational Technology & Society, 20(2), 89-100. Retrieved from <a href="http://www.jstor.org/stable/90002166">http://www.jstor.org/stable/90002166</a>
- Zhang Xing. (2019). A Study on the Relationship between Classroom Silence, Self-efficacy and Anxiety Among Junior High School Students.
- Zhang Xu. (2014). The Study on Status Quo and Influence Factors of University Students' Class Participation.
- Zhao Yue. (2018). Study on the Phenomenon of College Students' Classroom Silence.
- Zhu Lianwen & Sun Xianhui. (2020) Classroom status and teacher requirements from the perspective of students. Research in Innovative Education, 8, 927-936. doi: 10.12677/ Ces.2020.86152
- Zone of proximal development. (2009). In Penguin dictionary of psychology. Retrieved from Credo Reference database.