

How Do Teachers' Mindsets Impact Students' Learning Motivation in Chinese Public Schools and International Schools?

Zhijing Huang

The University of Birmingham, Birmingham, West Midlands, United Kingdom, B15 2TT
**corresponding author's email: ZXH040@student.bham.ac.uk*

Abstract: This research will develop the relationship between teachers' mindsets and students' learning motivation. It also makes the comparison between both Chinese public high schools and international high schools. The qualitative method, the semi-structured interview will be adapted as the main research method. The results concluded that Chinese public high school teachers tend to have fixed mindsets, and international school teachers presented close to growth mindsets. Additionally, both two types of mindsets of teachers could stimulate students' learning motivation. While fixed mindset teachers will lead students to have the extrinsic motivation and other students will be intrinsically motivated by growth mindsets teachers.

Keywords: Mindsets, Motivation, Secondary Education, Chinese Education, Schooling.

1. Introduction

In the 21st century, the Chinese schooling system is exam-oriented. That forces students to gain access to college entrance examinations to pursue higher education. Meanwhile, the Chinese educational system also provides international school programs to fit into the global market. Secondary education in China has two different categories: public and international schools. It caused two opposite educational ideologies. Thus, different educational ideologies might cultivate teachers to hold different mindsets. The strong and complex interaction among pedagogy, teachers' mindsets and students' learning motivation occurred in different class and educational system settings. Teachers' mindsets and beliefs play an important role in students' learning reflection [1]. The curricula in Chinese public schools and international schools hold different educational perspectives. Taking the English subject as an example, in Chinese public schools, English will be taken as a textbook-based teaching. By this means, students were allowed to follow the example sentences or conversations from textbooks. By contrast, this similar English module in international schools would be driven by inquiry-based learning, which provides a more flexible and stronger learning environment for students to speak and research [2]. That is to say, different curricula could lead to teachers holding different mindsets. Although Zhang, Kuusisto & Tirri found that Chinese teachers have the awareness to have growth mindsets, the curricula impact their teaching purpose. Thus, those Chinese teachers have potential fixed mindsets [3]. Considering most teachers from international schools are English native speakers, the following paragraphs will use native speaker teachers to

represent them. In this research, 9 participants from both Chinese public schools and international schools were invited to have semi-structured interviews to discuss the following three questions:

- How do Chinese students view their experiences with fixed and/or growth mindsets?
- How do Chinese students view the impact of teachers' mindsets on their learning motivation?
- How do Chinese students discuss the factors which lead to teachers' mindsets?

Before the interview was officially started, there were two hypotheses for previous questions. Firstly, teachers from public high schools will tend to have fixed mindsets, while international school teachers will hold growth mindsets. Additionally, teachers who hold fixed mindsets will tend to have a negative influence on students learning motivation. The value of this research would be providing students' self-reports to reflect their feedback on their high school teachers. Thus, their reports could provide suggestions for Chinese high school teachers to change their mindsets and attitudes toward the exam-oriented schooling system.

2. Introduction to Relevant Definitions

Mindsets have two opposite types, fixed and growth. People who hold fixed mindsets believe their abilities and intelligence could not be changed. They prefer to use outcomes to determine their abilities. By contrast, people who have a growth mindset think that their abilities and intelligence are changeable. Those people are more willing to focus on their learning process[4][5]. Bedford pointed out that teachers' support is a trigger to impact students' learning motivation[6]. Mindset intervention is one of the effective ways that teachers could do to guide students to change their mindsets from fixed to growth. Thus, when students hold growth mindsets, they could be more willing to accept challenging tasks.

The motivation could be driven by intrinsic and extrinsic factors. Intrinsic motivation refers to behaviors that are inherently interesting and enjoyable even in the absence of external impetus[7]. Extrinsic motivation is triggered by external stimulation like a reward[8]. As Vermote et al., pointed out, teachers could reflect their mindsets into pedagogies and encourage students. Those mindsets will further influence students' learning motivation[9].

3. Literature Review

Teachers' mindsets would be presented through pedagogies, thus influencing students learning outcomes[10]. Rattan et al's research supports this point. Those teachers who hold fixed mindsets would be easier to praise students' intelligence[11]. They also present lower expectations for some students who achieve lower marks. Although that strategy of decreasing students' perception might help students to clarify their abilities, meanwhile, it decreased students' learning motivation because they believe their abilities could be improved.

As previously mentioned, teachers' mindsets could be presented through their pedagogies and the ways they praise students. Jennings and Cuevas presented that when teachers have the awareness to praise students' learning processes, which is a growth mindsets pedagogy[12]. Most students had better preferences than before, and they were also more stimulated by learning motivation. That is to say, teachers' mindsets would be presented in their pedagogies. The growth mindset would bring more benefits for students in the learning process. Bedford pointed out that teachers' support is a trigger to impact students' learning motivation[6]. Mindset intervention is one of the effective ways that teachers could do to guide students to change their mindsets from fixed to growth. Thus, when students hold growth mindsets, they could be more willing to accept challenging tasks. According to previous research, there are limited resources for doing a comparative study between Chinese public

and international high schools. This research will focus on the different curricula in two opposite schooling systems to find factors that could lead to different mindsets.

4. Methodology

4.1. Semi-structured Interview

In this research, the semi-structured interview will be used as the main qualitative methodology to analyze qualitative data. It is a kind of interview that focuses on open-ended and follow-up questions. These questions will be changed based on participants' answers.

4.2. Method

The advantage of the semi-structured interview is its flexibility. During the interview, researchers would base on participants' answers to dig more detail. It is also able to collect participants' diverse experiences and opinions, which is different from the quantitative method of gathering casual relationships[13][14].

This research invited 9 participants (5 female and 4 male) aged from 20 to 22. Among the participants 4 (3 female, 1 male) from international schools and 5 (2 female, 3 male) from public schools. Considering it is comparative research, the questions for those students from two types of schools will be slightly different to gather detailed information and make comparisons. For example, ask those public school participants about their school's rank while asking international school students to introduce the school curriculum. There are three parts of the semi-structured interview questions, which are basic information about when and where they took high school, questions about their high school teachers and the comparison of college and high school teachers and curricula. This interview will use voice (offline interview) and video recording (online interview) when participants approve. The further analysis of interview information will first be transferred to word context and give particular words "codes" to account for the frequency with which they occur and how participants define or compare them.

Issue/topic	Possible questions	Possible follow up questions	Probes
Basic information	1.If you don't mind, may I ask about your current situation? Are you a university/college student, or do you already work?	Where	
	2.How old are you?		
	3.Could you please tell me where and when did you take your secondary (senior high school)?	Which kind of school did you participate in? For example, senior or international.	
	4.Could you please explain the basic information about your high school in more detail? For example, the curriculum you took, the rank?	What is your view of your high school? Do you like your high school? How does his /her attitude to students	If yes, why? If not, why?

Figure 1: The first part questions.

Figure 1 is the first part question, which asks participants to simply introduce their high schools.

Questions about your teacher	5. Could you please tell me a time your teacher impressed you most? (positive or negative)		Then...
	6. In your opinion, does this teacher focus more on your outcomes like grades, and scores, or focused more on your learning process, like how is your feeling or what kind of skills do you handle.		
	7. From your perspective, do you think your teachers' attitude presented to his or her teaching method (pedagogy) for example, he/she always mentioned your grades will impact your next year's class selection. He or she told your grades could not go to a good university	If yes, tell me an example If not, why	Why?....
	8. In your opinion, do you think your teacher used your grades to determine your intelligence and ability?	Could you please tell me your feeling	

Figure 2: The second part questions

Figure 2 is the second part of the semi-structured interview. In this part, students are asked to recall some detailed events about how their teachers' mindsets reflected pedagogies and teaching attitudes. A few questions will be further discussed based on participants' answers.

14. As I noted before, I heard you graduated from senior high school/ international high school. And now you are a college student. In your opinion, do you think the curriculums in college and high school are different?	If yes, could you tell me how did this mindset impact to you?
15. Compared with teachers in your college and high school, do you think they hold different mindsets?	If not, why you think you did not impact by his /her?
16. Do you think teachers' mindset could be impacted by different curriculum?	
	If yes, could you give me an example
	If not, could you tell me why you think so?

Figure 3: The third part questions.

Figure 3 shows the third part questions. Due to the reason that all of the participants are in college, the final part of the interview will ask participants to compare their high school and universities' curricula and teachers' mindsets. These questions will be open-ended, which will discuss research question 3, "How do Chinese students discuss the factors which lead to teachers' mindsets?" Participants are welcome to discuss other factors that could influence teachers' mindsets.

4.3. Result and Analyses

One of the interview questions asked participants to rate the degree to which teachers have a fixed or growth mindset on a scale of 1-5. 1 is when teachers are extremely unconcerned with student achievement, and 5 is when teachers are highly concerned with student achievement. Teachers from public high schools had a mean score of 3.8 compared to 3.25 for teachers from international schools. Teachers from public high schools tend to have a fixed mindset and are more focused on learning outcomes than teachers from international schools.

Based on the previous scores, the following paragraphs will discuss the factors that caused the different scores and how they influence students' learning motivations. First and foremost, 5 public school participants mentioned that their learning purpose in high school is to pass the college entrance

examination(Gaokao). At the same time, students from international schools discuss university applications based on both grade 11 and grade 12 scores. By this means, the exam-orientated selection in those public schools forced those teachers to focus on student outcomes. Regardless, most participants from public high schools mentioned that their teachers still encouraged them when they failed some tests. Participant 1 illustrated that his teachers always make perceptions of his abilities based on previous test preferences. That is to say, the result of Chinese public school teachers' mindsets is similar to Zhang, Kuusisto & Tirri's research [3]. Chinese teachers are aware to cultivate growth mindsets, but the Gaokao will influence their pedagogy and thinking to have fixed mindsets.

The additional factor that influences teachers to have different mindsets in the classroom setting. Five participants described that their class included about 40 students, while students from international schools mentioned that there were 25 students in each class. Blatchford, Moriarty & Martin found that when teachers need to prepare more than 30 students in one class, the time they interact with students will decrease[15]. That is to say, public school teachers are harder to focus on students' learning preferences. Participant 2 said that the obvious way for teachers to check students' learning is through the test scores, not through detailed observation of classes. Those public school participants also mentioned that each classroom would have a banzhuren(a teacher who charges the classroom; classroom teacher). It is similar to Li & Chen's research, which mentioned that Chinese public schools have classrooms and banzhuren to cultivate basic social circumstances[16]. The role of a banzhuren is to build connections between students and their parents. It also requires classroom teacher focused on students' learning performance[18]. Another participant described another reason why banzhuren focused on students' grades. Under her discussion, in her school, students' grades will be linked to the classroom teacher's KPI. That is to say, schools put pressure on classroom teachers to focus on students' grades, which leads them to have fixed mindsets. However, other international students illustrated that their classrooms would be based on optional classes. That is to say, there is no clear concept of "class" or "class as a team" for those international students and teachers. Teachers' mindsets could be changed under the different schooling systems and university selections.

Meanwhile, one participant from the vocational public high school presented the opposite situation to others. Vocational education in China focuses on skill training with pre-employment. Her explanation of the outlier result will be her school's curriculum. In her vocational school, students need to take both public high school curricula and early childhood education courses. Due to that school's cooperation with the university, the 2 years of high school plus 2 years of university lead to less Gaokao pressure for both teachers and students. The ways to present her final grades would be split into the exam and teachers' feedback compared with other public high school participants. The outlier participant's schools have more diverse ways to test students' performance, and vocational education leads to less Gaokao pressure. Under the comparison, it could answer question 3. The curriculum could be a factor which leads to different teachers' mindsets.

The connection between the teachers' mindsets and students' learning motivations is presented similarly in both public and international schools. Most of those students mentioned that no matter whether their teachers held fixed or growth mindsets, their motivation could be stimulated. After further asking participants about the triggers that lead to their motivation, public and international school participants showed opposite types of motivation. According to the self-determination theory, extrinsic motivation could be determined as the external factors stimulation. 4 of those public school students discussed that they want to achieve higher grades to reflect on teachers' praise and expectations. One of them answered that "if I got a lower mark than my teacher's expectation, I will be invited to a private meeting to discuss why I got this score and how I should improve". By contrast, the intrinsic motivation for those international school students is more common in their learning progress. Although they need to take a challenging course like English Literature as a Second

Language Learner they still enjoy the process without considering the mark. Their teachers will not be based on their scores to set expectations.

Finally, considering that all of the participants are now in college, the long-term influence of teachers' mindsets on their learning motivation from high school to college could be measured. Beyond the author's perspective, those participants who graduated from public high schools mentioned that their college teachers have growth mindsets, leading them to intrinsic motivation. Proof of this is that university pedagogy tends to be highly autonomous in terms of self-directed learning, which is an important factor in increasing motivation[17]. Based on this situation, the curriculum could be concluded as the third factor that causes teachers' mindsets and students' learning motivations. That is to say, when the curriculum provides, teachers have the right to share the knowledge and ask students to self-learn based on their interests. Teachers tend to have growth mindsets and transfer this idea to their students to influence their learning motivations further.

5. Discussion

Under the semi-structured interview, some limitations might not provide a complete picture of the research questions. The interview format is based on the participants' self-reports. That is to say, when they recall information from high school, they might have personal biases, which could not be checked whether it is correct or not[18]. Additionally, due to the limited time to collect data, this research only asked 9 students from the southern part of China. Thus, it might not be fully representative of the Chinese curriculum. If enough participants came from each province in China, the result might not be changed because Gaokao still exists and it is the only way to apply to Chinese universities. Thus, the Chinese schooling system will keep an exam-oriented form. There are some suggestions. First of all, although the college entrance examination is the main way for Chinese students to receive higher education, teachers can be aware of changing their mentality, from focusing on grades to paying more attention to the development of students. Additionally, based on public school, participants mentioned that they started to think about their interests and career life in universities. Those participants from the international high school said that they began to think about their major and career in high school, and their teachers supported them to have the diverse option for their future. Similar to Muthanna & Sang's suggestion, Gaokao should be concerned with students' interests in professions [19].

6. Conclusion

This study enriches the content of comparative research on public high schools at home and abroad. This research is also based on previous articles to develop further the relationship between teachers' mindsets and students' learning motivation. For question 1, public school teachers tend to have fixed mindsets, while those from international schools tend to have growth mindsets. The hypothesis made for question 2 was not fully approved because both fixed and growth mindsets teachers will stimulate students' motivations, except the intrinsic or extrinsic triggers of motivation are different. The open-ended question in the last part concluded that the curriculum could be the main factor in influencing teachers' mindsets. Through the learning process, teachers will transfer these ideas to students. Thus, most public high school students present similar mindsets in their high schools. However, when they are in college, teachers' different pedagogy and educational ideologies change their mindsets from fixed to growth. Meanwhile, their learning motivations have a process of extrinsic motivation internalization. Future research will choose a mixed investigation method and interview method to collect more participants' opinions. It can overcome the limitation that only 9 participants are poorly represented. To further explore this topic, the reasons why Chinese public school teachers are different from other international and university teachers will also be further analyzed.

Acknowledgement

Firstly, I would like to show my deepest gratitude to my teachers and professors in this research, who have provided me with valuable guidance in every stage of the writing of this thesis. Further, I would like to thank all participants for their participation and meaningful self-reports. Without all their enlightening instruction and impressive kindness, I could not have completed my thesis.

References

- [1] Gutshall, C. A. (2016) *Student perceptions of teachers' mindset beliefs in the classroom setting*. *Journal of Educational and Developmental Psychology*, 6(2), 135-142.
- [2] Pachina, E. (2014) *Differences Between Public and International Schools in China*. *Teflcourse.net*. Retrieved 10 July 2022, from <https://www.teflcourse.net/blog/differences-between-public-and-international-schools-in-china-itte-tefl-blog/>.
- [3] Zhang, J., Kuusisto, E., & Tirri, K. (2020). *Same mindset, different pedagogical strategies: A case study comparing Chinese and Finnish teachers*. *International Journal of Learning, Teaching and Educational Research*, 19(2), 248-262.
- [4] Dweck, C. S., & Yeager, D. S. (2019) *Mindsets: A view from two eras*. *Perspectives on Psychological science*, 14(3), 481-496.
- [5] Orvidas, K., Burnette, J. L., & Russell, V. M. (2018) *Mindsets applied to fitness: Growth beliefs predict exercise efficacy, value and frequency*. *Psychology of Sport and Exercise*, 36, 156-161.
- [6] Ryan, R.M. and Deci, E.L. (2000) 'Intrinsic and extrinsic motivations: Classic definitions and new directions', *Contemporary Educational Psychology* 25: 54-67.
- [7] Ryan, R. M., & Deci, E. L. (2020) *Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions*. *Contemporary educational psychology*, 61, 101860.
- [8] Vermote, B., Aelterman, N., Beyers, W., Aper, L., Buysschaert, F., & Vansteenkiste, M. (2020) *The role of teachers' motivation and mindsets in predicting a (de) motivating teaching style in higher education: A circumplex approach*. *Motivation and emotion*, 44(2), 270-294.
- [9] *Mindsetworks.com*. (2022) Retrieved 19 July 2022, from <https://www.mindsetworks.com/science/Teacher-Practices>.
- [10] Rattan, A., K. Savani., N. V. R. Naidu., and C. S. Dweck. (2012) "Can Everyone Become Highly Intelligent? Cultural Differences in and Societal Consequences of Beliefs about the Universal Potential for Intelligence." *Journal of Personality and Social Psychology* 103: 787-803.
- [11] Jennings, C., & Cuevas, J. A. (2021) *Teacher impact on student growth mindset*. *Perspectives in Learning*, 19(1), 4.
- [12] Kallio, H., Pietilä, A. M., Johnson, M., & Kangasniemi, M. (2016) *Systematic methodological review: developing a framework for a qualitative semi-structured interview guide*. *Journal of advanced nursing*, 72(12), 2954-2965.
- [13] Barriball K.L. & While A. (1994) *Collecting data using a semi- structured interview: a discussion paper*. *Journal of Advanced Nursing* 19(2), 328-335.
- [14] Garbarino, S., & Holland, J. (2009) *Quantitative and qualitative methods in impact evaluation and measuring results*.
- [15] Blatchford, P., Moriarty, V., Edmonds, S., & Martin, C. (2002) *Relationships between class size and teaching: A multimethod analysis of English infant schools*. *American Educational Research Journal*, 39(1), 101-132.
- [16] Li, J.C., & Jing, C. H. E. N. (2013) *Banzhuren and classrooming: Democracy in the Chinese classroom*. *International Journal of Progressive Education*, 9(3), 91-106.
- [17] Gandhimathi, S. N. S., & Devi, A. (2016) *Learner autonomy and motivation-a literature review*. *Research on Humanities and Social Sciences*, 6(3), 80-83.
- [18] *Sociologygroup*. (2022) *Advantages and Disadvantages of Interview in Research*. *Sociology Group: Sociology and Other Social Sciences Blog*. Retrieved 10 July 2022, from <https://www.sociologygroup.com/advantages-disadvantages-interview-research/>.
- [19] Muthanna, A., & Sang, G. (2016) *Undergraduate Chinese students' perspectives on Gaokao examination: Strengths, weaknesses, and implications*. *International Journal of Research Studies in Education*, 5(2), 3-12.