



EDUCATION METAPHORS IN CHINESE COMMENCEMENT SPEECHES
AND THE EFFECTS OF EDUCATION METAPHORS
ON CHINESE STUDENTS' REASONING ON EDUCATION

YUNSHU ZHAO

Graduate School Srinakharinwirot University

2024

-



ปริญญานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตร
ปรัชญาดุษฎีบัณฑิต สาขาวิชาภาษาและการสื่อสารสากล
คณะมนุษยศาสตร์ มหาวิทยาลัยศรีนครินทรวิโรฒ
ปีการศึกษา 2567
ลิขสิทธิ์ของมหาวิทยาลัยศรีนครินทรวิโรฒ

EDUCATION METAPHORS IN CHINESE COMMENCEMENT SPEECHES
AND THE EFFECTS OF EDUCATION METAPHORS
ON CHINESE STUDENTS' REASONING ON EDUCATION



An Dissertation Submitted in Partial Fulfillment of the Requirements
for the Degree of DOCTOR OF PHILOSOPHY
(Ph.D. (Language and Global Communication))
Faculty of Humanities, Srinakharinwirot University

2024

Copyright of Srinakharinwirot University

THE DISSERTATION TITLED

EDUCATION METAPHORS IN CHINESE COMMENCEMENT SPEECHES
AND THE EFFECTS OF EDUCATION METAPHORS
ON CHINESE STUDENTS' REASONING ON EDUCATION

BY

YUNSHU ZHAO

HAS BEEN APPROVED BY THE GRADUATE SCHOOL IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DOCTOR OF PHILOSOPHY
IN PH.D. (LANGUAGE AND GLOBAL COMMUNICATION) AT SRINAKHARINWIROT UNIVERSITY

.....
(Assoc. Prof. Dr. Chatchai Ekpanyaskul, MD.)

Dean of Graduate School

.....
ORAL DEFENSE COMMITTEE

..... Major-advisor

(Assoc. Prof. Dr.Nuntana Wongthai, Ph.D.)

..... Chair

(Asst. Prof. Dr.Baramee Kheovichai, Ph.D.)

..... Committee

(Assoc. Prof. Dr.Sugunya Ruangjaroon, Ph.D.)

..... Committee

(Asst. Prof. Dr.Sakulrat Worathumrong, Ph.D.)

..... Committee

(Dr.Attasith Boonsawasd, Ph.D.)

Title	EDUCATION METAPHORS IN CHINESE COMMENCEMENT SPEECHES AND THE EFFECTS OF EDUCATION METAPHORS ON CHINESE STUDENTS' REASONING ON EDUCATION
Author	YUNSHU ZHAO
Degree	DOCTOR OF PHILOSOPHY
Academic Year	2024
Thesis Advisor	Associate Professor Nuntana Wongthai , Ph.D.

Education metaphors in Chinese Commencement Speeches play a crucial role in shaping the audience's understanding of education, influencing their reasoning and attitudes toward the elements of education. However, few studies gave priority to education metaphors and their effects on reasoning and decision-making processes in non-political contexts. This study analyzes a dataset of 100 commencement speeches delivered between 2013 and 2023 by presidents of China's top 10 universities, which are Peking University, Tsinghua University, Zhejiang University, Fudan University, Shanghai Jiao Tong University, the University of Science and Technology of China, Nanjing University, Tongji University, Wuhan University, and Harbin Institute of Technology. Using Conceptual Metaphor Theory (CMT) as the theoretical foundation and the Metaphor Identification Procedure (MIP) as the research method, its aim is to identify and categorize the education metaphors embedded in these speeches, thereby uncovering the conceptual frameworks that shape contemporary educational discourse in elite Chinese higher education. The study identified 13 main education metaphorical domains. The findings revealed 13 key conceptual metaphors related to education in Chinese graduation speeches and among them, three conceptual metaphors stood out as the most prominent: (1) EDUCATION IS CULTIVATION; (2) EDUCATION IS CONSTRUCTION; (3) EDUCATION IS WAR. These metaphors reflect Chinese education by emphasizing nurturing and patience (CULTIVATION), systematic knowledge building and policy-driven goals (CONSTRUCTION), and competitive challenges (WAR). This study further explored and examined how different metaphorical frames shape students' reasoning on educational issues and guide their decisions on different coping strategies through a questionnaire-based experiment, with particular attention to gender and grade-level differences as key variables. The participant sample consisted primarily of first-year(freshmen) and fourth-year(senior) undergraduate students, including both male and female students, to examine how these social factors in gender and academic differences influence students' reasoning and decision-making processes when addressing educational problems under different metaphorical frames. By analyzing and coding responses, the findings indicated that education metaphors play a significant role in reasoning, leading to differentiated perceptions and approaches to educational issues. Furthermore, the study revealed that gender and grade-level differences serve as moderating factors in metaphorical reasoning, affecting how students interpret education metaphors and apply them in decision-making. By mapping key education metaphors, it identified the conceptual frameworks that shape educational discourse. By demonstrating the effects of metaphorical framing, it showed how these metaphors influence students' reasoning and decision-making processes. These findings contributed to deepening the understanding of the cognitive role of education metaphors and promoted the optimization of educational policies and teaching practices for Chinese higher education.

Keyword : Chinese Commencement Speeches; Educational Metaphors; Metaphorical Framing Effects

ACKNOWLEDGEMENTS

First and foremost, I would like to express my gratitude to the committee for their invaluable support and insights in the development of this research. In academia, just like in *The Fast and the Furious*, "you don't have friends—you have family". I am incredibly fortunate that throughout my academic journey, many people have supported, guided, and invested in me. The academic family is real and it is strong.

A heartfelt thank you to my dearest advisor, Ajarn Nan, for your unwavering encouragement, guidance, and for helping me maintain a broader perspective. Thank you for allowing me to explore new research ideas, even when I had no idea where they would lead, and for reminding me not to rush—that you would be there for me, urging me to focus on the core content and what truly matters.

I am also deeply grateful to my mentors, Ajarn Add, Ajarn Justin, and Ajarn Anchelee. Throughout these four years of learning, you have been my unwavering support system. Thank you for your invaluable feedback, encouragement, and for all the joyful moments we have shared together. To my parents, my companions and classmates—thank you for listening to all my complaints, and for always reminding me to "keep going."

YUNSHU ZHAO

TABLE OF CONTENTS

	Page
ABSTRACT	D
ACKNOWLEDGEMENTS.....	E
TABLE OF CONTENTS.....	F
List of tables	L
List of figures	P
CHAPTER 1	1
INTRODUCTION.....	1
1.1 Background.....	1
1.2 Scope of the Study.....	8
1.3 Research Objectives.....	9
1.4 Research Questions.....	9
1.5 Research Hypothesis	10
1.6 Research Significance	10
1.7 Definition of Terms	11
CHAPTER 2	15
LITERATURE REVIEW	15

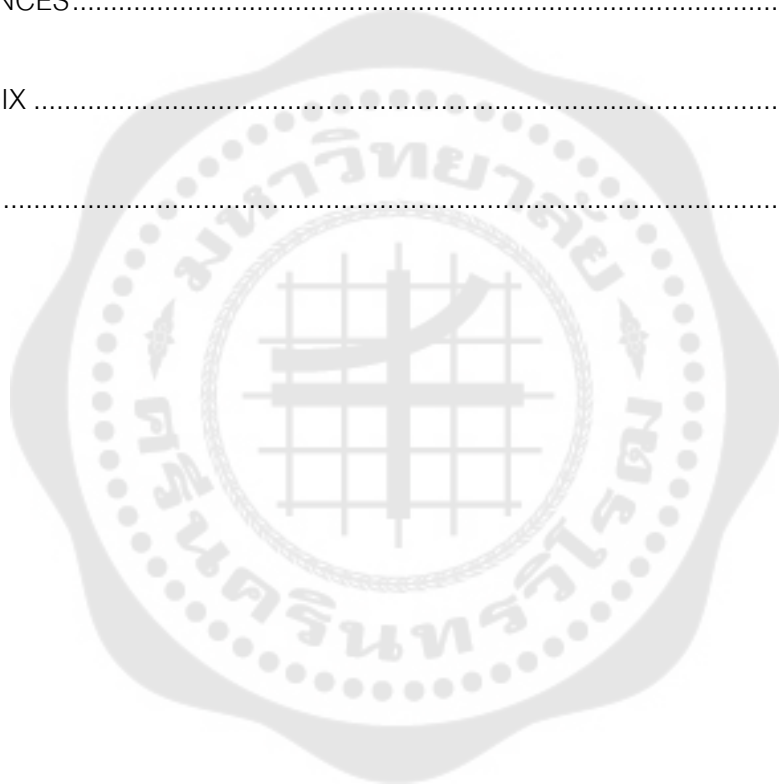
2.1 Evolution of Metaphor Studies	15
2.1.1 Traditional Views of Metaphors: From Rhetoric to Cognitive Understanding of Metaphor	15
2.1.2 Contemporary Views of Metaphors: Conceptual Metaphor Theory	16
2.1.3 Metaphorical Framing and its functions	22
2.2 Educational Metaphors	31
2.2.1 Why education metaphor matters?	31
2.2.2 The Types of Education Metaphors	33
2.3 Commencement Speeches	38
2.3.1 Introduction of Commencement Speeches.....	38
2.3.2 Genre Analysis of Commencement Speeches	39
2.3.3 Relevant Studies on Commencement Speeches.....	40
2.4 Metaphors Framing	42
2.4.1 Metaphorical Framing and its functions	42
2.4.2 Research Reviews on Metaphor Framing	44
2.4.3 Gender Differences in Metaphorical Framing	49
2.4.4 Educational Level Differences in Metaphorical Framing	50
2.5 Summary	51

CHAPTER 3	52
METHODOLOGY	52
3.1 Research Design.....	52
3.2 Educational Metaphor Identification Process	53
3.2.1 Selecting Commencement Speeches	53
3.2.2 Data Collection	54
3.2.3 Procedure for Data Analysis.....	56
3.3 Experimental Design.....	60
3.3.1 Ethical Considerations	60
3.3.2 Procedures on Experiment Study.....	60
3.3.2 Coding and Analyzing Process	65
CHAPTER 4	69
RESULTS	69
4.1 Educational Metaphors in Chinese Commencement Speeches	69
4.1.1 EDUCATION IS CULTIVATION.....	70
4.1.2 EDUCATION IS CONSTRUCTION.....	76
4.1.3 EDUCATION IS WAR.....	82
4.1.4 EDUCATION IS FAMILY	87

4.1.5 EDUCATION IS NATURE.....	91
4.1.6 EDUCATION IS A JOURNEY	95
4.1.7 EDUCATION IS AN OBJECT	99
4.1.8 EDUCATION IS A HUMAN BODY	103
4.1.9 EDUCATION IS AN ECONOMY.....	107
4.1.10 EDUCATION IS FIRE	111
4.1.11 EDUCATION IS A CONTAINER.....	114
4.1.12 EDUCATION IS A PLACE	117
4.1.13 EDUCATION IS RELIGION	120
4.1.14 Summary of Educational Metaphors in Chinese Commencement Speeches.....	122
4.2 The Contribution of the Educational Metaphors in Ten Universities	125
4.2.1 The contribution of the educational metaphors in Peking University	125
4.2.2 The contribution of the educational metaphors in Tsinghua University..	129
4.2.3 The contribution of the educational metaphors in Shanghai Jiaotong University	135
4.2.4 The Contribution of the educational metaphors in Fudan University.....	140

4.2.5 The Contribution of the educational metaphors in University of Science and Technology of China	145
4.2.6 The Contribution of the educational metaphors in Zhejiang University ..	150
4.2.7 The Contribution of the educational metaphors in Tongji University	155
4.2.8 The Contribution of the educational metaphors in Wuhan University	159
4.2.9 The Contribution of the educational metaphors in Nanjing University ...	164
4.2.10 The Contribution of the educational metaphors in Harbin Institute of Technology	168
4.3 The Effects of Metaphors on Chinese Students' Reasoning Across Different Metaphorical Frames	173
4.3.1 CULTIVATION Frame Results	176
4.3.2 CONSTRUCTION Frame Results	186
4.3.3 WAR Frame Results	196
4.3.4 Summary of the Results	206
CHAPTER 5	211
CONCLUSION, DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS	211
5.1 Conclusion of the study	211
5.2 Discussion of the results	214

5.2.1 Key Educational Metaphors in Chinese Commencement Speeches	214
5.2.2 Metaphorical Framing Effects on Students Reasoning on Education	226
5.3 Implications of the study	235
5.4 Limitation and Recommendation for Future Study	236
REFERENCES.....	238
APPENDIX	244
VITA	261



List of tables

	Page
Table 1 An overview of Metaphorical Framing Studies	5
Table 2 The Genre Analysis	39
Table 3 Summary of data	54
Table 4 Example of the linguistic expression and source domain.....	59
Table 5 The Participants Information	62
Table 6 The Information of Experimental Groups	63
Table 7 Examples of Code and Theme Categorization.....	66
Table 8 The Expressions, Tokens, and Mapping Structure of CULTIVATION	
Metaphor	70
Table 9 The Expressions, Tokens, and Mapping Structure of CONSTRUCTION	
Metaphor	76
Table 10 The Expressions, Tokens, and Mapping Structure of WAR Metaphor	82
Table 11 The Expressions, Tokens, and Mapping Structure of FAMILY Metaphor..	87
Table 12 The Expressions, Tokens, and Mapping Structure of NATURE Metaphor	91
Table 13 The Expressions, Tokens, and Mapping Structure of JOURNEY metaphor	
.....	95

Table 14 The Expressions, Tokens, and Mapping Structure of OBJECT Metaphor.99

Table 15 The Expressions, Tokens, and Mapping Structure of HUMAN BODY

Metaphor 104

Table 16 The Expressions, Tokens, and Mapping Structure of ECONOMY Metaphor

..... 107

Table 17 The Expressions, Tokens, and Mapping Structure of FIRE metaphor 111

Table 18 The Expressions, Tokens, and Mapping Structure of CONTAINER

metaphor 114

Table 19 The Expressions, Tokens, and Mapping Structure of OBJECT Metaphor

..... 117

Table 20 The Expressions, Tokens, and Mapping Structure of RELIGION metaphor

..... 120

Table 21 the Overall Data of Educational Metaphors in Chinese Commencement

Speeches 123

Table 22 Source Domains and Educational Metaphors of Peking University..... 125

Table 23 Source Domains and Educational Metaphors of Tingshua University..... 130

Table 24 Source Domains and Educational Metaphors of Shanghai Jiaotong

University 135

Table 25 Source Domains and Educational Metaphors of Fudan University 140

Table 26 Source Domains and Educational Metaphors of University of Science and Technology of China	145
Table 27 Source Domains and Educational Metaphors of University Zhejiang University.....	150
Table 28 Source Domains and Educational Metaphors of Tongji University.....	155
Table 29 Source Domains and Educational Metaphors of Wuhan University	159
Table 30 Source Domains and Educational Metaphors of Nanjing University	164
Table 31 Source Domains and Educational Metaphors of Harbin Institute of Technology.....	168
Table 32 Frequency and Main Code of Students' Responses on Educational Questions	174
Table 33 Comparison of Key Responses in Experimental and Control Groups	181
Table 34 Comparison of Key Responses between Experimental Group and Control Group	191
Table 35 Comparison of Key Responses between Experimental Group and Control Group	201
Table 36 Gender Differences in Primary Focus of Responses Across Metaphorical Frames	207

Table 37 Educational Levels Differences in Primary Focus of Responses Across

Metaphorical Frames209



List of figures

	Page
Figure 1 Research Design	53
Figure 2 Example From the 2020 Commencement speech at Peking University	56
Figure 3 Mapping Structure of EDUCATION IS CULTIVATION	59
Figure 4 The steps of coding process	67
Figure 5 The Overview Process of Experiment	68
Figure 6 the distribution of responses of Q1 under the CULTIVATION Framework	177
Figure 7:the distribution of responses of Q2 under the CULTIVATION Framework	179
Figure 8 Distribution Percentages of Responses between Experimental Group and Control Group Percentages	182
Figure 9 Gender Distribution of Q1 under the Frame of CULTIVATION	183
Figure 10 Gender Distribution of Q2 under the Frame of CULTIVATION	184
Figure 11 Education Levels Differences of Q1 under the CULTIVATION Frame ...	185
Figure 12 Education Levels Differences of Q2 under the CULTIVATION Frame ...	185
Figure 13 The distribution of responses of Q1 under the CONSTRUCTION Framework.....	187

Figure 14 The distribution of responses of Q2 under the CONSTRUCTION Framework.....	189
Figure 15 Gender Differences of Q1 under the Frame of CONSTRUCTION	193
Figure 16 Gender Distribution of Q2 under the Frame of CONSTRUCTION	194
Figure 17 Education Levels Difference of Q1 under the Frame of CONSTRUCCION	195
Figure 18 Education Levels Difference of Q1 under the Frame of CONSTRUCCION	195
Figure 19 The distribution of responses of Q1 under the WAR Frame	196
Figure 20 The distribution of responses of Q2 under the WAR Frame	199
Figure 21 Gender Distribution of Q1 under the Frame of WAR.....	203
Figure 22 Gender Distribution of Q2 under the Frame of WAR.....	204
Figure 23 Educational Level Differences of Q1 under the Frame of WAR.....	205
Figure 24 Educational Level Differences of Q2 under the Frame of WAR.....	206

CHAPTER 1

INTRODUCTION

This chapter provides an overview of the present study, including the research background and scope, research objectives and questions, research hypotheses, as well as the significance of the study and key definitions of terms.

1.1 Background

The significance of Commencement Speech in China's Education

The term “commencement” originates from the Latin word “inceptio” which means the beginning and inception of new life which much like the university students who are going to leave the school for their life. And the commencement speeches delivered during graduation ceremonies mark as a crucial juncture in the educational process of students as well as a turning point in the development of graduates, symbolizing by the “last lesson” to greatly affect their mindset before they enter society formally (Wang & Jiang, 2013). As an essential component of college graduation ceremonies, commencement speeches serve as a formal acknowledgment where students' learning experience and personal development are formally acknowledged (Partch & Kinnier, 2011). In addition, the graduation ceremony is a milestone in the students' personal development, signifying the transition between stages of growth and identity transformation. This is not only the conclusion of a learning period, but also the continuation of time, cultural traditions, and values of the graduates (Solly, 2014). The speeches, delivered on such an occasion, aim to inspire, encourage, engage, and

challenge the audience to think and comprehend more deeply.

In China, graduation speeches also play an important role in shaping students' final moments on campus. During commencement seasons in June each year, these speeches, often delivered by university leaders and presidents, are seen as a way to reflect on the achievements of the past and inspire students as they step into the next chapter of their lives. Ge Zhaoguang, historian and the president of Fudan University, delivered the following commencement address in 2018, which attracted significant attention. "University is neither a poultry farm nor a ballroom nor a stock market. It is a place where knowledge is transmitted, and ideals are maintained. I hope you will be able to reflect on your life's journey and recognize the significance of the knowledge and ideas taught to you by the university. I also hope that as you continue to pursue knowledge and ideals in the future, you will never forget your four years of college and your professors!"

With a direct and critical tone, he elaborated on the responsibilities of universities and the function of instructors. He stressed that universities exist to transmit knowledge and uphold values, emphasizing intellectual growth and ethical development. It also implies that universities are distinct from commercial, entertainment, or profit-making activities. Graduates are encouraged to think about their education, acknowledge the knowledge they have acquired, and pursue intellectual development and ethical values in their future efforts.

As an integral element of campus culture, the graduation ceremony's principal address not only embodies the humanistic spirit of the university but also serves as an effective channel for moral education (Liu, 2014). In China, graduation speeches hold significant weight in shaping college students' moral development, providing them with a moment to reflect on their journey and prepare for the challenges ahead. The significance of the graduation ceremony lies in the ritual activities that allowed students to comprehend their new identities and embrace their new responsibilities (Rutherford, 2004). The commencement ceremony motivates students to pursue self-development

and helps them discover their own aspirations and beliefs by expressing life and educational philosophies.

Moreover, commencement speeches also include blessings for the graduates, thoughts on the future, and reflections on education. One may gain insight about social changes and educational patterns in China and what kinds of information speakers choose to convey by examining commencement speeches. Unlike orientation speeches, which are typically may focuses on helping and preparing students for their university life with more practical contents, commencement speeches mark a culmination point, primarily celebrating and summarizing students' academic achievements while conveying educational philosophies, social values, and hopes for the future. Therefore, they provide a more comprehensive and symbolic representation of the educational experience and institutional identity and cover more broader audience and achieve higher social impacts. The inclusion of these commencement speeches as a research topic is important since they not only serve as a window through which to observe the characteristics and spirit of a university but also reflect an internal education issue of the university or the entire society, for understanding the intersection between education, culture, and leadership in Chinese educational discourse (Zhao & Shang, 2020).

This study specifically focuses on the president's commencement speeches at various Chinese universities. Both Konfrst (2017) and Zhao and Shang (2020) view the university president's speech at the commencement ceremony as part of the higher education discourse. They analyze the speech to determine the president's power level and conclude that the president's discourse in such a context represents one of authority and alliance. The social aspects of the president's commencement address reflect the construction and growth of Chinese education. By analyzing the content and rhetoric of these speeches, we can uncover the kinds of messages university leaders choose to convey and how these messages reflect societal expectations, educational ideologies, and national aspirations.

Metaphor and its function

Metaphor is far more than a poetic or rhetorical device—it is a powerful cognitive and communicative tool that shapes and simplified how we think, feel, and make sense of the world. Lakoff and Johnson (1980) revolutionized our understanding of metaphor by showing that metaphors are deeply embedded in human cognition. Rather than being confined to literary or decorative language, metaphors are integral to our everyday thinking, reasoning, and communication. They allow abstract, complex, or unfamiliar concepts to be understood through more concrete and familiar experiences, which makes them essential for meaning-making across a wide range of domains. They serve as bridges between complex thought and everyday understanding, transforming abstract theories into concrete realities that people can easily connect with.

Furthermore, metaphor can also used to shape people's opinions about complex issues, which are regarded as function of "framing and reasoning devices" (Burgers & Ahrens, 2020), and it further emphasizes even more how using different metaphors might cause people to reason in different ways. Researchers in the fields of linguistics, psychology, philosophy, and communications have consistently argued that metaphor is an effective tool for influencing people's thoughts and emotions about complex societal issues (Lakoff & Johnson, 1980; Sopory & Dillard, 2002; Lakoff, 2008; Thibodeau & Boroditsky, 2011). The metaphors we select to use have the power to significantly influence people's views in ways that have practical consequences because of the role that they play in our mental processes.

According to recent studies, metaphors have the function to affect people's perceptions of a broad variety of viewpoints. As table 1 shows, most of them are concentrating on ideas and other abstract concepts; sociopolitical problems like crime, law enforcement, and climate change; health problems like cancer and the flu; and emotional events like loving relationships. However, fewer of them explain how these education metaphors influence people's reasoning and perceptions. Considering the claim that metaphors have the power to change how we think in unexpected ways, how do metaphors used in education affect people's comprehension and behavior in education? This question is one of the driving forces behind the need for this study.

Table 1 An overview of Metaphorical Framing Studies

Target domain	Source domain	Findings	Reference
Crime	BEAST VS VIRUS	BEAST frame related to the preference of enforcement; VIRUS frame related to the preference of social reform	(Thibodeau & Boroditsky, 2011)
Cancer	WAR	WAR Metaphorical Frame: People are less inclined to limit their self-behaviors that enhance their risk of cancer	(Hauser & Schwarz, 2014)
Cancer	BATTLE VS JOURNEY	Cancer experience frame as a "JOURNEY": people are more likely to make peace with his situation. BATTLE Frames: feel guilty to a greater extent towards their situation	(Hendricks et al., 2018)
Climate change	WAR VS RACE	WAR frame related to the understanding of urgency, high-risk and the willingness to protect environment.	(Flusberg et al., 2017)
Flu	BEAST, ARMY, WEED	Metaphor frames of BEAST, ARMY, WEED increase people's urgency degree of getting vaccinated against flu	(Scherer et al., 2015)
Obesity	WAR VS	WAR frames provide the	(HUANG &

	JOURNEY VS MONEY	negative self-image of individuals and motivate the public to fight against obesity.	BISIADA, 2021)
--	------------------	--	----------------

Metaphor and Commencement Speeches

One philosophical viewpoint on metaphor in commencement speeches is that metaphors serve as a means for the speaker and the audience to share a similar understanding. By employing metaphors, the speaker can create a shared comprehension of complex topics, making it simpler for the audience to relate to the speech's meaning (Zhu, 2018). These metaphors cover a variety of topics like growth, life choice, self-development, and success, including expressions like *"the path to pursue dreams," "climbing the academic peak," "setting sail on life,"* and *"seeds of knowledge"*. Students could be encouraged to pursue their ambitions, gain self-confidence, and gain a deeper understanding of significant events in their lives through these metaphors (Li & Liu, 2020). Therefore, the use of metaphor can effectively convey attitudes and values, aspirations, and ambitions, and elicit the appropriate emotions for the expression of advice and encouragement to graduates, thereby facilitating the students' discovery of their own beliefs (Baxter Magolda, 2003).

Another viewpoint shares that a significant purpose of the metaphor used is "achievement of intimacy" (Cohen, 1978), where the exchange of communication may generate a sense of belonging to a particular community (Shu, 2000). When addressing and describing the university in speeches at graduation, the words "home", "family", "welcome back", and "family member" are commonly used. People may relax and feel warmly welcomed in their homes. Students experience a sense of closeness, belonging, and group identification via the use of family metaphors. Students will unwittingly increase their respect and gratitude for the school at the same time. As a result, metaphors create a sense of shared identity and experience between the speaker and the listener, capturing the audience's attention and leading them to a common sense of connectedness and purpose (Panther, 2009).

Furthermore, metaphor in commencement speeches can also imply the potential for social influence and ideology. In graduation speeches, educational metaphors are particularly used to criticize the current situation of education. For example, the speaker may use metaphors such as “the garden is not properly watered and pruned” to express criticism towards the quality of education, reflecting the phenomenon that many students just learn theoretical knowledge in books and universities but there is no systematic connection with practical life; they lack awareness, understanding, and empathy for or even indifference to real-world life. This metaphor implies that education, like a garden, requires careful and consistent nurturing to thrive. Without proper care, both can fail to reach their full potential.

Metaphor and its influences

As metaphor, not only as a poetic or rhetorical flourish and cognitive device, linguistic and conceptual, they are also regarded as “framing and reasoning devices to shape people's opinion” (Burgers & Ahrens, 2020), which emphasizes even more how using different metaphors might cause people to reason in different ways. Researchers in the fields of linguistics, psychology, philosophy, and communications have consistently argued that metaphor is an effective tool for influencing people's thoughts and emotions about complex societal issues (Lakoff & Johnson, 1980; Lakoff & Johnson, 2008; Sopory & Dillard, 2002; Thibodeau & Boroditsky, 2011). The metaphors we select to use have the power to significantly influence people's views in ways that have practical consequences because of the role that they play in our mental processes.

According to recent studies, metaphors have the function to affect people's perceptions of a broad variety of viewpoints. As table 1 shows, most of them are concentrating on ideas and other abstract concepts; sociopolitical problems like crime, law enforcement, and climate change; health problems like cancer and the flu; and emotional events like loving relationships. However, fewer of them explain how these educational metaphors influence people's reasoning and perceptions. Considering the claim that metaphors have the power to change how we think in unexpected ways, how

do metaphors used in education affect people's comprehension and behavior in education? This question is one of the driving forces behind the need for this study.

1.2 Scope of the Study

Based on Conceptual Metaphor Theory (Lakoff & Johnson, 1980), this study mainly focuses on analyzing the educational metaphors in commencement speeches at China's top ten universities from 2013 to 2023. By examining common metaphorical expressions, the study aims to uncover the characteristics, linguistic functions, and significance of education metaphors in Chinese commencement speeches. Educational metaphor is a common device of rhetoric and the research object in this study. In graduation speeches, the reflection on education often involves all kinds of metaphors, with the aim of helping the audience fully understand the nature and meaning of education. The discourse of education, shaped through metaphoric expressions, could be used to enhance public understanding of education (Cameron, 2003). By analyzing educational metaphors, this study can unearth profound information about education, thereby providing the public with a richer and more enlightening discourse on education. The analysis also focused on how these educational metaphors reflect educational values, influence students' perspectives, and contribute to moral education and institutional development in China's top ten universities.

Furthermore, this study further explores the impact of metaphorical framing on students' problem-solving decisions regarding educational issues. By investigating the effect of metaphorical reasoning, this study is beneficial for students to reflect on their own school experiences and for university administrators to comprehend students' decisions on solving the university problems and use the data as a guide when proposing or developing suitable policies and rules. For educators, different metaphors can be used as different teaching strategies to promote students' understanding of knowledge and as a cognitive tool for exploration and discovery.

This study also involves university students from diverse gender and educational backgrounds, who are asked to read a text containing different metaphorical frames and

answer questions related to educational theory and practice, and educational equity. By comparing how those social factors of male and female students or freshmen and senior students respond to the metaphorical frames, the research further reveals any potential gender-based and educational-level variations in cognitive processing, decision-making approaches, and problem-solving strategies related to education.

Overall, this study deepens the understanding of higher education concepts, ideas, and trends through the analysis of educational metaphors in Chinese commencement speeches, thereby helping readers better understand the characteristics and development trends of Chinese educational discourse, revealing the relationship between education and social development, and exploring the nature and significance of education. It also examines the role of metaphorical framing in students' educational decision-making, thereby enhancing the understanding of the nature and significance of education.

1.3 Research Objectives

1. To analyze metaphorical expressions in Chinese commencement speeches.
2. To examine whether different educational metaphors influence students' reasoning on education and lead to different decisions in solving educational questions
3. To explore how gender differences and educational level differences affect influence students' reasoning and problem-solving strategies on educational questions.

1.4 Research Questions

1. What educational metaphors are commonly used in Chinese graduation speeches?
2. How do the educational metaphors influence students' reasoning on education and lead to different decisions in solving educational problems?
 - 2.1 Do different educational metaphors influence students' reasoning on educational issues and lead to different decisions in solving educational problems?
 - 2.2 How do gender differences influence students' reasoning and affect their decisions in solving educational problems under different metaphorical frames?

2.3 How do educational level differences influence students' reasoning and affect their decisions in solving educational problems under different metaphorical frames?

1.5 Research Hypothesis

Hypothesis 1: Chinese commencement speeches predominantly use metaphors related to JOURNEY and PLANT to convey educational messages, reflecting traditional views on education as a process of personal development and achievement.

Hypothesis 2: Educational metaphorical frames (such as CULTIVATION) affect students' reasoning processes and problem-solving strategies regarding educational issues.

Hypothesis 3: Gender differences have influence on students' reasoning and decision-making approaches under different educational metaphor frames. Male participants may propose more strategies than female participants when solving educational problems.

Hypothesis 4: Educational level differences influence students' reasoning and decision-making approaches under different educational metaphor frames. Senior students are likely to generate more strategies than freshmen in addressing educational questions.

1.6 Research Significance

This study will make theoretical and practical contributions in the following areas:

Firstly, it can enrich different perspectives in studying educational metaphors in various discourses. Based on metaphor analysis, this study will thoroughly examine the dominant conceptual metaphors used in Chinese commencement speeches, revealing underlying meanings, assumptions, and beliefs that might not be explicitly stated in educational discourse.

Secondly, metaphors in educational discourse can provide insights into how pedagogical approaches are conceptualized and communicated. For example, if EDUCATION IS JOURNEY is a prevailing metaphor, it suggests a dynamic and evolving process of learning. Understanding these metaphors helps educators and students

promote more effective teaching and learning methods. Also, these investigations may help scholars better understand the significance and essence of education in China, as well as serve as sources of inspiration and direction for those working on the subject.

Lastly, it also contributes to filling the gap in research on the impact of metaphorical framing in education, an area that has received relatively little attention. By using experiments, this study provides empirical evidence to support the hypothesis that the metaphor can shape people's understanding and contribute to the reinforcement of the existing foundation of metaphor research.

1.7 Definition of Terms

Educational metaphor: Metaphor is a cognitive and linguistic device that describes one thing in terms of another, allowing people to understand abstract or complex concepts through more familiar, concrete experiences (Lakoff & Johnson, 1980). The term "educational metaphor" refers to a metaphor that is employed in educational discourse and has two meanings: The first component is described as "describing or interpreting some unfamiliar educational phenomenon, event, or action in terms of familiar things" (Botha, 2006). The second aspect refers to the metaphor that instructors use in educational environments and activities (Cameron, 2003). The primary emphasis of this study is on the educational metaphors that are employed in Chinese commencement speeches and how they represent and define the characteristics and development of Chinese higher education.

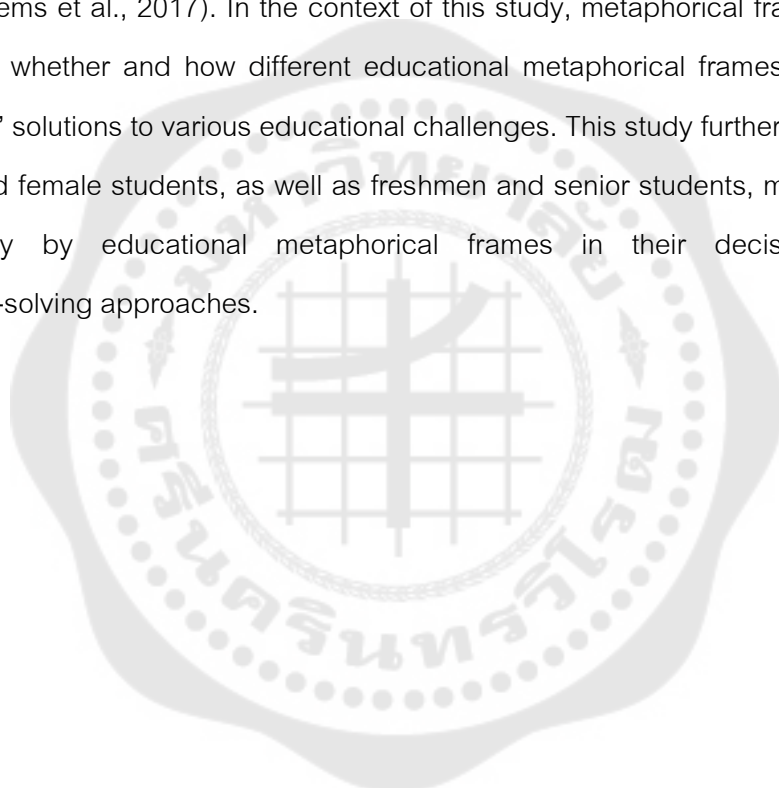
Commencement Speeches:

A commencement speech is a form of address usually given at a school or university graduation ceremony. It is a public address given by student representatives, teachers, staff, or other notable individuals with the aim of congratulating, encouraging, inspiring, and enlightening the graduate. The graduation speech's objectives are to recognize the graduate's accomplishments, offer career and life advice, and inspire them to take on future challenges (Rutherford, 2004). The primary focus of this study is

how the presidents of the Top Ten universities in China portrayed the university spirit in their commencement speeches.

Metaphorical Framing:

It means a metaphor can be used “to shape the public's opinion on important topics”. At the central point of metaphorical framing, it claims that metaphors have an impact on people's thought processes and reflect underlying conceptual frames (Boeynaems et al., 2017). In the context of this study, metaphorical framing specifically explores whether and how different educational metaphorical frames impact Chinese students' solutions to various educational challenges. This study further investigates how male and female students, as well as freshmen and senior students, may be influenced differently by educational metaphorical frames in their decision-making and problem-solving approaches.



CHAPTER 2

LITERATURE REVIEW

This chapter provides an overall picture of related research on basic concepts that served as the theoretical frame for this paper. The development of metaphor studies, Conceptual Metaphor Theory, the introduction of educational metaphor and its classifications and the working mechanism, the review of commencement speeches, and a brief review of metaphorical framing studies are all covered in detail in this section.

2.1 Evolution of Metaphor Studies

Metaphor study has a long history that dates to ancient Greece. The word metaphor originated from the Greek word “metaphora”, meaning meta (over) and phora (to carry). Therefore, the literal meaning of "metaphor" is "carrying across," which means "to take one thing to another."

As the fundamental concept in this present study, a comprehensive literature review of metaphor contributes to the smooth progression and foundation of this study. In this part, metaphor is investigated from two perspectives: Both metaphor as a cognitive technique and as a rhetorical device.

2.1.1 Traditional Views of Metaphors: From Rhetoric to Cognitive Understanding of

Metaphor

It's acknowledged that “any serious study of metaphor is almost obliged to start with the works of Aristotle” (Ortony et al., 1978). As indicated by Aristotle, "metaphor is used to give the thing a name that belongs to something else” (1457b1–30), which views the rhetorical function of metaphor. The use of metaphor is to understand and describe one thing from another based-on analogy and

likeness. It is defined that metaphor is used for a rhetorical purpose, that is, someone or something is carried over from a certain situation and area to a particular one because of the resemblance between two different entities and virtues of the association. His theory of metaphor was named Comparison Theory, which had a significant influence on western metaphor studies, and rhetorical research thus established its dominant foundation in Western metaphor research for the next two thousand years (Lin, 2012).

Other representatives of traditional metaphor theory, termed Substitution Theory, were proposed by Quintilian, an ancient Roman rhetorician, interpreting that metaphor is a rhetorical device to replace direct expressions (Reinhardt & Winterbottom, 2006). Metaphor is a rhetorical device in which one word replaces another directly. For example, the expression "John is a lion" uses the metaphor "LION" to replace the direct saying "a courageous man".

The traditional view of metaphor studies shares a common feature, namely that comparison theory and substitution theory both consider metaphor as a figure of speech, a rhetorical method in terms of the level of words. While Comparison Theory pays attention to "comparison", the essence of the composition of metaphor, Substitution Theory concerns "substitution", the way of the composition of metaphor, namely, to replace one word with another one (Shu, 1996).

Many philosophers, such as Kant, Rousseau, and Nietzsche, realized the cognitive function of metaphor. Rousseau indicated that metaphor reflects our intuitive understanding of the world. Nietzsche proposed his metaphorical view based on epistemology and ontology, indicating that people could feel reality and understand abstract things metaphorically. Humboldt stated that "concepts must often, if not always, take the form of figurative metaphors in language use" (Humboldt, 1985) originates from the brain and physical processes rather than merely a traditional language approach.

The proposed Interaction Theory by Richards (1936) argues that metaphor is not so much a matter of language as of thought, and metaphor is the interaction of thoughts. Interaction Theory "revealed the cognitive aspects of metaphors and laid the foundation

for later cognitive exploration of metaphors and conceptual metaphor theories"(p.28). Black (1963) views metaphors as "cognitive instruments", suggesting that metaphors are a way of thinking about things. Reddy (1979) further pointed out that the core of metaphor is thought rather than words; Metaphor is one of the most important and essential conventional ways that we think about the world, and our daily behavior can reflect our process of understanding experience.

Inspired by these scholars, Lakoff and Johnson (1980) further conducted thorough studies on metaphor and published a book, *Metaphors We Live By*. As a masterpiece in metaphor research, the publication of this masterpiece marks the beginning of contemporary studies of metaphor. In this significant book, Lakoff and Johnson took the lead in considering metaphor as a way of thinking, thus making the cognitive shift of metaphor research, and starting a new era for relevant studies.

At present, research on metaphor is gradually expanding from traditional rhetoric to linguistics, philosophy, psychology, cognitive science, and other disciplines, indicating that metaphor is an essential part of human cognition and social behaviors. The metaphorical studies are mainly concerned with metaphors at the discourse and cultural levels. Metaphor is also constrained by discourse and culture in the sense that culture and discourse exert great influence on metaphorical interpretation. Goatly (1997), (Cameron, 2003); Low et al. (2010) Musolff and Zinken (2009), Low et al. (2010), Goodhew et al. (2019) etc. have investigated how conceptual metaphors are represented in various discourses, including political, economic, scientific, and religious discourses. and how discourse factors may influence the interpretation of particular metaphors. As a result, studying metaphor at the discourse level is increasingly essential. The necessity to study metaphors in educational discourse from a cognitive and cultural perspective became the driving force behind this present study.

2.1.2 Contemporary Views of Metaphors: Conceptual Metaphor Theory

This section will introduce conceptual metaphor theory, laying the theoretical frame for the present study of educational metaphor. This contemporary view of metaphors was first put forward by Lakoff and Johnson in 1980 in the remarkable book

Metaphor We Live By and further developed by other scholars. As Lakoff (1990) indicates in many ways, the conceptual metaphor theory is revolutionary when compared to the conventional conceptions of metaphor and it promotes the study of metaphor in a new era in which metaphor is not only construed as something produced and understood by speakers of natural language, as a device of the poetic imagination and the rhetorical flourish, but it becomes a cognitive instrument and is at the core of communication and cognition Lakoff and Johnson (1980). It provides theoretical impetus for research on the relations between language, mind, and experiences.

Different from various previous metaphor theories, conceptual metaphor theory holds that metaphor is not only related to language but also related to thinking; metaphor pervades the whole process of human thinking and is used to understand abstract concepts; metaphor can be used in common and specific source concepts; and conceptual projections are established between unfamiliar and abstract target concepts (Lakoff & Johnson, 1980). It further proposed that metaphors are a way of thinking that serves as a cognitive way to construct people's perception, thought, and behavior. To understand the basic structure of the mind, conceptual metaphor theory (CMT) relies on the relationship between the body and the outside world. These structures, in accordance with Thomas (2010), "form the skeletal frame that allows metaphoric linkages between concepts and categories to take place, providing the basis for abstract reasoning and deliberation" (p. 79). The use of metaphor is then considered a method of conceptualizing and understanding the world. Based on the traditional theory, Kövecses (2010) has determined the shared attributes of the conventional metaphor concept: The foundation of metaphor is a similarity between the two things being contrasted and recognized. Deignan (2005) further summarizes that metaphors structure knowledge and thinking, metaphors are grounded in physical experiences. Therefore, the basic premise of CMT theory is that our conceptual system is metaphorical and that our conceptual system is rooted in embodied experience (Gibbs Jr, 2006).

However, in the context of the popularity of conceptual metaphor theory, there are also some controversies among researchers, and some questions and suspicions regarding CMT were also raised in this study (Holyoak & Stamenković, 2018; Kövecses, 2020; Murphy, 1996; Pinker, 2007). Kövecses (2020) makes a proposal for the Extended Conceptual Metaphor Theory which further argues that the traditional Conceptual Metaphor Theory faces several limitations. Firstly, Extended Conceptual Metaphor Theory pointed out that understanding a particular concept often does not rely on a single metaphorical mapping; Instead, multiple metaphors may work together in combination and coordination, forming a metaphor cluster. Secondly, traditional CMT does not sufficiently explain the dynamic and contextual variability of metaphor usage. One of the most significant contributions of Extended Conceptual Metaphor Theory is the introduction and detailed elaboration of contextualization, which highlighted the ways in which metaphorical meaning is shaped and reshaped by linguistic context (the co-text within a sentence or different discourse), situational or emotional context (the psychological and interpersonal settings), and cultural context (the shared conceptual resources and metaphor preferences of a community). One of the example pointed out by Kövecses (2020) is that the metaphor of anger may vary basing on the situation being expressed. For example, the sentence of “*He exploded in anger*” metaphorically framed as an explosive force, suggesting a sudden, violent release of emotion. While another expression of “*He kept his anger bottled up*” may frame the anger as a pressurized fluid in a container, highlighting emotional suppression and internal buildup. Although both sentences address the same general concept, the choice of metaphor reflects different emotional intensity, interpersonal dynamic, and possibly even cultural norms regarding emotional expression. Furthermore, in the context of education, the expressions of “Education is *the key* to success” and “Students are *empty vessels* to be filled with knowledge” reflects different educational philosophies- the former suggesting education as an essential tool that unlocks opportunities and grants access to achievement while the latter implying a passive, transmission-based view of learning. Metaphor is no longer a static correspondence between fixed domains, but a flexible

cognitive tool, constructed and reconstructed in response to the communicative, emotional, and cultural needs of the speaker.

An explanation for conceptual metaphors in further detail is “a systematic set of correspondences between two domains of experience” is what defines a conceptual metaphor (p. 2). The original definition of “understanding one domain in terms of another” or “mapping” by Lakoff and Johnson (1980) was replaced by “correspondence” in the extended theory. It mainly because conceptual metaphors may or may not be required to structure the concepts. It is always the case that conceptual metaphors are mapped to, or structured inside, their associated target domain from their source domain. Also, the extended conceptual metaphor theory goes on to say that our thinking is metaphorically built by the larger discourse frame, which also generates linguistic and conceptual metaphors. Understanding metaphors requires context, which can show how flexible and varied the conceptual system is.

Classification of conceptual metaphor

As proposed by Lakoff and Johnson (1980), three kinds of metaphor are differentiated: orientation metaphor, ontological metaphor, and structural metaphor (1980: 460–461).

Orientational metaphor means the connection with human spatial orientation, including front-back, up-down, and in-out. It gives a concept a spatial orientation, which arises from a human being's constant interaction with the environment as well as experiences in the physical world. For instance, HAPPY IS UP, SAD IS DOWN. The concepts HAPPY and SAD are oriented with UP and DOWN, respectively. The up-down orientation has to do with emotions in this instance, contributing to several metaphorical expressions, such as “I'm feeling up”, and “He is really low these days”, etc. Orientational metaphor is never randomly formed; instead, it is structured on human physical and cultural bases (Lakoff & Johnson, 1980).

Ontological metaphor makes it possible to perceive human experience by means of physical objects and substances. Lakoff and Johnson (1980) further classify this

metaphor into the following types: entity and substance metaphor, container metaphor, and personification (1980: 25–34). Entity and substance metaphors refer to those activities, events, ideas, and emotions that are regarded as entities and substances. For instance, in *THE MIND IS A MACHINE*, “mind”, an abstract concept, is viewed as the concrete object “machine” through which we can conceive of the characteristics of “mind” in a more concrete and vivid way. Container metaphor views human experience as well as human beings as containers that have a bounding surface together with an in-out orientation. Such metaphors can be used to comprehend the visual field, events, actions, and states by viewing them as containers. Like “The ship is coming into view”, and “We are out of trouble” are seen as instances to specify this point. Personification refers to human experiences with nonhuman entities in terms of human qualities such as motivations, personalities, behaviors, and activities Lakoff and Johnson (1980). For instance, some metaphorical expressions are like “Inflation has robbed me of my savings,” in which inflation is treated as an enemy who may attack us, rob us, or even destroy us.

Structural metaphor means one type of experience or activity is structured in terms of another. For instance, *ARGUMENT IS WAR* contains two domains that are different from each other, but their constituents are correlated. The concept of argument can be understood with the help of the concept of war, emphasizing the severity of the argument.

Working Mechanism of conceptual metaphor: Mapping

Studies on metaphor are believed to revolve around its working mechanism, which helps to explain the nature and purposes of metaphor. It refers to a systematic structure of correspondences between the various components.

According to Lakoff (1990), metaphor is a process of mapping structure between two cognitive domains: the source domain and the target domain. Due to the similarity between the source concept and the target concept, there will be a mapping behavior between the two concept domains, thus completing the process of metaphor. “Mapping”

indicates the systematic correspondences between two concept domains at the level of thought. When characteristics from the source domain are mapped to the target domain, the latter is only partially understood from the knowledge of the former. The most well-known example of a conceptual metaphor is ARGUMENT IS WAR. In this conceptual metaphor, ARGUMENT is the target domain and WAR is the source domain. To understand the target concept ARGUMENT, we need to project some or some features of the source concept WAR onto ARGUMENT to explain the same or similar features of ARGUMENT. Mappings are not randomly assigned since they are rooted in the body as well as in people's everyday experience and knowledge about the world.

There is a challenge in the way of mapping structure. For example, Murphy (1996, 1997) points out that CMT may fail to explain why metaphorical mappings are only partial. Another issue is that standard CMT gives limited information about the cognitive mapping process (Holyak and Stameenkovic, 2018). That means that it is difficult to clarify the detailed correspondence between the source domain and the target domain when discussing and abstracting concepts. According to Pinker (2007), to understand the metaphorical sentences, one may need to have active knowledge about the source domain, which is argued by Murphy (1996, 1997) as “overly reliant on patterns of language use in making mental representation”. Kövecses (2020) also states in traditional conceptual theory that metaphorical mapping occurs only between conceptual structures at a single level, and he further proposes the “multi-level view of metaphor” and the importance of context in this view (Kövecses, 2020). The multi-level view is a reasonable extension of standard conceptual metaphor theory.

In conclusion, Conceptual Metaphor Theory (CMT) holds that metaphor is a cognitive process reflected in language forms and summarized as follows: (1) Metaphor is a feature of concepts, not words; (2) Metaphor helps one understand particular concepts; (3) ordinary individuals use Metaphors naturally in daily life; (4) Metaphor is an inevitability in human cognition and reasoning; and (5) Metaphors can be thought of as cross-domain mappings.

2.1.3 Metaphorical Framing and its functions

In 1980, Lakoff and Johnson suggested a relationship between frame and metaphor, stating that “political and economic ideologies are framed in the metaphorical term”; Metaphor serves to shape the public’s opinion on important topics by presenting the problem definition, cause, and moral evaluation and implying policy solutions (Burgers et al. ,2016). Using metaphors as framing and reasoning devices has effects on how people characterize and understand the issues. In conclusion, metaphorical framing works as a tool for simplifying complicated issues and shaping people’s opinions and solutions about the issues.

Another function of metaphorical framing presented by Entman (1993) is that metaphor can be added to foreground the problem and address the evaluation and solution of the problem. It is further explained by Xiang H. and Huang and Bisiada (2021) that metaphors help to reflect and promote specific comprehensions and assessments of issues and solutions, as well as the ways in which they impact individuals and the community.

Furthermore, Musolff (2019) presents the significant effects of metaphorical framing as the enhancer for understanding the issue: “to activate the metaphorical structures in our minds and provide the filter for understanding the hiding target concepts”, which means that unconscious choice is made a particular interpretation of reality. It is essential to realize that if you want to communicate specific political facts to the public, you need to make sure you are using frames that make those facts make sense. Based on this viewpoint, the author outlines the account and outcome of the metaphorical frame in political discourse. By surveying the discourse history of this slogan, it can be found that the trend of its positive and negative judgement is linked to frame change. It shows that political metaphors serve as a means of presenting plausible frames for evaluating and understanding the available information. Subsequently, the public is influenced to create certain viewpoints based on the metaphorical framing of political matters. In this perspective, metaphorical framing

focuses on whether the different interpretations and frames of metaphors may produce variations, effects, and different public viewpoints on specific issues.

Similar to Musolff's opinion, Boeynaems et al. (2017) argued that in the past 20 years, researchers in a variety of fields have studied the impact of metaphorical framing on the persuasiveness of political arguments. It is hypothesized that people's ways of thinking about political issues are affected by the metaphors employed to describe them. Using the metaphor of a natural disaster to describe the issue of immigration, for instance, might lead to an unfavourable impression of immigrants since there are some negative characteristics of the "Disaster" source domain that are mapped to the "Immigration" target domain. This framing also stresses the severity of immigration problems and presents that it's a hard problem to control. Therefore, politicians frequently discuss themselves, their opponents, and their agendas using metaphors (López & Llopis, 2010). To sway public opinion on policy matters, they also resort to metaphors.

Research Reviews on Metaphor Framing

Metaphorical framing research is gaining popularity. Metaphors are necessary in communicative and cognitive processes because they share information, reflect, and highlight certain parts of the mind and social context. Within the field of linguistics, such as discourse analysis and metaphor theory, there exist systematic and theoretical approaches to examining individuals' language choices based on different metaphorical frames. These include examining the language choices that they made—consciously or unconsciously—in comparison to alternatives that may have been chosen, how these choices tend to pattern consistently, and how these choices affect people's needs, difficulties, experiences, and points of view. According to a recently developed psychological study, even one single metaphor can have an impact on our thought processes.

Metaphors are often used in political discourse because they allow politicians to create a frame for explaining their worldviews. Politicians place a premium on discussions of national economic health because it is directly related to the level of

public support they may expect for their policies and, by extension, their political careers. Politicians use language to communicate with the public about their policies and messages. The most condensed and typical instances of this language can be seen in presidential campaign speeches. The emphasis of Pavlikova (2021) research is political metaphors used in the speeches made by the two presidential candidates in the 2020 election. Similarly, the dissertation presented by Marotta (2017) examines how metaphors used to describe social policies and issues can affect political attitudes, mainly when voters are made aware of pending demographic shifts. These two studies try to focus on how political metaphors are used to describe policies, what the beneficiaries are when policies are framed using metaphors, and whether the people's shift can influence the public's attitude towards social policies. Interestingly, it can be found that metaphors in political speech could moderate the effects of people and racial shifts on attitudes towards different policies and perceptions of applications considered under various policies. Therefore, since the political metaphors they employed are directly related to the public's tendency to vote for and support the campaign, those in positions of power in political aspects will always be cautious with their words and enliven them with a variety of linguistic skills and methods.

Thibodeau & Borodinsky (2011) investigate whether discussing crime with different metaphors leads people to think about crime in different ways and to know how these metaphors affect how they approach and attempt to resolve crime-related issues and make decisions. In these experiments, participants read short excerpts on crime in Addison, a fictional city. A few sentences were slightly modified for half of the participants, who were informed that crime was like a "virus infecting" the city. One-half of the participants read the passage about crime as a "beast preying" on the city. The findings showed that people's opinions on how crime should be tackled may be significantly different in two different groups. Those who read the passage using the "beast" metaphor were asked to think of ways to fight crime, and their answers included more punishing measures like longer jail terms. Those who read the passage as a "virus" metaphor believed that more reformatory and educational approaches were needed.

This study looked at how metaphors that have real-world implications can have a significant impact on people's perceptions.

However, a follow-up study proposed by Steen et al. (2014) criticizes the study's design by Thibodeau and Boroditsky (2011) that it is unclear what language or text mechanism their study ultimately connects with, and they first argue that the words and materials are incompatible with the VIRUS and the BEAST frame. The materials with two different metaphorical frames ought to be distinguished and consistent from the first to the last sentence. These need to be carefully weighed by the researchers. Second, the differences in effects between texts with and without metaphorical framing were not compared in the original study. A neutral, non-metaphorical control is important since it provides a baseline.

To justify the critique, Steen et al. (2014) conducted the follow-up study after revising the materials and research procedures, trying to check whether the framing effect on people's reasoning still exists. The result is different from the original one, which shows that there are no effects of the metaphorical frame on reasoning. Similar results also show in the non-metaphorical, neutral frame, which further points out that two different metaphorical framing and a non-metaphorical frame led to a general preference for enforcement. This follow-up research further explains the conflicting findings and points to the need for more specific boundary conditions and factors, such as the structure and language of stimuli, the comparison of non-metaphorical frames, and the prior beliefs, attitudes, and intentions, also affect the entire reading process of the participants.

Hendricks et al. (2018) use BATTLE or a JOURNEY frame to examine whether, in the context of cancer, people would overcome the hardship differently if they used different metaphors. Five experiments show that the BATTLE frames encourage people to believe that the patient tends to feel guilty and fight harder than the journey frames, while the JOURNEY frames motivate people to make peace with their situation. It is verifying that metaphorical framing encourages people to reason about the cancer problems, which is consistent with the language they use to describe them. This

research further explores the potential explanations: the lexical association, the role of material's gender, and the priming effect, which provide useful guidance on experimental design.

The following research is related to using the WAR or RACE metaphor against climate change (Flusberg et al., 2017). The purpose of this study is to examine how metaphoric framing affects attitudes about climate change and intentions to engage in conservation behaviors. Participants are asked to read a brief introduction of the US attempts to cut carbon emissions in terms of the climate change issue, either non-metaphorically or metaphorically (RACE or WAR metaphorical frames against climate change). After that, they are asked to respond to the follow-up questions on the goals, the urgency risk, and the behaviour changes towards these environmental issues. The results find that, compared with those who read the RACE metaphors, people who read the article about the WAR metaphor regularly expressed a stronger sense of urgency, a higher sense of risk, and a greater willingness to strengthen their environmental protection behavior. Additionally, it reveals how important metaphors are for both communicating and comprehending abstract ideas, as well as for influencing people's perspectives on problem-solving.

Using three (two metaphorical expressions and one literal one) to describe flu, Scherer et al. (2014) carry out three between-subjects experiments to investigate whether describing flu metaphorically could boost a person's desire and interest in receiving a vaccination. The results support the hypothesis that using metaphor to describe flu can effectively increase people's intention to get vaccinations against the virus.

Another paper presented in 2021 by Huang and Bisiada (2021) pointed out the significance of focusing on Obesity in China: the metaphors of obesity frequently used in Chinese media provide valuable analytical and conceptual insights into how the media and public understand, communicate, and evaluate obesity. The findings indicate that all these metaphors describe obesity and obese people negatively and are also deeply rooted in Chinese sociocultural contexts, expressing obesity as a problem of national

collective social nature (parents, teachers, etc.) rather than presenting it as a personal health concern. In contrast to the JOURNEY and WAR metaphors, which present obesity from a collectivist perspective, the MONEY metaphors generate a Neo-liberal, individualist viewpoint, emphasizing health maintenance as a component of citizenship. WAR metaphors can also support the unfavourable perception of obese people, and to some extent, WAR metaphors are also effective in inspiring people to combat obesity problems.

The paper (Florescia, Tania, and Daniela, 2015) related to the metaphorical framing of depression employs the combined methods. It presents complete and coherent approaches for exploring the effects of metaphorical framing. Emotional disorders are described differently in different cultures. Various articles often describe depression as a *brain disorder* or *disease*, and this view has dismissed the understanding of the depressed person's responsibility. The article's central claim is that people's first perceptions of depression are influenced by linguistic cues.

Metaphors can also serve to reinforce deeply rooted preconceptions or stereotypes. For instance, Elmore and Luna-Lucero (2016) conducted the study to check whether using the LIGHT BULB metaphor or SEED metaphor to describe ideas would lead participants to think that the ideas of well-known innovators were more remarkable. The findings show that using light bulb metaphors to talk about the inventor may make people believe that they are more exceptional in their field. However, when the same metaphors are applied to female innovators, the results show that the SEED metaphor is more remarkable, convincing, and appropriate to characterize female inventors. Maybe this is because, according to a stereotype ingrained in our language, women should assume a more nurturing role, caring for ideas like seeds in a garden.

Regarding the use of metaphorical usage perspectives, several studies show that metaphorical frames influence people's reasoning in a variety of cognitive domains like abstract ideas (*ideas* on Elmore and Luna-Lucero (2016)), emotional experiences (*romantic relationships* on (Ervas et al., 2021)), health issues (*cancer* on Hendricks et al., 2018; *flu* on Scherer et al., 2015), and sociopolitical matters (*crime* on Thibodeau &

Boroditsky, 2011; *obesity* Xiang & Mario, 2021; *climate change on* Flusberg, Matlock, & Thibodeau, 2017). Because of the role that they play in our cognitive processes, the metaphors we use may have a significant impact on people's views and can have real-world consequences. As we understand the effects of metaphorical framing, it is essential to mention that this study may investigate the existence of framing effects in educational discourse. Therefore, if the metaphorical framing effect exists in this study, it will potentially be helpful to understand how education metaphors could be used to improve education issues and decision-making.

Gender Differences in Metaphorical Framing

A previous study found that "the framing effect is sex-specific, varying according to the gender role in different task domains" (Huang & Bisiada, 2021). Considering Social Role Theory posits that society imposes different role expectations and behavioral norms on men and women, leading to systematic differences in behavior and attitudes between the sexes (Rutherford, 2004).

Hussey and Katz (2006) proposed the research that men generally produce more metaphors than women in online conversations, particularly slang. The production of metaphors by women increases when conversing with friends, possibly to avoid miscommunication with strangers. This indicates a gender-based difference in the strategic use of metaphors, with men more willing to risk misunderstanding for humor or competitive interaction.

When constructing gender identity through workplace discourse, Holman (2016) pointed out that men in the workplace are more likely to use imperative language and tend to take on leadership and decision-making roles, while women often play the role of mediators and supporters within teams, using more negotiation and collaborative language. These differing communication styles reflect the gender power dynamics in the workplace. Similarly, the research of spatial metaphors and social power by Winter et al. (2020) indicated that men have greater tendency to conceptualize power in physical and embodied terms with more physical strength, dominance, and spatial

superiority. In contrast, women are more inclined to approach power from relational, collaborative, or context-sensitive perspectives and be less reliant on spatial or physical cues. Such gender-based differences highlights that metaphors for power are not universally understood in the same way, but are shaped by socialization, cultural experiences, and individual cognitive preferences.

Under the research of Indian banking print advertisements. Das et al. (2024), it aims to find the similarities and differences between the responses of male and female participants for the banking print advertisements with visual metaphor. The finding suggests that male participants tend to be more attentive to financial matters—likely a reflection of their conventional societal role as financial providers in Indian culture. By contrast, women may engage with visual metaphors on a deeper emotional level, closely linking metaphor to themes like education, freedom and opportunity portrayed aspiration and empowerment, reflecting a stronger focus on personal autonomy and the desire to break free from societal constraints.

Taking deeper insights on Chinese context about gender differences in metaphorical usage, Chen (2018) explored how metaphors involving gender not only reflect linguistic creativity but also reveal underlying gender biases and social inequalities. For example, Animal Metaphors are often used to describe women's characteristics (e.g., calling a woman a *bitch* or *nag*), while men may be positively associated with strength (*lion*). Similarly, Plant metaphors often frame women as beauty and delicacy of "*dolls or birds*", reinforcing traditional gender roles. Food metaphors further objectify women, associating them with consumption or sweetness. Another study proposed by Zhou (2017) focuses on gender metaphorical expressions found in Chinese literary works. It found that Female characters are more frequently framed as plants (such as flowers, vines) and objects (such as toys, gifts, or commodities), implying their fragility, passivity, and disposability. While male characters are more often described as armies, heroes, wild beasts, or trees, symbolizing strength, initiative, and dominant social status. Although both genders can be metaphorically represented by animals, men are more often compared to more higher-order animals like lions and

tigers, while women are likened to birds or lambs, reflecting submissive or gentle traits. The same metaphorical source often conveys different meanings depending on gender — like fox implies cunning when applied to men, but suggests seduction and danger when applied to women. Understanding how these metaphors function in practice helps to uncover the speaker's underlying intentions and enhances both communicative effectiveness and gender awareness.

Overall, many studies have shown that gender-specific roles and societal expectations shape how metaphors are produced and interpreted, with men and women engaging with metaphors in different ways depending on context. However, it appears that there aren't many studies examining gender differences in education metaphors in commencement speeches. Therefore, this study can enrich the study on such aspects.

Educational Level Differences in Metaphorical Framing

Due to differences in age, learning experience, academic achievement, and cognitive capacity, language proficiency, freshmen and seniors at university may vary significantly in understanding and using metaphors.

Research proposed by Jimenez-Munoz & Lahuerta-Martínez (2022) have found that since freshmen are adjusting to university life, navigating independence, and facing challenges transitioning from high school, they may tend to interpret metaphors in a more concrete and direct way. For example, the metaphor *"the journey of learning"* might be understood by freshmen as their personal adaptation and changes in university life, often focusing on terms like *"struggles or challenges"*, reflecting their anxiety and uncertainty. In contrast, seniors have had more time to adapt to academic rigor, gained specialized knowledge, more mature cognitive abilities and greater focus on career goals, job applications, and post-graduation preparation. They may tend to use more positive and goal-oriented metaphors, such as *"achievement or success"* in the context of their future career and life goals. And for *"the journey of learning"* may be more profound, involving stage-by-stage reflections on future planning and career development, rather than merely focusing on self-exploration.

Furthermore, Wegner et al. (2020) also figured out that metaphors usage in different educational levels indicate the general level of learning and study program type. Freshmen may use simple, functionally-driven metaphors such as *learning is memorization* or *learning is filling knowledge* to reflect mechanical and superficial learning strategies. As students' progress to higher grades, the metaphors they use generally become more complex and profound like *learning is exploration*, *learning is discovery*, reflecting a deeper understanding of knowledge and more active involvement in the learning process. As students gain more academic experience, their metaphors understanding shift from the simple task-oriented surface learning to more exploratory, critical, and creative thinking associated with deep learning.

In conclusion, these insights suggest metaphor use among university students varies significantly between grades, reflecting their levels of academic experience, cognitive development, and career focus.

2.2 Educational Metaphors

2.2.1 Why education metaphor matters?

Education has played a crucial role in human history. A nation's achievement in education has always been integral to its overall development, as it is essential to the growth of both society and the individual. While the phrase "education" is broad, "describing or interpreting some unfamiliar educational phenomenon, event, or action in terms of familiar things" is the definition of the metaphor employed in education-related contexts (Botha, 2006).

In terms of the significance of educational metaphor, Ortony et al. (1978) considers the educational power of metaphor to be twofold: "it elicits vivid imagery, which encourages memorability and insightful understanding, and it provides us with effective means for moving from the well-known to the less well-known". It is used to help individuals better understand and explain the meaning and value of education. People come to know, understand, and express educational phenomena, problems, and categories by using metaphors. School leaders may compare students to "plants" and stress the importance of "falling leaves returning to the roots"; Teachers may compare

students to candles and emphasize the meaning that one must burn oneself before lighting others (Gao, 2011). These metaphors can not only improve people's understanding of educational content but also have the function of motivation.

The essence of educational metaphor is to present the purpose and implication of its use and further indicate how the metaphor reflects education and national conditions or policies. Meanwhile, through these educational metaphors, the listener can also understand the teaching philosophy of the university and the educational policy and reform in line with the national conditions, further understanding the deep meaning behind the metaphor.

Furthermore, Candy's (1986) presentation showed that the use of metaphors has a role to play in teaching (or facilitating learning). Metaphor is widely used in education, which can stimulate students' creativity and thinking abilities and help them to understand and apply knowledge in a deeper way. Metaphor can help teachers connect abstract concepts or theories with concrete practice and strengthen students' understanding and memory in the teaching process. Meanwhile, metaphors can also help teachers stimulate students' interest and curiosity and cultivate their creativity and imagination (Leino & Drakenberg, 1993). Different kinds of metaphors used in the teaching environment can promote students' thinking and inquiry and make them realize the connection and internal relationship between things. Therefore, it is a great success that using metaphor in teaching practice can continuously provide students with a better educational experience and learning environment.

More specifically, the use of educational metaphor could help enhance teachers' in-depth understanding and cognition of educational concepts, reflect on educational and teaching practice, stimulate emotional experience and cognitive impulse, create personalized educational and teaching metaphors, and improve educational and teaching methods, thereby achieving the purpose of improving educational and teaching effects (Leino & Drakenberg, 1993). Therefore, the use of educational metaphors could reflect teachers' personal educational ideas and thoughts and their focus on educational practice.

In the perspective of the application of education in China, one of the most typical metaphors is EDUCATION IS THE LIGHT OF LIFE (Liu, 2014). Through comparing education to light, it describes the importance and value of education in people's lives, which can effectively inspire students to study harder and pursue their own light and dreams in the future. Another commonly used educational metaphor is EDUCATION IS AN ENDLESS JOURNEY. This metaphor expresses the long-term and progressive nature of education by comparing it to a journey, which is achieved through continuous efforts to move forward. This educational metaphor can remind students to keep learning and making progress and encourage them to persevere in the face of challenges and difficulties.

2.2.2 The Types of Education Metaphors

Educational metaphors always arouse the attention of researchers in the field of education. It refers to the metaphor between education, including educators, students, the process of teaching, and other seemingly unrelated things (Özdemir, 2013). As Tao (2017) states, education metaphors can be divided into:

Metaphor Related to Teacher

Metaphor about teachers is just like a mirror that reflects teachers' thinking level and responsibilities. As the environment and society change, so does the function that instructors play. Based on the analysis of different metaphors about teachers, we can explore the educational views and values involved and the changes in teachers' roles and educational ideas. There are some commonly used metaphors about teachers; for example, TEACHERS ARE ENGINES (Wongthai, 2022). According to the finding, students or teachers are viewed as non-human machines without any feelings or emotions. There are some controversies about the engine metaphor applied in the educational context. On the one hand, the view means that the engine can accelerate the development of science and that the students who trained as the machine may learn in an efficient way to stay up to date in this competitive society. On the other hand, it further implied that they have no such ability to think or reason because of the strict and fixed educational systems.

Another metaphor is TEACHERS ARE A SPRING SILKWORM OR CANDLE (Ahmady et al., 2016). With the emphasis of sacrificing life for righteousness, the metaphors of “spring silkworm” and “candle” highlight the teacher’s dedication spirit and the teacher’s contribution to the cause of education. The metaphor calls attention to the moral conduct of teachers.

The metaphor of TEACHERS ARE GARDENER advocates that teachers should work hard in the field of education, just like ploughing on “cultivated land”. They take good care of “saplings”, before they become the pillars of a country and make a nation strong, which reflects the naturalistic education concept and the people-oriented educational concept.

Metaphor on Students

Plato has compared those illiterate individuals, who, just like prisoners bound against the back wall of a cave, can only see the shadows cast on the wall by the fire light outside the cave but cannot see real things. The metaphor of STUDENTS AS PRISONERS cleverly points out the importance and necessity of education for individuals to build a sense of truth. In other words, students are educated at an early age that they should have a heart of kindness and should know that "being good-hearted" is the most noble idea. Furthermore, Aristotle’s metaphor that refers to students as blank paper is similar to Lock’s (1970) ideas that STUDENTS ARE WHITE BROAD, accepting people’s development based on their experiences and learning from the outside world. Both share the consideration that the goal of education is to guide souls in the proper direction.

The STUDENT ARE CONSUMER metaphor emphasizes customer service operations because they are the providers of the education students want Laing and Laing (2016). Accordingly, Treena and Zachary (2010) also highlighted the concept of student-as-customer, which evolved from the market literature. One compelling argument favoring the marketization imperative is that framing students as customers may improve communication, boost morale and productivity, increase process

efficiency, and reduce defects and costs. This means that the needs of students must be considered while designing educational programs. Teachers are therefore tasked with continuous improvement and the customization of educational experiences. Therefore, employing this metaphor encourages professors to improve their lessons and take pride in their work.

In the perspective of Chinese educationists, Cai Peiyuan's FARMING metaphor thinks the student is the crops, and just like farming follows natural law, education should follow different teaching approaches Fang (2005). Like Comenius's SEED metaphor, it means education should respect the law of nature's growth.

According to Tao (2017), SCHOOL IS A BIRD'S CAGE, and STUDENTS ARE THE BIRDS inside. He also indicated that in school, children's cognitive development is hindered, which is not conducive to the cultivation of children's practical life abilities. With its limitations, education is just a "foreign stereotype". Therefore, he advocated that the birds should be brought back into the woods, as students could be educated in life situations and encouraged to gain experiences and increase knowledge in life. It signified the great evolution of Chinese educational thought.

Metaphor Related to School

According to Wongthai's (2022) research on the core ideas of Thailand's contemporary educational system, schools are referred to as five metaphors: (1)SCHOOLS ARE SERVICE INDUSTRY ORGANIZATIONS: Schools are seen as service providers, with students as customers, education as a product, and stakeholders as clients, which reflected a business-oriented view of education. (2) SCHOOLS ARE PRODUCERS:Schools are likened to factories producing graduates, research, and services and the teaching and curriculum design are viewed as production processes. (3)SCHOOLS ARE ENGINES: Schools are regarded as mechanisms driving development and efficiency in the education system which are expected to perform, drive innovation, and maintain high output. (4) SCHOOLS ARE DEPOSITORIES OF WISDOM: Schools are portrayed and emphasized as repositories of national knowledge

and intellect, responsible for generating and preserving wisdom through research and teaching. (5)SCHOOLS ARE COMBAT UNITS: Schools are conceptualized as military or strategic units in competition, with references to competitive, high-stakes nature of globalized education.

The metaphor SCHOOLS ARE FACTORIES illustrates the process of efficient production, coherent monitoring, and product testing. When a school is compared to a factory, it implies that the teachers are factory employees or operators, the curriculum is the production line, and the students are the final product. Davis et al. (2020)criticizes the notion that SCHOOLS ARE FACTORIE which ignores how students' personalities develop. It shows that teachers supervise and manage educational and instructional activities, whereas learners only passively perceive, comprehend, accept, and apply knowledge during learning.

Cheng (2006) uses the statement SCHOOL IS A SUPERMARKET to describe how marketization and industrialization have affected education. In order to thrive and advance in this competitive marketplace, schools must market educational services and showcase their academic achievements. The school's management and development should follow the rules of social development and the law of market supply and demand.

The metaphor SCHOOL IS ECOLOGICAL GARDEN is frequently used. The environment has an impact on the learner's growth, and the student adjusts to it(Cheng,2006). The gardeners must cultivate, loosen the soil, apply fertilizer, and water at the proper times during this process to encourage the healthy growth of life.

Metaphor on Teaching or Learning Process

There are many metaphors related to the teaching process (Tao, 2017): TEACHING IS A JOURNEY, TEACHING IS CULTIVATING, TEACHING IS FEEDING, AND TEACHING IS CONTROLLING AND MANUFACTURING.

Due to the action of teaching, some research Goodhew et al. (2019) has found that teaching is controlled and further discusses that TEACHING IS PRISON OFFICE. It means schools and classes have deprived the student's freedom, autonomy, and

individuality of the students. While Chinese educationist Tao Xingzi criticizes that treating education in this way is a terrible mistake and may have serious consequences for educational developments (Fang, 2005).

According to Tao's (2017) research, the learning metaphors LEARNING IS CONTAINING, LEARNING IS INGESTION, LEARNING IS A WAR, and LEARNING IS CONSTRUCTING are shown. Tao describes the Chinese-specific metaphors for learning: Learning is a war (*knowledge is a powerful weapon; students get ready to fight*), which is frequently used. In this sense, the students are soldiers, and learning or testing is the war, so the classroom is their battlefield. To stand out or win the war, they need to be fully prepared (well-equipped) and overcome all the barriers (defeat all the enemies in the fighting).

Metaphor Related to Education

“EDUCATION AS GUIDANCE.”

Describing education as guidance is an old historical concept. Socrates was among the most influential proponents of this view. The distance between teacher, learner, and topic of study is reduced in this educational metaphor. This metaphor means that consultation, organization, and guidance are the roles of "tour guides" in the process of education, and there is a "cooperative effect" and "interactive effect" between teachers and students in teaching and learning activities. Here, educators are viewed as guides who lead students to learn wisdom (Leino & Drakenberg, 1993).

“EDUCATION IS GROWTH.”

This metaphor almost turned into a standard term and slogan while gaining symbolic significance quickly. The growth metaphor compares education to a greenhouse in which students are treated like plants. They will develop if knowledgeable and patient gardeners care deeply about their needs. However, this metaphor is criticized for indicating that it is "the lack of direction of growth other than the child's internal dispositions" and lack of a sense of competitiveness because they are protected well by school and teachers (Liu, 2014).

“EDUCATION IS LIBERATION”

The metaphor EDUCATION AS LIBERATION conveys the idea that education has the capacity to set people free from ignorance, oppression, and constraints. As regarding as “powerful and stimulating metaphor” in education (Elliott ,1984), people may overcome social limitations, broaden their viewpoints, and give themselves the ability to make wise decisions and make positive changes in their life by acquiring knowledge, skills, and critical thinking abilities.

To summarize, this section provides the related studies of educational metaphor: the importance and definition of educational metaphor; the classification and examples of educational metaphors; and the study of the understanding, functions, and values of educational metaphor. These investigations enable us to comprehend educational metaphors and education more fully.

2.3 Commencement Speeches

2.3.1 Introduction of Commencement Speeches

As its name suggests, a commencement speech is one type of speech delivered during a commencement. According to the Oxford Dictionary , a commencement is originated from the Latin word “inceptio”, which means the beginning and inspection of new life, and more specifically refers to “a ceremony at a high school, university, or college where graduates receive their degrees or diplomas formally”(Stevenson, 2010). It's an occasion to reflect on the achievements and accomplishments of the past as well as the hope and responsibilities of the future; its primary goal is to honor graduates' independence by inspiring them and showing respect for them. It marks the "beginning" of a new stage in life and the turning point for students to enter society from campus. Usually, in universities and colleges, there is a tradition of holding a grand commencement for graduates. And on that occasion, inspiring commencement speeches are given to convey best wishes and offer suggestions for graduates (Rutherford, 2004).

Different from other types of speeches, commencement speeches manifest cultural and educational elements about campus life. They serve two major functions:

persuasive and instructive (Liu, 2014). For one thing, the graduates are usually persuaded to be realistic and face reality, as well as to take up the challenges. For another, they are provided with some valuable advice and illuminating instructions for their future lives from the personal experience shared by the addressers (Partch & Kinnier, 2011).

To sum up, a commencement speech is a specific type of public speech oriented at graduates in universities or colleges, with the purpose of encouraging the graduates to face reality as well as to instruct their future lives.

2.3.2 Genre Analysis of Commencement Speeches

Genre means the fixed and structured text form; it contains a communicative purpose that can be recognized and understood by that profession or academic community (Bhatia, 1993). Shabelnyk and Torhovets (2021) investigates the structured feature of modern commencement speeches and points out that the typical commencement address usually consists of three main parts: the beginning (initial part, introduction), the middle (main part), and the end (final part, conclusion). Interestingly, it also finds that some politicians are more likely to choose an informal way to greet at the beginning of their speeches, establishing a friendly atmosphere. While some speakers would like to stick to particular patterns and formal greeting forms,

And using Move-Step is also commonly used in analyzing the genre: moves are the smallest unit of discourse, and steps are the elements that realize each speech's communicative purposes. Zhao and Shang (2020) and Liu (2014) propose that there are five similar moves and steps in the commencement speeches after analyzing the 30 and 60 commencement speeches in different universities in China:

Table 2 The Genre Analysis

Moves	Steps
Move One: Greeting Audience	Step 1: Salutation; Step 2: greeting.
Move Two: Congratulations and Gratitude	Step 1: congratulate to the graduates.

	Step 2: show the gratitude towards the teachers, staff, parents, and friends.
Move Three: Reviewing and Complimenting achievement.	Step 1: Review the development of school. Step 2: Complimenting the achievement of university. Step 3: Complimenting the achievement of students and teachers.
Move Four: Encouraging graduates.	Step 1: Experience sharing. Step 2: Social phenomena. Step 3: Suggestions.
Move Five: Ending words and Blessing.	Step: Show the expectation to the future and offer hope.

In conclusion, the table above indicates that a Chinese graduation speech comprises five key moves, each of which consists of distinct steps. It is typical for speakers to begin with a greeting the audience address. This is followed by a celebration of the accomplishment, congrats, and words of encouragement for the graduates. Chinese commencement speeches also typically end with some remarks such as blessing and offering hopes.

2.3.3 Relevant Studies on Commencement Speeches

Research on commencement speeches focuses on different perspectives. One perspective of the research puts emphasis on the themes and contents of the commencement speech. Roberts (1987) points out that a principal's commencement speech should not only simply convey his or her congratulations to graduates but also show his or her expectations and care for the next generation and offer some advice for the graduates to survive in this complex world. Partch and Kinnier (2011) conducted a study to identify the most frequently expressed values and themes of ninety American commencement speeches from 1990 to 2002, including seeking balance, looking to help

others, doing the right thing, widening your horizons, staying true to yourself, never giving up, appreciating diversity, and cherishing special others. Among them, staying true to yourself and cherishing special others are used more frequently at women's colleges than at universities that are coeducational.

Some scholars study commencement speeches in functional linguistics and cognitive linguistics. From the perspective of anthropology, Baxter Magolda (2003) illustrates that commencement rituals were powerful in transmitting cultural norms, which helped scholars, practitioners, and policymakers better understand and modify campus culture. By investigating women's commencement speeches from 1910 to 1915 delivered at Vassar College, Bordelon (2010) demonstrates students' rhetorical education and how women voice their opinions publicly. Another piece of research is a study of the functions of university presidents' commencement speeches. Xiong (2006) compares the stylistic features and functions of Chinese and Western commencement speeches. She discusses that the functions of entertainment and persuasion are involved in both Chinese and Western graduation ceremonies, and that compared with the function of persuasion, the function of entertainment is more prominent in Western graduation speeches. This study's primary focus is on how the diversity of sentence structures, and flexibility of mood voice contribute to the discourse's coherence and systematicity. However, from the examples presented in the study, it is evident from this study's examples that many speakers also use linguistic forms—such as quotation, comparison, or even metaphors (young people are sponges: to absorb new technologies and talents to enrich themselves)—to express the goals and motivation to the audiences. The researcher ignores the significance of such linguistic aspects in the examples. Importantly, the use of metaphorical expression can not only make the speech lively, interesting, and infectious but also stimulate the emotional response of the listener and thus realize the resonance between the speaker and the audience so as to achieve the purpose of persuasion. For example, by using the metaphor of CONSTRUCTION, the president encourages students to work together to build a better

school, society, and world. It needs to be claimed that metaphors are frequently used extensively and significantly to persuade audiences in commencement addresses.

Joshi (2014) reconstructs rhetorical methods by analyzing two commencement addresses by global business celebrities. Zhang (2016) conducts a positive discourse analysis of nine commencement speeches delivered by university presidents in China in June 2016. The study applies discourse analysis to educational discourses and found that positive expressions were more frequently adopted than negative expressions in these speeches, thus providing some guidance for future studies in educational discourses.

Besides, the comparative analysis conducted between speeches from America and China enriches research to some extent. One of the comparative studies is on the differences in commencement speeches of university presidents. Hua (2010) has studied the commencement speeches of Peking University, Tsinghua University, Fudan University, and Harvard University in recent years, and at the same time, he has made a comparative analysis of the differences between the commencement speeches of Chinese and American universities in terms of structural patterns, ideological contents, rhetoric, and linguistic styles, which is very inspiring for us to do the related research.

To sum up, scholars have both conducted fruitful research on commencement speeches. They pay little attention to the conceptual metaphors used in this type of speech, and the discourse coherence of these speeches is ignored in their studies, thus providing a research gap for the present study.

2.4 Metaphors Framing

2.4.1 Metaphorical Framing and its functions

In 1980, Lakoff and Johnson suggested a relationship between frame and metaphor, stating that “political and economic ideologies are framed in the metaphorical term”; Metaphor serves to shape the public’s opinion on important topics by presenting the problem definition, cause, and moral evaluation and implying policy solutions (Burgers et al. ,2016). Using metaphors as framing and reasoning devices has effects on how people characterize and understand the issues. In conclusion, metaphorical

framing works as a tool for simplifying complicated issues and shaping people's opinions and solutions about the issues.

Another function of metaphorical framing presented by Entman (1993) is that metaphor can be added to foreground the problem and address the evaluation and solution of the problem. It is further explained by Xiang H. and Huang and Bisiada (2021) that metaphors help to reflect and promote specific comprehensions and assessments of issues and solutions, as well as the ways in which they impact individuals and the community.

Furthermore, Musolff (2019) presents the significant effects of metaphorical framing as the enhancer for understanding the issue: "to activate the metaphorical structures in our minds and provide the filter for understanding the hiding target concepts", which means that unconscious choice is made a particular interpretation of reality. It is essential to realize that if you want to communicate specific political facts to the public, you need to make sure you are using frames that make those facts make sense. Based on this viewpoint, the author outlines the account and outcome of the metaphorical frame in political discourse. By surveying the discourse history of this slogan, it can be found that the trend of its positive and negative judgement is linked to frame change. It shows that political metaphors serve as a means of presenting plausible frames for evaluating and understanding the available information. Subsequently, the public is influenced to create certain viewpoints based on the metaphorical framing of political matters. In this perspective, metaphorical framing focuses on whether the different interpretations and frames of metaphors may produce variations, effects, and different public viewpoints on specific issues.

Similar to Musolff's opinion, Boeynaems et al. (2017) argued that in the past 20 years, researchers in a variety of fields have studied the impact of metaphorical framing on the persuasiveness of political arguments. It is hypothesized that people's ways of thinking about political issues are affected by the metaphors employed to describe them. Using the metaphor of a natural disaster to describe the issue of immigration, for instance, might lead to an unfavourable impression of immigrants since there are some

negative characteristics of the "Disaster" source domain that are mapped to the "Immigration" target domain. This framing also stresses the severity of immigration problems and presents that it's a hard problem to control. Therefore, politicians frequently discuss themselves, their opponents, and their agendas using metaphors (López & Llopis, 2010). To sway public opinion on policy matters, they also resort to metaphors.

2.4.2 Research Reviews on Metaphor Framing

Metaphorical framing research is gaining popularity. Metaphors are necessary in communicative and cognitive processes because they share information, reflect, and highlight certain parts of the mind and social context. Within the field of linguistics, such as discourse analysis and metaphor theory, there exist systematic and theoretical approaches to examining individuals' language choices based on different metaphorical frames. These include examining the language choices that they made—consciously or unconsciously—in comparison to alternatives that may have been chosen, how these choices tend to pattern consistently, and how these choices affect people's needs, difficulties, experiences, and points of view. According to a recently developed psychological study, even one single metaphor can have an impact on our thought processes.

Metaphors are often used in political discourse because they allow politicians to create a frame for explaining their worldviews. Politicians place a premium on discussions of national economic health because it is directly related to the level of public support they may expect for their policies and, by extension, their political careers. Politicians use language to communicate with the public about their policies and messages. The most condensed and typical instances of this language can be seen in presidential campaign speeches. The emphasis of Pavlikova's (2021) research is political metaphors used in the speeches made by the two presidential candidates in the 2020 election. Similarly, the dissertation presented by Marotta (2017) examines how metaphors used to describe social policies and issues can affect political attitudes, mainly when voters are made aware of pending demographic shifts. These two studies

try to focus on how political metaphors are used to describe policies, what the beneficiaries are when policies are framed using metaphors, and whether the people's shift can influence the public's attitude towards social policies. Interestingly, it can be found that metaphors in political speech could moderate the effects of people and racial shifts on attitudes towards different policies and perceptions of applications considered under various policies. Therefore, since the political metaphors they employed are directly related to the public's tendency to vote for and support the campaign, those in positions of power in political aspects will always be cautious with their words and enliven them with a variety of linguistic skills and methods.

Thibodeau & Borodinsky (2011) investigate whether discussing crime with different metaphors leads people to think about crime in different ways and to know how these metaphors affect how they approach and attempt to resolve crime-related issues and make decisions. In these experiments, participants read short excerpts on crime in Addison, a fictional city. A few sentences were slightly modified for half of the participants, who were informed that crime was like a "virus infecting" the city. One-half of the participants read the passage about crime as a "beast preying" on the city. The findings showed that people's opinions on how crime should be tackled may be significantly different in two different groups. Those who read the passage using the "beast" metaphor were asked to think of ways to fight crime, and their answers included more punishing measures like longer jail terms. Those who read the passage as a "virus" metaphor believed that more reformative and educational approaches were needed. This study looked at how metaphors that have real-world implications can have a significant impact on people's perceptions.

However, a follow-up study proposed by Steen et al. (2014) criticizes the study's design by Thibodeau and Boroditsky (2011) that it is unclear what language or text mechanism their study ultimately connects with, and they first argue that the words and materials are incompatible with the VIRUS and the BEAST frame. The materials with two different metaphorical frames ought to be distinguished and consistent from the first to the last sentence. These need to be carefully weighed by the researchers. Second, the

differences in effects between texts with and without metaphorical framing were not compared in the original study. A neutral, non-metaphorical control is important since it provides a baseline.

To justify the critique, Steen et al. (2014) conducted the follow-up study after revising the materials and research procedures, trying to check whether the framing effect on people's reasoning still exists. The result is different from the original one, which shows that there are no effects of the metaphorical frame on reasoning. Similar results also show in the non-metaphorical, neutral frame, which further points out that two different metaphorical framing and a non-metaphorical frame led to a general preference for enforcement. This follow-up research further explains the conflicting findings and points to the need for more specific boundary conditions and factors, such as the structure and language of stimuli, the comparison of non-metaphorical frames, and the prior beliefs, attitudes, and intentions, also affect the entire reading process of the participants.

Hendricks et al. (2018) use BATTLE or a JOURNEY frame to examine whether, in the context of cancer, people would overcome the hardship differently if they used different metaphors. Five experiments show that the BATTLE frames encourage people to believe that the patient tends to feel guilty and fight harder than the journey frames, while the JOURNEY frames motivate people to make peace with their situation. It is verifying that metaphorical framing encourages people to reason about the cancer problems, which is consistent with the language they use to describe them. This research further explores the potential explanations: the lexical association, the role of material's gender, and the priming effect, which provide useful guidance on experimental design.

The following research is related to using the WAR or RACE metaphor against climate change (Flusberg et al., 2017). The purpose of this study is to examine how metaphoric framing affects attitudes about climate change and intentions to engage in conservation behaviors. Participants are asked to read a brief introduction of the US attempts to cut carbon emissions in terms of the climate change issue, either

non-metaphorically or metaphorically (RACE or WAR metaphorical frames against climate change). After that, they are asked to respond to the follow-up questions on the goals, the urgency risk, and the behaviour changes towards these environmental issues. The results find that, compared with those who read the RACE metaphors, people who read the article about the WAR metaphor regularly expressed a stronger sense of urgency, a higher sense of risk, and a greater willingness to strengthen their environmental protection behavior. Additionally, it reveals how important metaphors are for both communicating and comprehending abstract ideas, as well as for influencing people's perspectives on problem-solving.

Using three (two metaphorical expressions and one literal one) to describe flu, Scherer et al. (2014) carry out three between-subjects experiments to investigate whether describing flu metaphorically could boost a person's desire and interest in receiving a vaccination. The results support the hypothesis that using metaphor to describe flu can effectively increase people's intention to get vaccinations against the virus.

Another paper presented in 2021 by Huang and Bisiada (2021) pointed out the significance of focusing on Obesity in China: the metaphors of obesity frequently used in Chinese media provide valuable analytical and conceptual insights into how the media and public understand, communicate, and evaluate obesity. The findings indicate that all these metaphors describe obesity and obese people negatively and are also deeply rooted in Chinese sociocultural contexts, expressing obesity as a problem of national collective social nature (parents, teachers, etc.) rather than presenting it as a personal health concern. In contrast to the JOURNEY and WAR metaphors, which present obesity from a collectivist perspective, the MONEY metaphors generate a neo-liberal, individualist viewpoint, emphasising health maintenance as a component of citizenship. WAR metaphors can also support the unfavourable perception of obese people, and to some extent, WAR metaphors are also effective in inspiring people to combat obesity problems.

The paper (Flores, Tania, and Daniela, 2015) related to the metaphorical framing of depression employs the combined methods. It presents complete and coherent approaches for exploring the effects of metaphorical framing. Emotional disorders are described differently in different cultures. Various articles often describe depression as a *brain disorder* or *disease*, and this view has dismissed the understanding of the depressed person's responsibility. The article's central claim is that people's first perceptions of depression are influenced by linguistic cues.

Metaphors can also serve to reinforce deeply rooted preconceptions or stereotypes. For instance, Elmore and Luna-Lucero (2016) conducted the study to check whether using the LIGHT BULB metaphor or SEED metaphor to describe ideas would lead participants to think that the ideas of well-known innovators were more remarkable. The findings show that using light bulb metaphors to talk about the inventor may make people believe that they are more exceptional in their field. However, when the same metaphors are applied to female innovators, the results show that the SEED metaphor is more remarkable, convincing, and appropriate to characterize female inventors. Maybe this is because, according to a stereotype ingrained in our language, women should assume a more nurturing role, caring for ideas like seeds in a garden.

Regarding the use of metaphorical usage perspectives, several studies show that metaphorical frames influence people's reasoning in a variety of cognitive domains like abstract ideas (*ideas* on Elmore, & Luna-Lucero, 2017), emotional experiences (*romantic relationships* on Ervaset al., 2021), health issues (*cancer* on Hendricks et al., 2018; *flu* on Scherer et al., 2015), and sociopolitical matters (*crime* on Thibodeau & Boroditsky, 2011; *obesity* Xiang & Mario, 2021; *climate change* on Flusberg, Matlock, & Thibodeau, 2017). Because of the role that they play in our cognitive processes, the metaphors we use may have a significant impact on people's views and can have real-world consequences. As we understand the effects of metaphorical framing, it is essential to mention that this study may investigate the existence of framing effects in educational discourse. Therefore, if the metaphorical framing effect exists in this study, it will

potentially be helpful to understand how education metaphors could be used to improve education issues and decision-making.

2.4.3 Gender Differences in Metaphorical Framing

A previous study found that "the framing effect is sex-specific, varying according to the gender role in different task domains" (Huang & Bisiada, 2021). Considering Social Role Theory posits that society imposes different role expectations and behavioral norms on men and women, leading to systematic differences in behavior and attitudes between the sexes (Rutherford, 2004).

Hussey and Katz(2006) proposed the research that men generally produce more metaphors than women in online conversations, particularly slang. The production of metaphors by women increases when conversing with friends, possibly to avoid miscommunication with strangers. This indicates a gender-based difference in the strategic use of metaphors, with men more willing to risk misunderstanding for humor or competitive interaction.

When constructing gender identity through workplace discourse, Holman(2006) pointed out that men in the workplace are more likely to use imperative language and tend to take on leadership and decision-making roles, while women often play the role of mediators and supporters within teams, using more negotiation and collaborative language. These differing communication styles reflect the gender power dynamics in the workplace.

Under the context of Indian banking print advertisements (Das et al., 2024), females tend to score higher in their appreciation of ads with visual metaphors compared to males, who show greater variability in their responses. This suggests that women may engage with visual metaphors on a deeper emotional level, closely linking metaphor to themes like education, freedom and opportunity portrayed aspiration and empowerment, reflecting societal demand for change, while men may interpret these themes with more pragmatical metaphors.

Overall, many studies have shown that gender-specific roles and societal expectations shape how metaphors are produced and interpreted, with men and women

engaging with metaphors in different ways depending on context. However, it appears that there aren't many studies examining gender differences in educational metaphors in commencement speeches. Therefore, this study can enrich the study on such aspects.

2.4.4 Educational Level Differences in Metaphorical Framing

Due to differences in age, learning experience, academic achievement, and cognitive capacity, language proficiency, freshmen and seniors at university may vary significantly in understanding and using metaphors.

Research proposed by Jimenez-Munoz & Lahuerta-Martínez (2022) have found that since freshmen are adjusting to university life, navigating independence, and facing challenges transitioning from high school, they may tend to interpret metaphors in a more concrete and direct way. For example, the metaphor "*the journey of learning*" might be understood by freshmen as their personal adaptation and changes in university life, often focusing on terms like "*struggles or challenges*", reflecting their anxiety and uncertainty. In contrast, seniors have had more time to adapt to academic rigor, gained specialized knowledge, more mature cognitive abilities and greater focus on career goals, job applications, and post-graduation preparation. They may tend to use more positive and goal-oriented metaphors, such as "*achievement or success*" in the context of their future career and life goals. And for "*the journey of learning*" may be more profound, involving stage-by-stage reflections on future planning and career development, rather than merely focusing on self-exploration.

Furthermore, Wegner et al., (2020) also figured out that metaphors usage in different educational levels indicate the general level of learning and study program type. Freshmen may use simple, functionally-driven metaphors such as *learning is memorization* or *learning is filling knowledge* to reflect mechanical and superficial learning strategies. As students' progress to higher grades, the metaphors they use generally become more complex and profound like *learning is exploration*, *learning is discovery*, reflecting a deeper understanding of knowledge and more active involvement in the learning process. As students gain more academic experience, their

metaphors understanding shift from the simple task-oriented surface learning to more exploratory, critical, and creative thinking associated with deep learning.

In conclusion, these insights suggest metaphor use among university students varies significantly between grades, reflecting their levels of academic experience, cognitive development, and career focus.

2.5 Summary

In this chapter, the development of metaphors by some distinguished scholars, the introduction of educational metaphors, commencement speeches, and metaphorical framing are introduced in a comprehensive way to lay a solid theoretical foundation for the following analysis. However, the previous studies mainly focused on graduation speeches by celebrities at certain colleges and universities. This study decides to study conceptual metaphor in the commencement speech of the president of a Chinese university from the perspective of educational metaphor. Additionally, in terms of research methods, some research mainly focuses on qualitative analysis of conceptual metaphors, ignoring the influences of education metaphors on people's reasoning processes. And this study will use quantitative and qualitative analysis methods, verifying the claim that different metaphorical frames have an impact on people's understanding of education.

CHAPTER 3

METHODOLOGY

This chapter outlines the methodology, covering data selection and identification, along with how this experimental study was conducted.

3.1 Research Design

This study incorporates a Conceptual Metaphor Analysis of education with an experiment on Metaphorical Framing. Figure 1 below illustrates the general research procedures: the identification phase involves locating, classifying, and grouping educational metaphors. Once the frequency of metaphorical domains was determined, the data from the first step are used as the basis for the next experiment, which is designed to test the metaphorical framing effect. In order to examine the metaphorical effect, this experiment additionally uses non-metaphorical frames as the control group to compare the results with groups that use metaphorical frames, aiming to prove or disprove the existing theories on metaphorical framing. If the metaphorical framing effect is true, further research should be done to determine how different student groups' reasoning—female or male; freshmen versus seniors—is impacted by the use of educational metaphors to frame education in different ways.

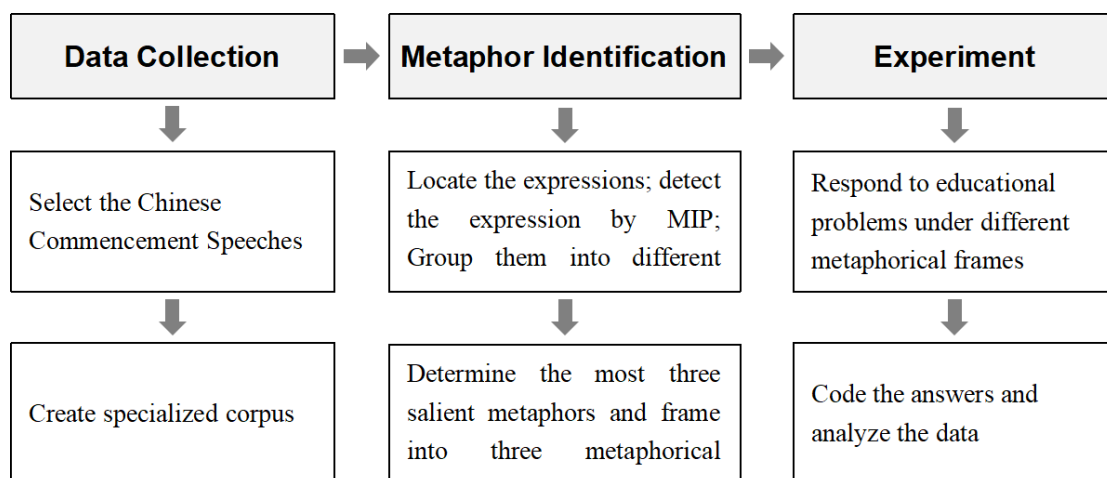


Figure 1 Research Design

3.2 Educational Metaphor Identification Process

For the first research question "What metaphors have been employed in Chinese commencement speeches?", corpus-based analysis, which uses both qualitative and quantitative approaches, is employed. The procedure for locating metaphors includes specific analysis stages, identifying potential metaphors and words to determining whether the selected candidate word is being used metaphorically or literally by looking at the context of the corpus and verifying the accuracy of metaphor-related words. Qualitative analysis included to analyze the metaphor domain, the topics that were talked about metaphorically, and how metaphorical uses of language occurred within ongoing discourse (Cameron, 2003). By analyzing the corresponding and mapping relationship between the source domain and the target domain as well as the classification of the education metaphors, it is helpful for researchers to understand complex concepts of education, how they elicit an emotional resonance from the audience and present the specific characteristics and elements of Chinese higher education.

3.2.1 Selecting Commencement Speeches

This study draws on 100 commencement speeches delivered at 10 leading Chinese universities over a ten-year period (2013–2023). To ensure representativeness and academic credibility, this study focused on the top 10 comprehensive universities in

China, as listed in the 2024 QS China University Rankings. These include: Peking University, Tsinghua University, Zhejiang University, Fudan University, Shanghai Jiao Tong University, University of Science and Technology of China, Nanjing University, Tongji University, Wuhan University, and Harbin Institute of Technology (QS Ranking, 2024; <https://www.qschina.cn>).

The primary objective of selecting these speeches is to identify typical conceptual metaphors employed in formal educational discourse and to further explore how metaphorical framing influences students' comprehension and perception of education. Commencement speeches were chosen because they represent a critical communicative event where university leaders summarize educational values, project future expectations, and convey institutional identity—making them a rich source for metaphor analysis.

3.2.2 Data Collection

To ensure quality and consistency, speeches delivered by ten various colleges should be comparable in terms of length, lecture genre, audience, and even presentation time. The length of the speeches ranges from 21,000 to 36,000 words, with each speech lasting 8 to 10 minutes, whereas commencement speeches of a similar genre consist of four move-steps: welcoming, congratulating, sharing, and closing (Zhao & Shang, 2020). The summary of the data, including the university, word count, and text sources, is shown in Table 3 below.

Table 3 Summary of data

University	Words Count	Text Source
<i>Peking University</i>	30,437	https://www.pku.edu.cn/
<i>Tsinghua University</i>	21,457	https://www.tsinghua.edu.cn/
<i>Zhejiang University</i>	29,487	https://www.zju.edu.cn/
<i>Fudan University</i>	32,658	https://www.fudan.edu.cn/
<i>Shanghai Jiao Tong University</i>	32,213	https://www.sjtu.edu.cn/
<i>University of Science and Technology of</i>	28,401	https://www.ustc.edu.cn/

<i>China</i>		
<i>Nanjing University</i>	29,008	https://www.nju.edu.cn/
<i>Wuhan University</i>	36,490	http://www.whu.edu.cn/
<i>Tongji University</i>	33,593	https://www.tongji.edu.cn/
<i>Harbin Institute of Technology</i>	25,307	http://www.hit.edu.cn/
Total	299,051	

The authenticity of the data collection is verified by downloading the lectures and transcripts from the official website. Original material from the universities' official websites was manually searched using the keywords 毕业演讲 and 毕业致辞 (commencement speeches). Consider Peking University as an example. By using the keywords and the specific year (commencement speeches; 2020) in the search bar on the website, examples of commencement speeches for that year were displayed, and the president's speech on the graduation ceremony was selected. Such presidential speeches at graduation ceremonies not only reflect the humanistic spirit of universities with their distinctive moral education functions but also serve as cultural symbols for these institutions by representing their pedagogical philosophies and value orientations as school administrators (Liu, 2014).

激扬青春 开创未来
——在北京大学2020年毕业典礼上的讲话
北京大学校长 郝平



老师们、同学们：
大家上午好！

在全球新冠疫情仍然很严重的时刻，我们迎来了今天这场不同以往的毕业典礼。为了期待已久的重逢，我们在校门口建好了欢迎站，在百年讲堂外树起了毕业墙，校园已经打扫得干干净净，餐桌也摆放得整整齐齐，给同学们准备的健康包塞满了各种防疫用品，就是要等待着同学们回来参加毕业典礼。

Figure 2 Example From the 2020 Commencement speech at Peking

University

Source: <https://www.gsm.pku.edu.cn/info/1022/21984.htm>

3.2.3 Procedure for Data Analysis

Step 1: Identify the metaphorical linguistic expressions from the data of commencement speeches.

The identification of conceptual metaphors was a primary and important part of the present study, which includes identifying potential metaphors as well as classifying and calculating terms that are connected to metaphors. To make the data more objective and persuasive, the current study adopted the identification procedures proposed by Group (2007).

- (i) reading the text to determine the context, subject.
- (ii) identifying lexical units in the text.
- (iii) Determine the meaning of each lexical unit in the text in connection to an entity, relation, or attribute in the situation that the text suggests (contextual meaning).
- (iv) comparing the basic meaning of the identified lexical items against their contextual meaning to determine whether the use is metaphorical or literal.

This study includes a pilot study, in which metaphors were identified using a systematic approach. First, thoroughly read the materials to understand the overall themes of the commencement speeches. Next, divided the text into different lexical units (see Example of a pilot study). After carefully reading the sample texts, potential metaphors was identified. Expressions that meet the criteria for metaphorical use were then marked as metaphor keywords. Finally, determined whether an expression is literal or metaphorical based on its context.

To ensure the reliability of the metaphor identification process, researcher triangulation was also employed. This involved multiple researchers reviewing and cross-checking the selected metaphors to minimize bias and enhance the accuracy of the findings (Masson & Raymond, 2018). That is, examining the same data set by many

researchers—must also be a part of the research process. This study involved inviting two associate professors Dr. Zhou and Dr. Yan from the English Department to ensure the credibility and quality of the research data.

Example:

你们	在	大学	四年	收获的	青春	果实
nǐ men	zài	dà xué	sì nián	shōu huò de	qīng chūn	guǒ shí
You	in	university	four year	harvested	youth	fruit
最宝贵	就是	你们	逐渐	形成的	思想。	
zuì bǎo guì	jiù shì	nǐ men	zhú jiàn	xíng chéng de	sī xiǎng	。
most precious	is	your	gradual	developed	ideas.	

(Of all the fruits of your youth that you have harvested during your four years in college, the most precious and valuable thing is the ideas that you have gradually formed.)

By looking at these lexical units' contextual meanings, it is found that the linguistic expressions 收获(shōu huò)/harvest and 果实(guǒ shí)/fruit have a much basic meaning than the contextual meanings they refer to. The non-contextual meaning of 收获(shōu huò)/harvest is “the time of year when the crops are gathered on a farm and the act of cutting and gathering crops” from *the Chinese Modern Dictionary*(2016). But in the context, it refers to a more concrete meaning “to gain”, “Fruit” means “a part of a plant or tree that is formed after the flowers have died and in which seeds develop”, but the context meaning refers to “the achievement and progress gained in the university”. Thus, based on the MIP, these words are identified as being metaphorically used.

It is vital to point out that the primary concern in choosing the candidate metaphor should entirely connect to educational elements, not to aspects of life or dreams. The purpose of carefully reading all 100 of the above materials is to identify the main topic of education and judge whether the description relates to educational elements or not.

Step 2: Classify the metaphorical linguistic expressions into the elements of education.

Based on the candidate metaphors obtained in Step 1, the researcher thoroughly reviewed the materials of educational metaphors to identify items containing educational elements in the Chinese corpus. The search criteria, using specific words, were then applied to identify the relevant items(Tao, 2017):

Metaphor related to teacher.

(keywords: 老师/lǎo shī /teacher, 辅导员/fǔ dǎo yuán/counsellor, 教授/jiào shòu /professor, 师生/shī shēng/instructor, 教职员工/jiào zhí yuán gōng/teaching and administrative staff),

Metaphor related to students.

(Keywords: 学生 /xué shēng/students, 本科生/běn kē shēng/under-graduates, 毕业生/bì yè shēng/graduates),

Metaphor related to educational process.

Education of teaching:(Keywords: 教学/jiào xué/teaching; 教育/jiào yù/instructing) Education of learning(Keyword: 学习 xué xí: learning and studying); Resource and facility(Keywords: 教学资源/jiào xué zī yuán/teaching resources; 图书馆/tú shū guǎn library; 课室/kè shì/ classroom)

Metaphor related to institution.

(Keywords: 大学/dà xué/ university/ college; 学校/xué xiào/ school).

The metaphor in the Example was manually sorted into several educational categories after being looked up in the transcripts of the commencement speeches. By looking at the contextual meanings, the examples “收获/ shōu huò/harvest” and “果实/ guǒ shí/fruit” were used to characterize the students’ learning experiences while attending university. These metaphors can therefore be viewed as metaphors for the learning process. This process clarified the language words and establishes a strong frame for the subsequent identification procedures.

Step 3: Group the metaphorical linguistic expressions under each element under different semantic domain.

After classifying the educational metaphors into four different categorizations: educator, students, institution, and teaching or learning process, the next step was to figure out the semantic domain, such as JOURNEY, WAR,

CULTIVATION and so on. Considering the metaphorical words 收获/Harvest and 果实/fruit (the Table 4 show an example of linguistic expression) both related to cultivating or planting ideas and knowledge in students' mind, these educational metaphors can be regarded as plant metaphors.

Table 4 Example of the linguistic expression and source domain

Source Domain	Linguistic Expression
CULTIVATION	收获(shōu huò) harvest/果实(guǒ shí) fruits /成长(chéngzhǎng) growth /培育(péi yù) nature/ 开花(kāi huā)blossom / 播种(bōzhòng) sow/ 种子(zhǒng zǐ) seed

Step 4: Determine the cross-domain mapping structure.

After gathering the materials' source domain and typical linguistic expression, the next step was to draw out the cross-domain mapping structure. The common metaphor TEACHER IS GARDENER can be found as an example for this stage after a thorough and in-depth examination of the text in the speeches. Selected the counterpart parts of the target domain as TEACHER and the source domain as GARDENER and then classified the elements into the CULTIVATION domain category based on the close association between conceptual domains and mental presentation.

Source domain		Target domain
CULTIVATION		EDUCATION
gardener	→	teacher
gardening	→	teaching
garden	→	school
seeds	→	uneducated person
fruits	→	educated students
fertilizer/ nutrition	→	knowledge

Figure 3 Mapping Structure of EDUCATION IS CULTIVATION

The source domain characteristic of knowing and facilitating the individual learning needs of every plant to better support growth and development was mapped onto the target domain. Just like a gardener needs to be able to see the final outcome and harvest, a professional teacher needs a vision to strive towards long-term objectives.

3.3 Experimental Design

The purpose of the experimental studies focuses on research question: How do these educational metaphors affect students' educational reasoning and lead them to make different decisions when dealing with educational problems? The main objectives of the study are to determine whether educational metaphors influence students' decision-making and reasoning when it comes to educational challenges, as well as how much gender and educational background differences influence the way the framing effect is measured. This variation suggests the possibility that there may be individual differences with significant framing consequences, even when generalizing at the level of conditions. Therefore, researching the impact of metaphorical frames used by certain groups of people in particular settings is essential (Semino et al., 2017).

3.3.1 Ethical Considerations

Before recruiting the participants for the current study, the idea was presented to Srinakharinwirot University, and after approval of Zhanjiang University of Science and Technology (Ethical Approval Number of EA/ZUST/2024/0301-01) on 1 March in 2024, the current study proceeded to the next stage. After approval and consent from the participants, the procedures used in this study ensured the participants' rights and welfare.

3.3.2 Procedures on Experiment Study

Step 1: Identifying the most frequent and salient educational metaphorical frames based on collecting data.

To measure and compare the productivity of source domains, the linguistic forms from the source domain (types) and the times each form appears (tokens) were

counted. The frequency statistics of metaphorical keywords were carried out to calculate the “resonance value” which indicated the coverage rate for a certain type of metaphor in a certain corpus (Charteris-Black, 2004). The higher the resonance value, the higher the metaphor yield, indicating the higher the use frequency of the metaphor. Resonance value is a measure of metaphorical productivity. Its calculation formula is: $\text{resonance value} = \text{number of types} * \text{number of tokens}$, that is, the total number of metaphorical keywords from the same source domain multiplied by the total number of occurrences of the metaphorical type. For example, suppose that the WAR metaphor in a corpus has three different expressions: “奋斗/fight”, “战胜/conquer” and “武器/weapon”. The “奋斗/Fight” is used 3 times; “战胜/ conquer” was used 5 times and “武器/weapon ” was used 8 times, respectively. The resonance value of the WAR metaphor in this corpus was $3 (\text{types of keywords}) * 16 (3+5+8 \text{ frequency of the total number}) = 48$. Therefore, the percentage of the resonance value of each type of conceptual metaphor in the total resonance value was calculated, and the conceptual metaphors that are used more frequently in the corpus were analyzed.

Step 2: Creating the Stimuli and target questions for experiment.

Once the frequency and the most salient of educational metaphorical domains were established, the data from the first step served as the foundation for the subsequent experiment.

The stimulus materials in this experiment included four versions: three with the most salient metaphorical frames and one with a non-metaphorical frame. Next was determined the structure of stimulus materials by presenting the same background information in each version—about a student A from a Top 10 university in China—describing his views on university life. After the frames were determined, the extracts relevant metaphorical expressions from commencement speeches were used to depict how the student perceives the learning process and personal growth. Correspondingly, the non-metaphorical frame version would simply state the student's views without any metaphorical expression. Also, the stimulus materials need to take into account language and cultural differences: expressions in Chinese and English may

differ, and when translating, it is important to ensure the accuracy and effectiveness of the metaphors while aligning with the idiomatic expressions and conventions of each language.

Inspired by the speeches of university presidents on education reform and social equity, which were also the key issues within China's education system, there were two follow-up questions for participants to answer: 1). How does educational theory better integrate into practice? Please share any ideas or strategies you think would work. 2). What suggestions or ideas do you have to help ensure that all students, regardless of their geographic background, can receive equal and high-quality educational opportunities? Or how to address educational inequalities?

Each metaphorical frame and questions were carefully designed to convey different metaphorical imagery, aiming to examine participants' responses to different metaphorical frames and assess the influence of gender and educational background on metaphor understanding.

Step 3: Selecting the Research Participants

150 Chinese students (120 in the Experimental Group; 30 in the Control Group) participated in this study, ranging in age from 18 to 24. Participants were undergraduate students, including freshmen and seniors, from top and elite universities in China (Table 5 displays the participants' general information). The reason for choosing students as participants was that they were the most intuitive audience and recipients of these graduation speeches, and they were among the first to confront and encounter such educational issues, as they directly experienced the challenges and dynamics of the current higher education system. Additionally, freshmen and senior students were both at pivotal and different stages in their personal and academic development, making them particularly receptive to the educational problems and issues. Therefore, their perspectives offered a unique insight into how these issues were perceived and felt at the ground level.

Table 5 The Participants Information

Items	Description
Number of participants	150
Number of Groups	5
Age Range	18-24
Educational Level	Freshman and Senior
Gender	Female and Male

The participants were split into five groups: female-freshmen, male-freshmen, female-seniors, male-seniors, and control group in order to examine whether different metaphors have an impact on students of different genders and educational levels. As Table 6 shows, the number of participants in each group was fixed at 30, therefore 10 participants were distributed separately and randomly to each group for each of the metaphorical frames. 10 first-year students from the first group, for instance, read the passage using the WAR frame; 10 first-year students from the second group read the passage using the CULITIVATION frame; and the last 10 participants read the passage using the CONSTRUCTION frame.

<i>Group</i>	<i>Items</i>	<i>Number</i>
1	Female- freshmen	30
2	Male- freshmen	30

Table 6 The Information of Experimental Groups

3	Female- senior	30
4	Male- senior	30
5	Control Group	30
Total		150

Step 4 Conducting the Experiment

As the Tshown, the current study gathered data from a sample of 150 participants who generated data about the educational experiences, and the participants could not be repeated under different scenarios for these participants. The participants were recruited from the "AiShiYan" online platform (aishiyen.bnu.edu.cn) which was launched by Beijing Normal University, which provided a convenient way for researchers to access student participants from China's top ten universities for various online surveys and experiments.

This study restricted the research sample to students living in China, and they could come from top and elite universities in China. And the participant's profile of student ID and their previous platform task assessments were reviewed by the researcher before taking the next step. To gather rich data about participants' experiences in the study regarding generative metaphor framing, the current study adopted the following sample selection method:

These participants were contacted by sending out an introduction letter via email and engaging them directly through the "AiShiYan- For Experiment" platform.

Each potential volunteer participant was sent a recruiting letter indicating their right to decline participation or withdraw throughout the study.

Once the response to the email invitation to participate was received from the participants, they were invited into the group on the platform. A 5-minute initial interview was conducted to explain the objectives of the study and provide an overview of the overall research.

Once they understood the scope of the study, the informed consent form (Appendix 1) was sent to them, and they were invited to read it thoroughly and then sign it.

Participants who agreed and signed the informed consent selected their gender (female or male) and grade (freshmen or seniors). Prior to data collection, they also assigned a code and selected a pseudonym to ensure anonymity. Then, the platform system then automatically assigned them to different groups (Group 1-5), with each group receiving a different metaphorical frame.

For those who took part in this study, they were paid 20 to 50 Yuan (around 100 to 250 Baht) for completing the task and the payment was based on the expected completion time. Participants who exited early or did not engage with the text (e.g., spending less than two seconds on the screen) were excluded from the study.

3.3.2 Coding and Analyzing Process

In the coding process, as Figure 2 shows, the researcher manually reviewed participants' responses and then became familiar with the data and read the data to note down the keywords of general solutions. Following the principles of Grounded Theory (Strauss & Corbin, 1998), the initial coding process involved identifying multiple original concepts were identified from the students' responses to the metaphorical texts. After refining these original concepts, primary and secondary concepts and themes were developed. See the Example in Table 7, participants' responses were categorized under the primary code Psychological Counseling when the answers focused on the second code Teacher's and School's Communication and Guidance (e.g., the original concepts *"Teachers and the school should patiently listen to the needs of each student, particularly those who feel they have been treated unfairly".*) and *"Establishing a Psychological Support System"* (e.g., *there should be a platform where students, especially those from disadvantaged backgrounds, can express their thoughts and challenges, allowing the school to quickly and effectively address their concerns*). The next step was to collate and code these terms into potential themes by reviewing the data.

Table 7 Examples of Code and Theme Categorization

Secondary Concept (Theme)	← Primary concept	← Initial code (participant's responses- selected)
Teaching and Support	Diversified Teaching	<i>More discussion-based and critical thinking classes.</i> <i>Use of diverse teaching methods (e.g., group collaboration, case analysis).</i>
	Multidimensional Evaluation Methods	<i>Incorporate alternative assessment methods and more practical assignments or projects. (e.g., project reports, oral presentations, teamwork).</i> <i>Exam results should be only a part of the overall evaluation, not the sole factor.</i>

By analyzing, decoding the content and the language used by participants, one can assess their attitudes and decision-making tendencies towards the educational problems. Additionally, qualitative analysis can further deepen the understanding of participants' thought processes. For example, participants may say, *"We need to establish a clear plan, with each department working together to build a solid foundation for success"*, the keywords of *"establish"* and *"build a solid foundation"* reflected the characteristics of the CONSTRUCTION frame. Furthermore, Multiple researchers independently conducted coding and compared results to minimize subjective judgment bias (Patton, 1999). Two doctoral students (Dr.Zhou and Dr. Yan) were involved in parallel adjustments and proofreading during the coding process. Dispersed or disputed coded statements were collectively discussed until all reviewers unanimously agreed on the classification results.

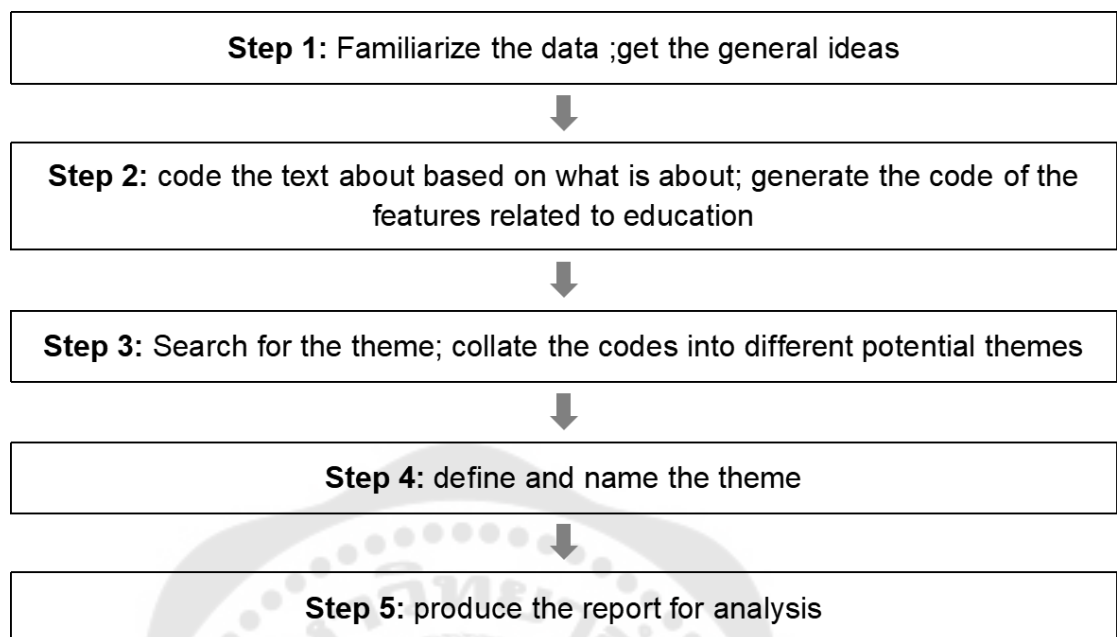


Figure 4 The steps of coding process

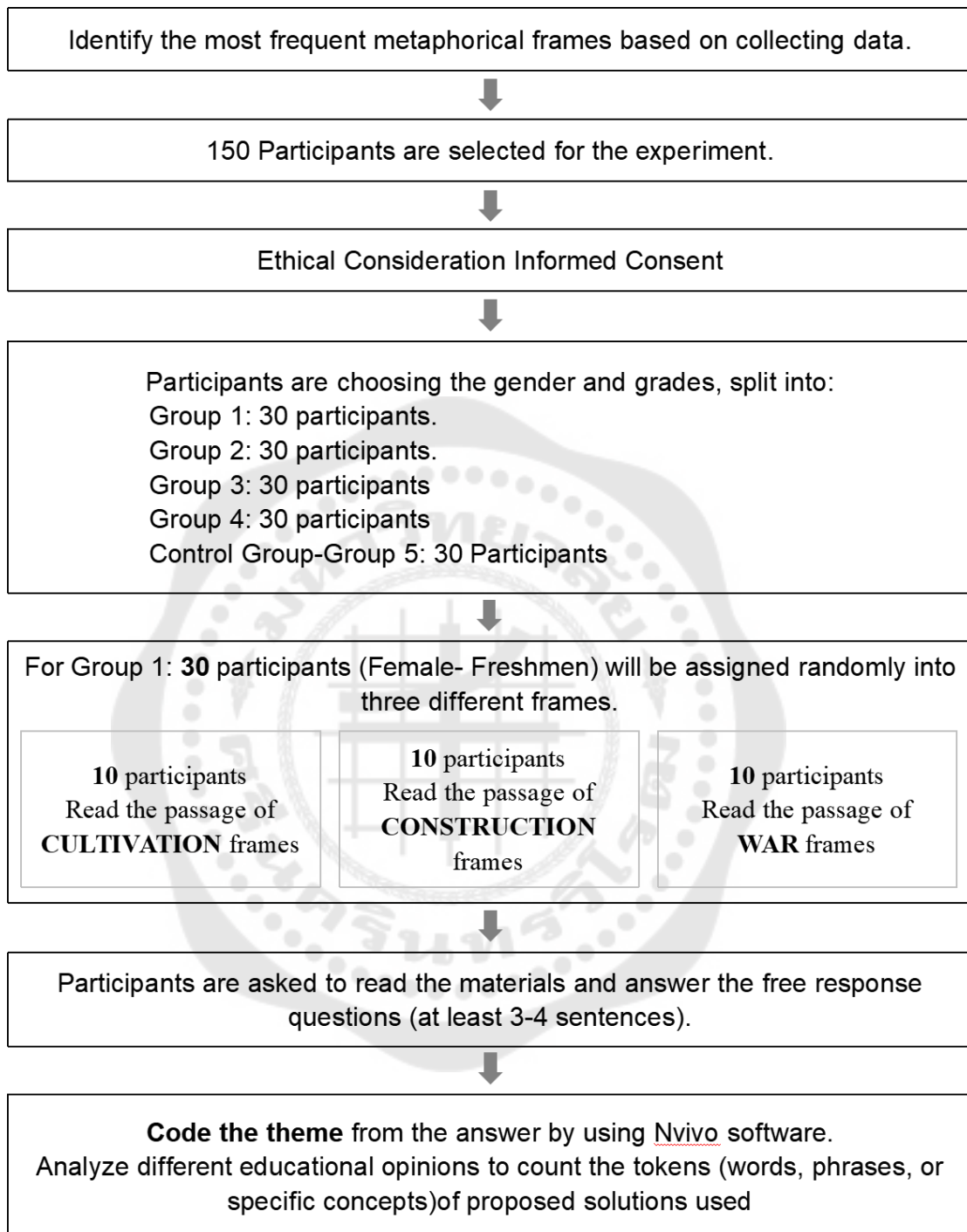


Figure 5 The Overview Process of Experiment

CHAPTER 4

RESULTS

This chapter presents the findings for both research questions. First, 4.1 to 4.2 presents the most commonly used educational metaphors in Chinese graduation speeches as well as the educational metaphors used by ten universities through both quantitative and qualitative analyses. Second, 4.3 to 4.5 examines how these metaphors influence students' reasoning and decision-making on educational issues, also focusing on the impact of three major metaphorical frames on Chinese college students of varying genders and educational levels.

4.1 Educational Metaphors in Chinese Commencement Speeches

To address the first research objective, the specialized corpus on Commencement Speeches revealed 13 distinct conceptual metaphors, each serving to reflect the metaphorical conceptualization of education. For each educational domain, specific metaphorical expressions and tokens were listed, along with the corresponding mappings that link the source domain to the target domain. Additionally, concrete examples were included to illustrate how these metaphors showed in the context of education, providing a clearer understanding of the metaphorical representations within the speeches. The rationale for selecting these examples in this section is that based on their frequency, significance, and clarity within the speeches. Furthermore, these examples were chosen because they are closely connected to fundamental elements of education, such as students and teachers' roles, teaching, learning, personal growth, and the teacher-student relationship. This comprehensive

approach allowed for a detailed examination of the diverse metaphors used to conceptualize education in Commencement Speeches.

4.1.1 EDUCATION IS CULTIVATION

The CULTIVATION metaphor is a fascinating concept, where elements from the botanical world such as flowers, grass, trees, and activities related to plant cultivation, are used to represent and understand abstract ideas in education. After the analysis on the corpus and comparison of literal and contextual meanings, 21 key expressions were identified as education-related concepts within the domain of CULTIVATION. Table 8 show key expressions with their Chinese translations, Pinyin transliterations, English equivalents, and the frequency of token use. The tokens are ranked in descending order, with frequencies ranging from 145 to 1, and a total of 408 occurrences.

Table 8 The Expressions, Tokens, and Mapping Structure of CULTIVATION Metaphor

Expression	Ping Ying	Translation	Tokens
培育, 培养	péi yù, péi yǎng	cultivate	145
成长	chéng zhǎng	grow up; growth	85
扎根	zhā gēn	take root	38
收获	shōu huò	gather in the crops; harvest	36
结果, 果实	jié guǒ, guǒ shí	fruit	22
成熟	chéng shú	ripe	12
树, 树苗	shù, shù miáo	trees, saplings	12
厚植	hòu zhí	plant	9
土地, 沃土	tǔ dì, wò tǔ	land, fertile soil	9
青涩	qīng sè	green and unripe	6

耕耘	gēng yún	plough and weed	5
种子	zhǒng zǐ	seed	5
花朵	huā duǒ	flower	4
生态	shēng tài	ecology	4
营养, 养分	yíng yǎng, yǎng fèn	nutrients	3
播种	bō zhòng	sow	3
萌芽, 发芽	méng yá; fā yá	bud	3
开花, 绽放, 盛开	kāi huā, zhàn fàng, shèng kāi	blossom, bloom	2
草	cǎo	grass	2
枝叶, 绿叶	zhī yè, lǜ yè	branches and leaves	2
苗圃	miáo pǔ	nursery garden	1
Total			408

Through the metaphor of EDUCATION IS CULTIVATION, we can draw the following mappings:

Source Domain:		Target Domain:
CULTIVATION		EDUCATION
gardener	→	teacher
nurturing/cultivating/sowing/weeding and ploughing	→	teaching process
growing/rooting/planting/budding	→	learning process

ripe/blossom/flower/harvest/ fruit	→	learning/teaching achievement of educated student
garden	→	school
seed/tree/sapling/grass/unripe	→	uneducated students
fertilizer/ nutrition	→	knowledge; resources and support
branches and Leaves	→	diverse skills and knowledge
land/fertile soil	→	learning environment
ecology	→	the overall educational system

The analysis of CULTIVATION metaphor can be conducted based on the stages of plant life cycle, including seed, germination, growth, maturity, and reproduction.

Within the context of plant growing environment, there are several key terms, including 生态 (ecology), "土地沃土" (fertile soil), and "苗圃" (nursery garden), showing the environment, nurturing space for plant. "种子" (seed), "播种" (sow); "萌芽, 发芽" (bud, germinate), representing the seeds initial growth spurt; "培育, 培养" (cultivate), "成长" (grow up; growth), "扎根" (take root), "厚植" (plant), "耕耘" (plough and weed), "青涩" (green and unripe), "枝叶, 绿叶" (branches and leaves), "营养, 养分" (nutrients), presenting the growth stage, with the focus on the development and nourishment of plant.

For the maturity and harvesting stage, "成熟" (ripe), "开花, 绽放, 盛开" (blossom, bloom), "花朵" (flower), "结果, 果实" (fruit), and "收获" (harvest), symbolizing the educational outcome; "草" (grass) and "树, 树苗" (trees, saplings), representing different plant life forms, and the spectrum of vegetation.

Just like the life cycle of plant, from seed to germination, growth, and fruition, education follows a similar path. It starts with basic learning, deeper understanding, and finally acquisition of knowledge and expertise. There is a vivid comparison between gardening and education, with gardening as a metaphor to explain the teaching and

learning process. It effectively maps the planting elements from the source domain of gardening onto the target domain of education, drawing analogies between gardeners and teachers, gardening activities and the pedagogical process, and gardens and educational institutions. With elements from the source domain (cultivating) to the target domain (educating process), there are comparisons between gardeners and teachers, gardening activities and teaching/learning process, gardens and schools, and various stages of plant growth to the educational journey of students. This analysis emphasizes the nurturing role of education, with which teachers (gardeners) impart knowledge (fertilizer/nutrition) to students (seeds/saplings/trees) and school (garden) provides fertile soil and land (learning environment and resources), aiming at learning achievements (fruit/flowers/blossom) and strong practical skills (branches and leaves) as teaching outcomes and results of educational efforts (harvest).

This metaphor reveals the strong connection between education and gardening: both require patience, care, and continuous effort for growth. Through these comparisons, readers could learn about the process-oriented and developmental nature of education, as well as its dependence on the environment. It also stresses the importance of a supportive and adaptable environment, whether in cultivating plants or nurturing students.

The following part presents four examples of education metaphors in the domain of CULTIVATION. This section presents four representative examples drawn from a larger corpus of Chinese university commencement speeches. These examples showcase a variety of metaphorical expressions that reflect both teachers' (Example 1) and students' (Example 2) perspectives in the educational process (Example 3).

These examples begin with the original Chinese version on the first line, followed by the Pin Yin transliteration version on the second line, and finally the word-for-word English translation in third line. The final line provides the English translation.

Example 1

钟扬	教授，	他	30	余年	从	教，
zhōng yáng	jiào shòu,	tā	30	yú nián	cóng	jiào,

Zhong Yang Professor, he 30 more years engage in Teaching,

不断 **播种** 着 国家 和 人类的 未来。
 bú duàn **bō zhòng** zhe guó jiā hé rén lèi de wèi lái。
 keep **sow** -ed country and mankind's Future.

Translation: Professor Zhong Yang, who has been teaching for more than 30 years, has continuously sown the future of the country and mankind.

Fudan University, 2018

Example 2

作为 学生, 汲取 复旦 百年 商科 的 **养分**;
 zuò wéi xué shēng, jí qǔ fù dàn bǎi nián shāng kē de **yǎng fèn**;
 As student, absorb fudan centennial business studies 's **nutrients**;

Translation: As a student, you have absorbed the nutrients of Fudans century-old business program.

Fudan University 2017

Example 3

学习的 创新 就 像 **花儿** 一样,
 xué xí de chuàng xīn jiù xiàng huā ér yí yàng,
 Learning Innovation is like flower alike,

一定 要 有 **种子** 在 黑暗期的 **萌芽**,
 yí dìng yào yǒu zhǒng zǐ zài hēi àn qī de méng yá,

definite must have **seed** in dark period 's **sprout**

小草 一样的 成长, 才有 **花朵** 的 盛开 和 绽放
 xiǎo cǎo yí yàng de Chéng zhǎng cái yǒu huā duǒ de shèng kāi hé zhàn fàng
grass like 's grow only have **flower** 's bloom and bloom

如果 急功近利 掐了 一朵 **花** 回家 第二天 就会 萎缩。
 rú guǒ jí gōng jìn lì qiā le yì duǒ **huā** huí jiā dì èr tiān jiù huì wěi suō。
 If quick success pinch a **flower** go home, the next day will be shrink.

Translation: *The innovation of learning is like a **flower**, there must be seeds in the dark period of germination, like the **growth of grass**, there is a flower **in full bloom**. If you want quick success, pinch a flower home, the next day will shrink.*

University of Science and Technology of China, 2015

As shown by Example 1, “播种”(sowing) typically referred to planting seeds by scattering them on or in the ground, anticipating the growth and yielding a rich harvest in the future. Metaphorically, it highlights Professor Zhong Yang's efforts in cultivating students over the past 30 years. Education is more than just knowledge transfer, and it is about providing students with tools and wisdom to grow and thrive. Additionally, it implied that a teacher not only imparts knowledge but also sowed seeds in students' hearts and minds, thereby laying the foundation for their future growth and contributions.

In Example 2, “养分” (nutrients) originally referred to substances that provide essential nourishment for the growth and maintenance of plants. “养分” (nutrients) represented the knowledge, skills, and experience gained in the academic and business fields, which contribute to students' growth and development. In this metaphor, students were compared to seedlings or seeds with vast potential and limitless possibilities for growth. It highlighted the importance of their natural development, while

also suggesting that they require the right environment and support to fully realize their potential.

In Example 3, various metaphorical expressions were used to explain the process and essence of learning in a simple way, just like the growth stages of plant. “花”(flower) was used to symbolize the innovations and ideas in learning process, while the germination “萌芽”of seeds in the dark period represented the initial aspiration and motivation for learning. In learning, having a genuine interest and motivation is equally crucial. Only with a passionate desire and thirst for knowledge can individuals build the momentum needed for sustained learning, and then embark on a meaningful journey of learning. Furthermore, the growth of grass and blooming of flowers symbolized the accumulation and consolidation of knowledge in the process of learning. Grasses, as primary producers, provided shelter and food for the growth of flowers. Without the unnoticed growth (grass), the moments of visible success or bloom (flowers) would not be possible. These metaphors highlighted the long-term nature and process of learning, reminding us that learning is not a single achievement but an ongoing journey that required patience and time to cultivate and develop. Success in learning, much like flowers, emerges gradually, built upon the quiet, steady progress that generally goes unseen.

4.1.2 EDUCATION IS CONSTRUCTION

Table 9 shows the metaphorical expressions identified in the Construction Metaphor, where literal meanings are compared with their contextual interpretations. A total of 15 key expressions, with a combined frequency of 199, have been identified. These expressions collectively illustrate the concept of EDUCATION IS CONSTRUCTION.

Table 9 The Expressions, Tokens, and Mapping Structure of CONSTRUCTION Metaphor

Expression	Ping Ying	Translation	Tokens
------------	-----------	-------------	--------

建立, 建设, 建成, 搭建, 创建, 搭建	jiàn lì; jiàn shè; jiàn chéng; dā jiàn; chuàng jiàn; dā jiàn	build; construct	82
基础、基石, 基底	jī chǔ; jī shí; jī dǐ	foundation, base	46
顶梁	dòng liáng	support beam	16
结构, 框架	jié gòu; kuàng jià	structure	12
平台	píng tái	platform	10
大门	dà mén	front door	7
桥梁, 桥	qiáo liáng; qiáo	bridge	7
柱、支撑、支柱	zhù ; zhī chēng; zhī zhù	support, pillar	6
筑塔	zhù tǎ	tower building	3
舞台	wǔ tái	stage	2
建设者, 建构者	jiàn shè zhě; jiàn gòu zhě	builder	2
空间	kōng jiān	inner space	2
楼梯	lóu tī	stairs	2
楼阁	lóu gé	pavilion	1
蓝图	lán tú	blueprint	1
Total			199

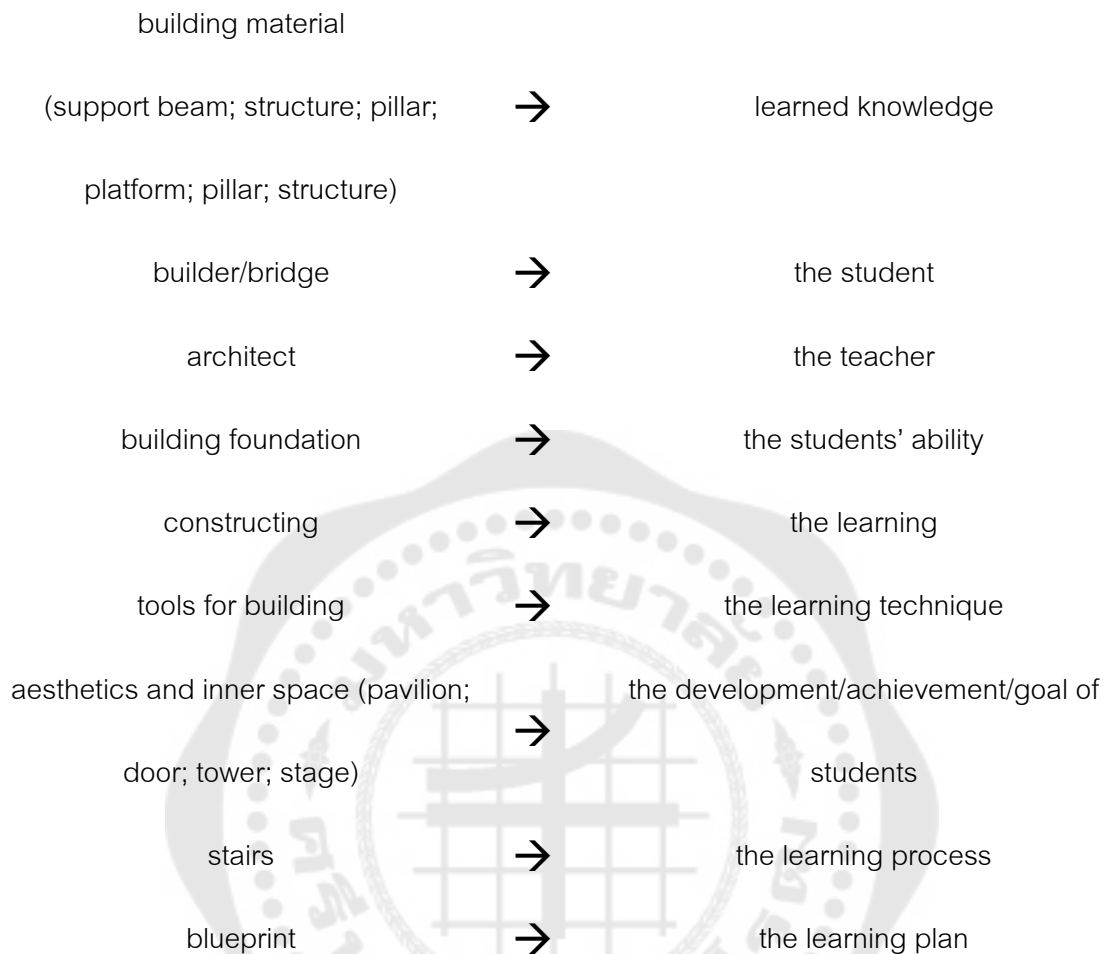
Source Domain:
CONSTRUCTION

schools' foundation



Target Domain:
EDUCATION

the base of running a school



The most commonly used metaphors in CONSTRUCTION domain involve “建” or “建立” (constructing) , with 82 mentions, while “基础”(foundations/base) with 46 times also ranked highly. Notably, “foundation” represents the beginning of educational development, while “constructing” relates to the process of learning. These metaphors provide a unique perspective on education, highlighting its structured, and step-by-step nature. Other expressions, such as “柱、支撑、支柱” (support, column), “结构”(structure) and “平台”(platform), emphasize the structural stability required for successful education.

Basing on the mapping structure, these metaphors can also be categorized into different stages of construction. Early planning, terms like “蓝图” (blueprint) represented the initial stages of education. Structural components, like “大门” (front doors), “桥梁”

(bridges), and “舞台” (stages) symbolized functional aspects, like access, support, and connection. Also, Visual and sensory experiences, such as “楼阁” (pavilions) and “空间” (spaces) represented the role of environment in learning.

Just as architects create blueprints and construct buildings with various spaces and functions, educators design the framework for learning, while students actively construct their own education. The materials (knowledge and skills) and the builders (students) symbolize how students build and expand their knowledge base under the guidance of educators. The following examples present the role of students, the learning process and school's developments under the CONSTRUCTION domain.

Example 4

留学生	代表	提到	要	在	学术
liú xué shēng	dài biǎo	tí dào	yào	zài	xué shù
international students	Representatives	mention	demand	in	academic
和	外交	领域	成为	中	塞
hé	wài jiāo	lǐng yù	Chéng wéi	zhōng	cè
and	diplomatic	field	become	China	Serbia
				友谊的	桥梁
				yǒu yì de	qiáo liáng
				friendship's	bridge

*The student representative becomes a **bridge** of friendship between China and Serbia in the academic and diplomatic fields.*

Fudan University, 2020

Example 5

“治学	如	筑	塔,	基础	须	广	大”。
“zhì xué	rú	zhù	tǎ,	jī chǔ	xū	guǎng	Dà”。
Pursue learning	like	building	tower,	foundation	must	broad	big

他 希望 学生 有 扎实的 **基础** 知识,
 tā xī wàng xué shēng yǒu zhā shí de jī chǔ zhī shí,
 Chen Daisun hope students have solid **foundation** knowledge

有 金字塔式 的 知识 结构。
 Yǒu jīn zì tǎ shì de zhī shí jié gòu。
 Have pyramidal 's knowledge structure.

"Learning is like building a tower, the foundation must be broad". Chen Daisun expects students to have a solid foundation and a pyramidal structure of knowledge.

(Chen Daisun was a literary scholar and educator at the turn of the Ming and Qing dynasties. He emphasized the fundamental and profound nature of learning in his educational views and academic thoughts.)

Peking University, 2020

Example 6

同学们, 你们 要 对 学校 改革 发展
 Tóngxué men, nǐ men yào duì xué xiào gǎi gé fā zhǎn
 Students, you should to school reform development

的 美好 **蓝图** 充满 信心,
 de měi hǎo **lán tú** Chōng mǎn xìn xīn,
 's beautiful **blueprint** Full confidence,

对 自己的 未来 充满 信心!
 duì zì jǐ de wèi lái chōng mǎn xìn xīn!
 to own future full confidence !

Students, you should be full of confidence in the beautiful blueprint of school reform and development, Full of confidence in your own future!

Wuhan University, 2020

In Example 4, "桥梁"(bridge) originally refers to a physical structure connecting two separate locations, enabling people to travel from one side to the other. Bridges, as critical components of infrastructure, connect divided areas and facilitate transport and communication. In this educational context, students were symbolized as a "*bridge*" to represent their role in facilitating understanding, cooperation, and connection between China and Serbia in both academic and diplomatic fields. Additionally, the architectural features of bridge, such as supporting piers, deck, and overall structure, offered additional metaphorical meanings. For instance, piers represented the unwavering support and determination to overcome linguistic and cultural barriers, political differences, and economic challenges in international exchanges.

There are 3 types of construction metaphors in Example 5, involving "筑塔"(building tower), "基础" (foundation) , "结构"(structure). Originally, "building tower", meaning the constructing activities of towers, was usually for a specific purpose, such as observation, and communication. Metaphorically, the "tower" represented the learning space and environment dedicated to study. The expression of "foundation", literally referring to the lowest load-bearing part of a building, symbolized the most fundamental and basic knowledge. For Chinese higher education, the foundation for college students involved not only a focus on learning of courses but also a broad exploration of knowledge in various fields. A pyramidal structure, typically defined as a monumental structure with a square or triangular base and sloping sides that converge to a point at the top, is a metaphor representing how learning and knowledge build upward, starting from fundamental principles and expanding toward more complex concepts.

The first sentence in Example 5 was a quotation by Chen Daisun, a renowned economist and educator. He argued that students were required to focus on the core courses and also those in related fields, including politics, history, philosophy,

psychology, and mathematics (Qiu, 2023). This suggested that just like constructing a tower on a broad base for stability and strength, students should first acquire a diverse range of foundational knowledge. On this basis, they would gradually deepen their explorations, and build a strong professional knowledge system. In this sense, the process of "building a tower" represented a layered approach to learning, and with a solid foundation, the structure of knowledge would grow upward and eventually come together, forming a stable and orderly hierarchy.

In Example 6, the term "蓝图"(blueprint) originally referred to the comprehensive process of planning, designing, and constructing buildings during the early stages. Metaphorically, it symbolized the visionary aspirations and educational strategies within the school, including educational philosophy, learning objectives, curriculum design, teaching methods, campus facilities. It contained the expectations for the future school's development, reflecting both confidence and anticipation for what is to come.

4.1.3 EDUCATION IS WAR

Regarding the metaphor of "EDUCATION IS WAR", there were 15 types of metaphorical expressions from the War domain, along with the corresponding Pinyin transliterations, English translations, and frequencies, as shown by Table 10. The total number of occurrences was 145 for these expressions.

Table 10 The Expressions, Tokens, and Mapping Structure of WAR Metaphor

Expression	Ping Ying	Translation	Frequency
奋战, 斗争, 抗争	fèn zhàn dòu zhēng, kàng zhēng	fight	62
变革, 改革, 革命	biàn gé; gǎi gé, gé mìng	reform, and revolution	17
战略	zhàn lüè	strategy	13
后盾	hòu dùn	backup force	10
战士, 生力军, 排头兵, 集团军	zhàn shì, shēng lì jūn, pái tóu bīng, jí tuán jūn	soldier	9

牺牲	xī shēng	sacrifice	7
捷报, 胜利, 告捷; 冠军; 桂冠	jié bào, shèng lì, gào jié; guàn jūn; guì guān	victory	7
前线, 战线, 一线	qián xiàn, zhàn xiàn, yī xiàn	front line	6
武器, 利器, 重器	wǔ qì, lì qì, zhòng qì	weapons	5
武装	wǔ zhuāng	armed forces	3
战袍	zhàn páo	coat armor	2
枪弹, 子弹	qiāng dàn, zǐ dàn	bullets	1
战场	zhàn chǎng	battlefield	1
军令状	jūn lìng zhuàng	military order	1
冲锋	chōng fēng	assault	1
Total			145

Source Domain:

WAR

Target Domain:

EDUCATION

warrior/soldier/force



students

battlefield/front line



classroom/learning environment

war/fight/conquer



learning/testing

defeated/victory



failure / achievement in learning

weapon/bullet



knowledge

coat armor



knowledge

backup shield



school

strategy	→	the school's goal
reform	→	the school's technique
sacrifice	→	the effort in learning
military order	→	teachers' instructions

As integral parts of education, WAR metaphors were widely used to represent the perception of struggle, conflict, and the process of overcoming challenges in the field of education. The most commonly and frequently used metaphor was "fight" (奋战, 斗争, 抗争), emphasizing the direct conflict and struggle in educational pursuits. There were other frequently used metaphors, such as "reform and revolution" (变革, 改革, 革命), representing the themes of ideological or structural change, reminiscent of military upheavals. "Strategy(战略)" highlighted the planned and tactical nature of educational endeavors. In this domain, students were compared to "warriors,(战士,生力军,排头兵,集团军)", who were active participants in the learning process. Classroom was viewed as "front line" (前线,战线,一线) and "battlefield" (战场) where knowledge was transmitted, with learning challenges. These metaphors were used to show that the locations of educational endeavors were influential, affecting the use of tactics and strategies, and outcomes, thus shaping the overall educational experience. Learning and preparing for exams were referred as "struggle, and conquest(战斗)", the metaphor for challenges in the field of education. Meanwhile, learning and information were also compared to tools and protective measures in academic pursuits, such as "weapons" and "arms" (武器,利器,重器), "battle attire" (战袍), and "bullets" (枪弹,子弹), while school, referred to as "backing forces,"(后盾) provided support and resources for students. With these metaphors, people could learn that learning is a dynamic and evolving process, and a journey of struggle, adaptation, and eventual transformation, with both hardships and accomplishments.

Example 7

你们 这 几年 在 学校的 学习、 追求、 探索
 nǐ mén zhè jǐ nián zài xué xiào de xué xí、 zhuī qiú、 tàn suǒ
 You in these years in School 's study, pursuit, exploration

和 奋斗, 你们 就是 南京大学 的 忠诚 **战士**
 hé fèn dòu, nǐ mén jiù shì nán jīng dà xué de zhōng chéng zhàn shì
 and Struggle, You are Nanjing University 's loyal **soldier**

Your study, pursuit, exploration and struggle have been witnessed in school in recent years; You are the loyal soldiers of Nanjing University.

Nanjing University, 2015

Example 8

今天, 你们 每一个人 都 穿上了 以 紫色 打底、
 Jīn tiān, nǐ men měi yí gè rén dōu chuān shàng le yǐ zǐ sè dǎ dǐ、
 Today you everyone all wear as purple background,

以 紫荆花 丁香花 装饰的 新 版 学位服,
 yǐ zǐ jīng huā dīng xiāng huā zhuāng shì xīn bǎn xué wèi fú,
 as Chinese redbud lilac decorative new version degree uniform,

同学们 说 这是 学校的 给 大家
 tóng xué men shuō zhè shì xué xiào de gěi dà jiā
 Students say it is school 's for all

披上

紫荆

战袍。

pī shàng

zǐ jīng

zhàn páo。

dress

the redbud

coat armor.

Today, each of you is wearing a new version of the degree uniform decorated with purple background and lilacs, which students say is the "purple robe" put on by the school.

Tsinghua University, 2021

Example 9

你们的 老师, 还有 学校的 许多 工作 人员

nǐ mén de lǎo shī, hái yǒu xué xiào de xǔ duō gōng zuò rén yuán

Your teachers, and the school's many working staff

都 全力以赴, 为 大家 提供 温暖 和 守护,

dōu quán lì yǐ fù wéi dà jiā tí gōng wēn nuǎn hé shǒu hù,

are whole effort to out for everyone provide warmth and protection,

做 好 坚强 的 后盾。

zuò hǎo jiāng qiáng de hòu dùn。

as good strongn 's *backing shield.*

Your parents, teachers and many staff members of the university have done their best to provide you with warmth and protection, and do a strong backing shield.

Peking University, 2023

In these examples, metaphors related to war were employed to illustrate students' academic experiences and the assistance provided by educational institutions.

In Example 7, "忠诚战士"(loyal warriors) was used to describe students at Nanjing University. By using this metaphor, students, with their mission to the university, were compared to soldiers. In addition, there were also descriptions on students' hard work, perseverance, and commitment to both academic and personal development. With resilience and loyalty, students could navigate and overcome challenges throughout the whole educational journey.

In Example 8, the metaphor of "紫荆战袍" (Redbud battle robe) was chosen to show the academic gown of students from Tsinghua University. This comparison equated the battle robe to a soldier's armor, symbolizing students' bravery, determination, and preparedness to tackle academic challenges. The purple hue and the Chinese Redbud flower, representing Tsinghua's unique spirit and cultural identity, infuse the metaphor with a sense of pride and tradition. It also reflected these students' role as future leaders and bearers of enduring values for the university.

In Example 9, the term "后盾" (backup shield) was used metaphorically to represent the security, support, encouragement, and protection provided by the school, teachers, and staff members. Throughout the pandemic, teachers and staff members provide academic support, and also crucial emotional and social assistance to students, thereby ensuring their success in spite of the challenging times.

These metaphors, drawing on military imagery such as warriors, battle robes, and backup forces, present the educational journey as a series of challenges that require strength, determination, and strategic effort. There were also highlights about the value of student resilience, the crucial support provided by the institution, and the enduring spirit of struggle and achievement.

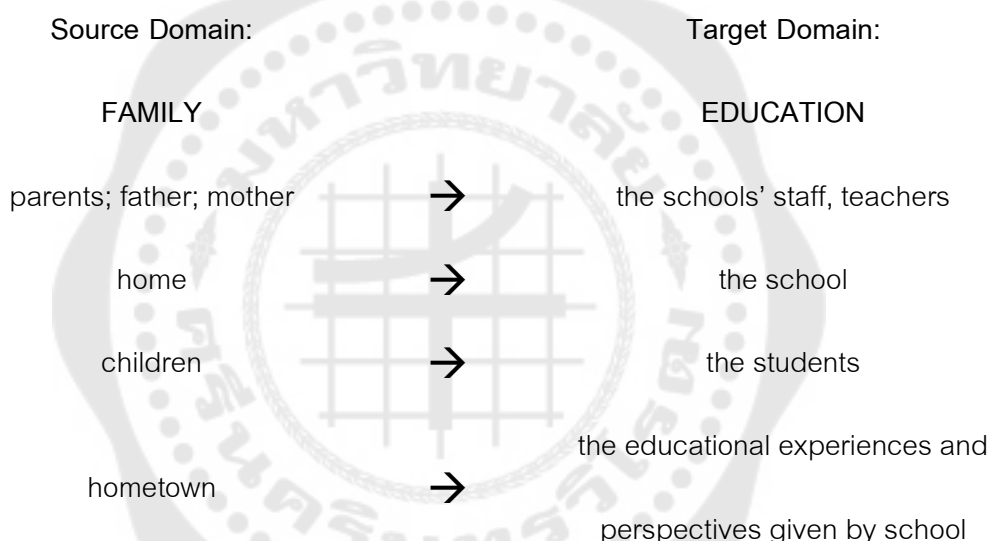
4.1.4 EDUCATION IS FAMILY

The following table 11 and figure illustrated the expression, translation and frequency, as well as the mapping structure of EDUCATION IS A FAMILY in speeches.

Table 11 The Expressions, Tokens, and Mapping Structure of FAMILY Metaphor

Expression	Ping Ying	Translation	Tokens
------------	-----------	-------------	--------

父母、父亲与母亲	fù mǔ, fù qīn yǔ mǔ qīn	parents, father and mother	147
家, 家园	Jiā, jiā yuán	family; home	109
孩子, 孩子们	Hái zǐ, hái zǐ men	child; children	11
故乡, 故里	gù xiāng, gù lǐ	hometown	4
Total			271



The expression frequently used, "父母, 父亲与母亲" (parents, father and mother), portrayed the school as a strict yet nurturing parent. This reflected an educational philosophy by combining discipline and guidance with care and support. Another expression commonly seen, "家, 家园" (family; home), referred to the school that offers foundational support, care, and values essential for students' growth. The school was shown as the first place of learning and emotional development. The term "孩子, 孩子们" (child; children) was specifically used to show that students were members of the school. Additionally, "故乡, 故里" (hometown) suggested that the school was the birthplace of students' personal growth. This metaphor conveyed the idea that the school holds a

special place in students' minds, much like a hometown, symbolizing emotional connections, cherished memories, and a sense of identity tied to the school.

The 271 references to these terms highlighted their central role and importance. The focus on family, home, origins, and education reflected deeply held cultural values within Chinese higher education. It also underscored the importance of nurturing, belonging, and personal development in this context.

The following lists the example of FAMILY metaphor:

Example 10

清华	永远	是	你们	温暖的	家。
qīng huá	yǒng yuǎn	shì	nǐ mén	wēn nuǎn de	jiā。
Tsinghua	always	is	your	warm	home.

欢迎	你们	随时	回家
huān yíng	nǐ mén	suí shí	huí jiā
Welcome	you	anytime	back home

Tsinghua will always be a warm home for you. You are welcome to come home anytime.

Tsinghua University, 2015

Example 11

你们	将	成为	<u>母校</u>	永远的	牵挂，
nǐ mén	jiāng	chéng wéi	<u>mǔ xiào</u>	yǒng yuǎn de	qiān guà,
You	will	be	<u>mother school</u>	forever	concern,

而	母校	也	将	成为	你们	永远的	<u>故乡。</u>
ér	mǔ xiào	yě	jiāng	chéng wéi	nǐ mén	yǒng yuǎn de	<u>gù xiāng</u>

and mother school also will become your forever hometown

You will become the eternal attachment of your alma mater, and your alma mater will become your eternal hometown.

Shanghai Jiao Tong University, 2020

Example 12

母 校 将 永 远 站 在 你 们 身 后 ,
mǔ xiào jiāng yǒng yuǎn zhàn zài nǐ mén shēn hòu ,
Mother school will always stand in you behind,

犹 如 父 母 送 别 长 大 的 孩 子 一 样 ,
yóu rú fù mǔ sòng bié zhǎng dà de hái zǐ yí yàng ,
like *parents* farewell grown 's *child* same

Your Alma mater will always stand behind you, just as parents bid farewell to their children who have grown up.

Peking University, 2013

In Example 10, "home"(家) was just a physical place, but referred to the emotional connection and sense of security that the school offered for students. The school, described as a "warm home," provided educational opportunities and also emotional support, spiritual comfort, and a space for personal growth.

There was profound cultural and emotional significance, with the comparison of the school to a "hometown"(故乡) (Example 11). The school was a foundation for students' self-identity and a sense of emotional belonging, just as how a hometown shaped an individual's culture and values. Also, it played a pivotal role in students' life journey, functioning as a space for personal development and a hub of social and intellectual opportunities. This metaphor highlighted the school's enduring impact on students' lives, both emotionally and intellectually.

In Example 12, Peking University was portrayed as "alma mater," with students referred to as "children of the university" and classmates as "brothers and sisters." This emphasized the strong, familial connection between institution and students. Teachers were not just educators responsible for imparting knowledge, but also mentors and motivators who guide students on their journey of personal growth. The school, as a whole, fostered a sense of community, while encouraging students to support and uplift one another in the whole process.

4.1.5 EDUCATION IS NATURE

The expressions drew on natural elements and imagery, including stars, wind, weather, peaks, clouds, the sky, waves, and landscapes. Collectively, these terms appeared 50 times, reflecting their significance in the context described.

Table 12 The Expressions, Tokens, and Mapping Structure of NATURE Metaphor

Expression	Ping Ying	Translation	Tokens
风	fēng	wind	13
云, 云端	yún, yún duān	cloud	13
星	xīng	Star	9
高峰	gāo fēng	peak	8
浪	làng	wave	3
空中	kōng zhōng	in the sky	2
气象	qì xiàng	weather	1
风景	fēng jǐng	landscape	1
Total			50

Source Domain:		Target Domain:
NATURAL ELEMENT		EDUCATION
Star	→	students
wind	→	the school's values/motto
weather	→	the school learning vigor and environment
peak of the mountain	→	the academic achievement
cloud	→	online classroom during covid-19 outbreak
in the sky	→	online classroom during covid-19 outbreak
wave	→	students
landscape	→	the development opportunities in school

Among metaphors related to natural phenomena and elements, the most commonly used terms were "wind (风)" and "clouds (云)," each appearing 13 times. These metaphors symbolized the widespread influence of a school's values and the transformative impact of the online learning environment, emphasizing the dynamic and nurturing qualities of education. The term "star (星)" also played a significant role, representing students' dreams and goals, and underscoring the importance of individuality and the guiding role of education. Among geographical features, "peak (高峰)" emerged as a symbol of academic excellence, inspiring both students and teachers to strive for the highest levels of achievement. The least used terms were "weather (气象)" and "landscape (风景)," each mentioned only once. "Weather" reflected the constantly evolving nature of the learning environment, while "landscape" symbolized the diverse opportunities for growth and development provided by educational institutions.

Overall, the metaphorical use of natural elements and geographical features highlighted the dynamic, nurturing, and interconnected essence of education. It

portrayed education as a process full of potential and diverse opportunities for growth, emphasizing its transformative and multifaceted nature.

Example 13

四年来，同学们传承了科大严谨务实、
 sì nián lái, tóng xué men chuán chéng le kē dà yán jǐn wù shí、
 Four year since, students inherit USTC rigorous Pragmatic、

勤奋治学的校风和学风。
 qín fèn zhì xué de Xiào fēng hé xué fēng。
 rigorous pragmatic diligent academic 's school wind and study wind.

In the past four years, the students have inherited the school spirit and academic style of HKUST, which is rigorous, pragmatic and diligent in academic research.

University of Science and Technology of China, 2014

Example 14

每个科大人都是一颗闪亮的星，
 měi ge kē dà rén dōu shì yì kē shǎn liàngde xīng,
 Everyone USTC people all is a Shining Star

共同组成中国科大的星云璀璨。
 gòng tóng zǔ chéng Zhōng guó kē dà de xīngyún cuǐ càn。
 together form ustc 's nebula Bright.

Each of you at USTC is a shining star. The nebula that makes up USTC is brilliant.

University of Science and Technology of China, 2018

Example 15

毕业生	共同	迎接	这场	“云答辩”	“云面试”
bì yè shēng	gòng tóng	yíng jiē	zhè chǎng	“yún dá biàn”	“yún miàn shì”
Graduates	together	welcome	this	"cloud defense",	"cloud interview"

“云毕业”。

“yún bì yè”。

"cloud graduation".

Graduates will welcome the "cloud graduation" "cloud defense", "cloud interview" and "cloud graduation".

University of Science and Technology of China, 2020

In Example 13, as compared to the "wind" (风), the academic mottos and school spirit were described as "rigorous, pragmatic, and diligent". This metaphor showed how these core values flow through every aspect of the university, deeply influencing its students. The image of wind highlighted how these principles, though intangible, had a powerful and far-reaching effect on the school community, finally shaping students' attitudes and actions. Wind also symbolized flexibility, adaptability, and continuous movement, representing the ongoing evolution of education. By comparing the school's spirit to the wind, the metaphor encouraged to embrace innovation, stay adaptable, and follow the trends of a changing world.

In Example 14, USTC students were referred to as "shining stars"(闪亮的星), and the community was compared to a "nebula," a cluster of stars form something brilliant and radiant. The metaphor of "stars" highlighted the unique potential and talent of each student, suggesting that while challenges may arise, their inner strength and abilities remain intact. Stars also represented guidance, dreams, and aspirations, with each student following their own path while collectively adding to the university's overall brilliance. In these expressions, each individual, like a star, shined in their own way,

contributing to the university's vitality and success. The metaphor emphasized students' role in shaping the institution's identity and future, with their personal achievements and their collective influence.

In Example 15, the "cloud"(云) metaphor captured how technology rapidly integrated into education, particularly during the COVID-19 pandemic when online learning became essential. Phrases like "cloud defense," "cloud interview," and "cloud graduation" represented the shift of traditional academic activities to virtual platforms. These metaphors highlighted the flexibility, accessibility, and innovative nature of online education, allowing learning to take place anytime, anywhere, and for anyone. By leveraging cloud technology, these practices challenged conventional educational structures and methods, encouraging a rethinking of how education could evolve in the digital era. The "cloud" metaphor underscored themes of innovation, inclusivity, and transformation, illustrating how education adapted to meet the demands of modern technology.

4.1.6 EDUCATION IS A JOURNEY

The JOURNEY metaphor in education serves as a powerful conceptual tool, depicting learning as a voyage of discovery. As shown in Table 13, there was a list of various journey-related expressions found in Chinese commencement speeches. These expressions can be categorized as follows.

Table 13 The Expressions, Tokens, and Mapping Structure of JOURNEY metaphor

Expression	Ping Ying	Translation	frequency
走, 前行	zǒu, qián xíng	walk, go forward	52
路, 道路	lù, dào lù	road	17
旅程, 征程, 历程	lǚ chéng, zhēng chéng, lì chéng	journey	8
步子, 一步	bù zǐ, yì bù	step	4

足迹	zú jì	footprint	1
Total			82

Source Domain:

JOURNEY

Target Domain:

EDUCATION

walking	→	the learning process
road	→	the objectives/directions of learning
journey	→	the educational experience
step	→	the students' efforts in learning process
footprint	→	the progress and achievement in learning

The most commonly used metaphor was "walk, go forward (走, 前行)," which emphasized progress and forward movement in the contexts of teaching, learning, and personal development. The term "road (路, 道路)" ranked second, symbolizing the direction of learning along the educational journey. The metaphor "journey (旅程, 征程, 历程)" appeared eight times in the collected speeches, referring to the entire learning process, from start to finish. Although this journey was filled with challenges and difficulties, it also led to significant growth and achievements. Additionally, the expression "step (步子, 一步)" represented the accumulation of small progress, encouraging students to make gradual breakthroughs. The term "footprint (足迹)" appeared the least frequently and symbolized the lasting impact or mark left along the journey. Overall, these metaphors emphasized growth, exploration, and the transformative nature of education.

Example 16

时龄	院士	几十年	如	一日	坚守	教学
shí líng	yuàn shì	jǐ shí nián	rú	yí rì	jiān shǒu	jiào xué
Shi Ling	academician	decades	like	day	stick to	teaching

一线,	走	在	学术	前沿
Yì xiàn,	zǒu	zài	xué shù	qián yán
first line,	walk	at	academic	front

*The academician has been sticking to the teaching line for decades and **walking** in the academic frontier.*

Tongji University, 2014

Example 17

你们	扎扎实实	走	好	每	一	步	也	要	将	步子
nǐ mén	zhā zhā shí shí	zǒu	hǎo	měi	yì	bù	yě	yào	jiāng	bù zǐ
	down-to-earth									
You		walk	well	every	one	step	also	need	take	step
	manner									

迈得	更	稳	一些,	基础	打得	更	扎实	一些,
mài dé	gèng	wěn	wěn yì xiē,	jī chǔ	dǎ dé	gèng	zhā shí	wěn yì xiē.
stride	more	steadily	some,	lay	more	more	solidly	some.

You must walk each step solidly and firmly, also ensuring that each **step** is taken even more steadily, laying the foundation even more solidly.

Peking University, 2013

Example 18

清华	大学的	发展	历程,	是	我国	高等
qīng huá	dà xué de	fā zhǎn	lì chéng,	shì	wǒ guó	gāo děng
Tsinghua	University's	development	journey,	is	our country	higher

教育	发展	的	一个	生动	缩影。
jiào yù	fā zhǎn	de	yí gè	shēng dòng	suō yǐng。
education	development	's	a	vivid	epitome.

The development journey of Tsinghua University is a vivid epitome of the development of higher education in our country.

Tsinghua University, 2022

In Example 16, the term "走" (walk) was used to vividly illustrate Academician Shi Ling's unwavering dedication to teaching and academic progress over more than seven decades. It captured his relentless journey in the pursuit of cutting-edge knowledge and technological advancements, portraying him as a constant presence at the forefront of scholarly research. His enduring curiosity and innovative spirit remained sharp, symbolizing his ability to adapt, evolve, and inspire, much like a tireless traveler always in search of new horizons.

In Example 17, the metaphor of "each step" (步子) symbolized the gradual progress and growth in students' careers, studies, or life, emphasizing the importance of steady and steady advancement. The sentence highlighted the value of establishing a strong foundation, advancing incrementally, and making consistent progress toward more significant achievements. This metaphor suggested that students should prioritize mastering the fundamentals, making continuous, small improvements, an approach showing the educational philosophy of Chinese universities, focusing on fostering solid academic foundations and well-rounded development.

In Example 18, the metaphor of "journey" (历程) was used to describe the developmental trajectory of Tsinghua University. The term "journey" represented the institution's long and ongoing process of growth, challenges, and accomplishments. It symbolized the university's evolution through various stages, marked by academic innovation and significant societal contributions. This metaphor highlighted not only the

continuity and complexity of Tsinghua University's history but also its pivotal role in the broader context of China's higher education development.

4.1.1.7 EDUCATION IS AN OBJECT

As shown by the table 14, there was a collection of 12 distinct object expressions relevant to the educational context, with a total frequency of 16. Based on the expression table and the symbolic meaning, it can integrate these expressions and symbolic meanings into a larger framework to reflect students' learning and growth process, and the school's development and roles in education.

Table 14 The Expressions, Tokens, and Mapping Structure of OBJECT Metaphor

Expression	Ping Ying	Translation	Tokens
标签	qiān biāo	label	3
画卷	huà juǎn	scroll painting	2
摇篮	yáo lán	cradle	2
尺子	chǐ zi	ruler	1
工具箱	gōng jù xiāng	tool kit	1
红旗	hóng qí	red flag	1
镜子	jìng zi	mirror	1
温床	wēn chuáng	hotbed	1
指南针	zhǐ nán zhēn	compass	1
书	shū	book	1
拼图	pīn tú	jigsaw	1
名片	míng piàn	business card	1

Total			16
-------	--	--	----

Source Domain:		Target Domain:
OBJECT		EDUCATION
label	→	the evaluation method for students
scroll painting	→	the schools' development process
cradle	→	the dream of students
ruler	→	the quality assessment for students
tool kit	→	the skills, strategies, methods, or resources in learning
red flag	→	the quality assessment for students
mirror	→	the schools' development
hotbed	→	the disadvantageous learning environment
compass	→	the guidance and direction in the educational process
book	→	the history, vision of school development
jigsaw	→	the learning strategy
business card		the credentials and qualifications of students

"摇篮 (cradle)," as the most engaging and frequently used metaphor, symbolized the beginning of students' aspirations and dreams. With the school learning opportunities, students could recognize, expand, and enhance their knowledge. Object

metaphors, such as "地图 (map)," "指南针 (compass)," "工具箱 (tool kit)," "拼图 (jigsaw)," and "钥匙 (key)," emphasized effective learning strategies, knowledge exploration, innovative thinking, problem-solving skills, and the availability of learning resources. These phases focused on evaluating students' learning progress and achievements to ensure educational quality. Other object metaphors, such as "尺子 (ruler)" and "标签 (label)," metaphorically refer to assessing students' learning outcomes. Items like "名片 (card)" highlight the presentation and recognition of students' academic accomplishments. Additionally, metaphors such as "镜子 (mirror)," "书 (book)," or "红旗 (red flag)", reflected the ongoing development of the school in terms of infrastructure, educational content, teaching methods, and culture.

Here presents some examples for OBJECT metaphors:

Example 19

相信	你们	对于	素质测评	的	质疑,	思考	的
xiāng xìn	nǐ mén	duì yú	sù zhì cè píng	de	zhì yí,	sī kǎo	de
Believe	your	about	The quality		's	question	think
			assessment				's

不只	是	如何	用	一把	尺子	公平地	评价	学生
bù zhǐ	shì	rú hé	yòng	yì bǎ	chǐ zǐ	gōng píng dì	píng jià	xué shēng
not just	is	how	use	a	ruler	fairly	evaluate	students

I believe that your question about quality assessment, which is not the only way on how to use a ruler to evaluate students fairly.

Tsinghua University, 2014

Example 20

自从	我们	进入了	哈工大,	哈工大	这个
zì cóng	wǒ mén	jìn rù le	hā gōng dà,	hā gōng dà	zhè ge

Since we entered Harbin Institute of Technology, HIT this

品牌 和 标签 就贴 在了 我们的 身上。
pǐn pái hé biāo qiān jiù tiē zài le wǒ mén de shēn shàng。
brand and label attach in our body

哈工大 这块 金字 标签 会 给 我们 带来 荣誉、
hā gōng dà zhè kuà jīn zì biāo qiān huì gěi wǒ mén dài lái róng yù、
HIT this golden label will us we Bring honor

带来 机会、 带来 很多 很多 有利的 条件。
dài lái jī huì、 dài lái hěn duō hěn duō yǒu lì de tiáo jiàn。
bring opportunity, bring many many favorable conditions.

Since we entered Harbin Institute of Technology, the brand and label of Harbin Institute of Technology have been attached to us. This prestigious label of Harbin Institute of Technology will bring us honor, opportunities, and many advantageous conditions.

Harbin Institute of Technology, 2017

Example 21

清华 新 百年 的 美好 画卷 正 徐徐 展开。
qīnghuá xīn bǎi nián de měi hǎo huà juǎn zhèng xú xú zhǎn kāi。
Tsinghua new century 's beautiful picture scroll being slowly unfold

Tsinghua University's beautiful scroll of a new century is gradually unfolding.

Tsinghua University, 2018

In Example 19, the phrase "一把尺子" (a single ruler) metaphorically represented "a standard or criterion for measuring students." It highlighted issues within traditional Chinese educational concepts, such as the overemphasis on test scores and college entrance rates, which often overlooked students' overall development and individual differences. Modern education, however, argued that this one-size-fits-all approach should be abandoned in favor of diversified assessment methods that took students' holistic growth and unique characteristics into account. Therefore, the ruler metaphor conveyed the idea that assessments should be varied and individualized, moving away from an over-reliance on test scores.

The term "标签 (label)" in Example 20 not only symbolized the identity and affiliation with the institution but also reflected the school's esteemed reputation and influence, akin to a "golden label." However, the term "label" could also lead to stereotyping, causing one to overlook the diverse characteristics and individual differences of groups or individuals. In educational and social contexts, it was emphasized that over-reliance on labels should be avoided. There was a need to maintain space for independent thinking and personal development, ensuring that students were not confined or defined by labels. Only by doing so could students truly evolve into independent, thoughtful, and creative individuals.

In Example 21, the development of Tsinghua University was compared to a painting, reflecting its unique history, culture, and achievements. As the university continuously promoted educational and teaching reforms, strengthened scientific research and innovation, and cultivated high-quality talent, it made significant contributions to the development of society and the nation. The beautiful picture and scroll of Tsinghua's new century gradually unfolded, becoming increasingly magnificent.

4.1.8 EDUCATION IS A HUMAN BODY

The human body metaphor, as the name suggests, involves conceptualizing abstract ideas as tangible, living components of the body. The accompanying table 15 illustrated the prevalence of metaphors related to essential human body parts in

Chinese commencement speeches, particularly in educational contexts. It categorizes six different types of educational expressions using HUMAN BODY metaphors:

Table 15 The Expressions, Tokens, and Mapping Structure of HUMAN BODY Metaphor

Expression	Pīng Yīng	Translation	Tokens
血液, 血脉	xuè yè, xuè mài	blood	11
脊梁, 脊骨	jǐ liáng, jǐ gǔ	backbone	6
心	xīn	heart	5
基因	jī yīn	gene	2
唇	chún	lip	2
齿	chǐ	tooth	2
Total			28

Source Domain:

HUMAN BODY

Target Domain:

EDUCATION

fresh blood



the teacher's dedication

backbone



the student

heart



the students' learning enthusiasm

gene



the core principles, values of school

lip



the teacher/school

teeth



the student

These metaphors were employed with varying frequencies, ranging from 2 to 11 instances, totaling 28 occurrences. The most frequently used metaphor was "血液, 血脉" (blood), symbolizing the dedication of teachers and the life-sustaining role of

education. This was followed by "脊梁, 脊骨" (backbone), representing students' abilities and symbolizing the core support structure, and "心" (heart), which was associated with the school's goals and their central importance. The metaphors "基因" (gene), referring to the school's values and principles as inherited traits, "唇" (lip), and "齿" (tooth), which represented the complementary and cooperative roles of teachers and students, appeared less frequently but still held significant presence in the speeches discussing education. These metaphors imbued educational components with a life-like quality, emphasizing their critical and interdependent roles, much like the parts of a living organism.

Example 22

大学	是	探索	高深	学问	的	场所;
dà xué	shì	tàn suǒ	gāo shēn	xué wèn	de	chǎng suǒ;
University	is	explore	advanced	knowledge	's	place
也	是	担负	社会	责任的		脊梁,
yě	shì	dān fù	shè huì	zé rèn de		jǐ liáng,
also	is	take	social	responsibility		Backbone,

University is not only a place to explore advanced knowledge; They are also the backbone of social responsibility.

Peking University, 2013

Example 23

学校	和	校友	就是	唇齿	相依、	唇亡
xué xiào	hé	Xiào yǒu	Jiù shì	Chún chǐ	xiāng yī、	chún wáng

School and alumni are **lips teeth** together, **lips** dead

齿 寒 的 关系。

chǐ hán de guān xi

teeth cold 's relation.

*The university and its alumni are as close as **lips and teeth**.*

Tongji University, 2015

Example 24

校 训 是 复 旦 人 的 文 化 **基因**，

xiào xùn shì fù dàn rén de wén huà jī yīn,

school motto is Fudan people 's culture **gene**

指引着 我们的 行动 表型。

zhǐ yǐn zhe wǒ men de xíng dòng biǎo xíng。

guide our action phenotype.

The school motto is the **cultural gene** of Fudan people, guiding our action and behavior.

Fudan University, 2022

The term "脊梁"(backbone), in Example 21, traditionally referred to "the spine, which constituted the central framework of the human skeleton". This metaphor drew a parallel between the spine's function in supporting the body and a university's essential role in fulfilling societal and educational obligations. Just as the backbone provided structural integrity and stability to the human body, a university was depicted as the "backbone" of society and education system. Here, the university is framed as the backbone, symbolizing its responsibility to uphold and advance societal development.

Through the cultivation of knowledge, scientific inquiry, and the nurturing of responsible citizens, universities serve as foundational institutions that support the moral and intellectual framework of society. The metaphor highlighted the critical and irreplaceable contribution of universities in shaping societal growth and evolution.

In Example 23, the metaphor of "lips and teeth (唇齿)" portrayed the school as the "lips" and the alumni as the "teeth." The phrase "As close as lips and teeth" conveyed a profound interdependence and mutual support between the institution and its graduates. The school nurtured and educated students, while alumni, in turn, enhanced the university's reputation and contributed to its development. This metaphor underscored the reciprocal relationship that benefited both entities, illustrating how the university's success was deeply connected to the accomplishments of its alumni.

The concept of a "cultural gene (基因)" in Example 24 referred to the role of a university's motto in shaping its cultural heritage and development. Similar to genetic traits that are inherited across generations, the values and spirit in the school motto were transmitted to students, shaping their behavior and attitudes. For Fudan University, the motto represented the foundation of its cultural identity, molding the values of its community and exerting a lasting, stable influence on future generations. This metaphor highlighted the enduring and transformative power of institutional values in fostering a shared identity and legacy.

4.1.9 EDUCATION IS AN ECONOMY

As shown by the Table 16 below, there is a list of 5 types of metaphorical expressions found in Chinese commencement speeches, focusing on ECONOMY metaphors.

Table 16 The Expressions, Tokens, and Mapping Structure of ECONOMY Metaphor

Expression	Ping Yīng	Translation	frequency
财富	cáifù	wealth	12
品牌	pǐnpái	brand	6

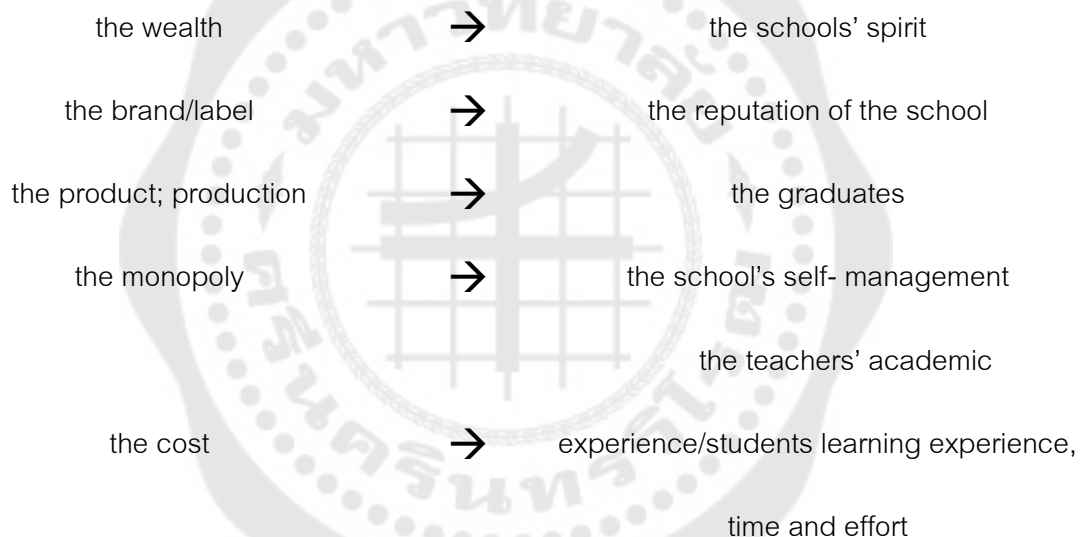
产品; 生产; 产出; 产物	chǎnpǐn; shēngchǎn; chǎnchū; chǎnwù	product; production	3
垄断	lǒngduàn	monopoly	1
成本	chéng běn	cost	1
Total			23

Source Domain:

Target Domain:

ECONOMY

EDUCATION



The most frequently used metaphor was "wealth (财富)," which represented the spirit or culture of the university. This encompassed not only knowledge and academic achievements but also the values, traditions, and sense of community that deeply influenced students' overall development and sense of belonging. Following this, "brand (品牌)" symbolized the school's reputation, while "product (产品)" was equated with graduates, underscoring the goal of education to cultivate talents that meet societal needs. The term "monopoly (垄断)" illustrated the influence and control a school exerted over educational quality, standards, and students' future opportunities, acknowledging that such control could have both positive and negative implications. Lastly, "cost (成

本)" referred not only to financial aspects but also to the time, effort, and expertise invested by teachers and students, emphasizing the critical role of these investments in ensuring the quality of student learning outcomes.

Example 25

大学	已经	不再	能够	垄断	知识
dà xué	yǐ jīng	bú zài	néng gòu	lǒng duàn	zhī shí
Universities	have	no longer	able	monopolize	knowledge

Universities can no longer monopolize knowledge.

Peking University, 2016

Example 26

好	老师,	是	学校	的	珍宝;
hǎo	lǎo shī,	shì	xué xiào	de	zhēn bǎo;
Food	teacher,	is	school	's	treasure;
他们的	探究	精神	和	创新	热情,
tā men de	tàn jiū	jīng shén	hé	chuàng xīn	rè qíng,
Their	inquiry	spirit	and	innovative	Enthusiasm,
更	是	复旦	人	宝贵的	精神 财富。
gèng	shì	fù dàn	rén	bǎo guì de	jīng shén cái fù.
even	is	Fudan	people	precious	spiritual wealth.

Those good teachers, is the treasure of the school; Their spirit of inquiry and enthusiasm for innovation are the precious spiritual wealth of Fudan people.

Fudan University 2017

Example 27

我们	为	数	年	的	辛勤	劳作
wǒ mén	wéi	shù	nián	de	xīn qín	láo zuò
We	for	many	year	's	hard	work

而	产出	高	质量	产品	而	感到	高兴、	激动
ér	chǎn chū	gāo	zhì liàng	chǎn pǐn	ér	gǎn dào	gāo xìng、	jī dòng
and	produce	High	quality	<i>product</i>	and	feel	happy	excited

We are excited and proud of the high-quality products—our graduates—that we have produced through years of hard work.

Wuhan University, 2015

In economics, the term "monopoly (垄断)" means a market condition where a single supplier dominates the provision of a specific good or service, eliminating competition. In Example 25, however, "monopoly" was referred to the unique position traditionally held by universities in controlling the dissemination of knowledge and educational content. Universities and higher education institutions historically wielded authority over knowledge, determining what was taught, researched, and how it was shared. However, this example highlighted the drawbacks of such monopolies. When universities monopolized certain areas of education, it could restrict the diversity of teaching methods and learning materials, hinder the exchange of innovative perspectives and ideas, and ultimately impede societal innovation and progress.

The original economic meaning of "wealth" refers to valuable possessions, resources, or assets. In Example 26, "wealth" metaphorically represented the intangible, spiritual qualities and resources possessed by outstanding teachers, such as their knowledge, education, and inspiration, which were viewed as valuable and essential to students' development. This metaphor emphasized the significance of teachers and

their role in shaping students' education and lives, portraying them as a form of spiritual wealth.

In business, a "product (产品)" is an item created or offered by a company or organization to fulfill market demands and generate profit. In Example 28, however, "product" was used to describe graduates, who were molded and developed through years of education. In this analogy, students were compared to products, framing the educational process as a form of production, with teachers as the producers and students as the final output. The metaphor conveyed an acknowledgment of the significance and value of education, as well as admiration and respect for the accomplishments achieved through the educational system.

4.1.10 EDUCATION IS FIRE

The metaphor of FIRE was expressed in various ways, each with differing frequencies. There are 4 types of metaphorical expression with a total of 17 frequencies.

Table 17 The Expressions, Tokens, and Mapping Structure of FIRE metaphor

Expression	Ping Ying	Translation	frequency
火, 火种	huǒ, huǒ zhǒng	fire	6
点燃, 点亮, 照亮, 发光, 发热	diǎn rán, diǎn liàng, zhào liàng, fā guāng, fā rè	burning	6
光, 光芒	guāng , guāng máng	light	3
灯	dēng	lamp	2
Total			17

Source Domain:

FIRE

fire



Target Domain:

EDUCATION

the enlightenment, wisdom and

knowledge

burning	→	the teaching/learning process
light/candlelight	→	the teacher
lamp	→	the schools' values

From the tables, the most frequently used expressions included "火, 火种" (fire) and "点燃, 点亮, 照亮, 发光, 发热" (light up), as well as "光, 光芒" (light). All of these phrases carried symbolic meanings of hope, enlightenment, and guidance provided by education. Similarly, education was depicted as a force that could illuminate students' minds, expand their horizons, and empower them to better understand and navigate the world. The expressions for "灯"(lamp) appeared less frequently and symbolized the school's values and commitment to guiding students toward intellectual and moral growth, underscoring a dedication to holistic education and critical thinking. Collectively, these metaphors highlighted the vital role of education in inspiring students, shaping their character, and broadening their perspectives.

Example 28

大学	以	真理的	光芒	照亮了	人类	的	未来,
dà xué	yǐ	zhēn lǐ de	guāngmáng	zhào liàng le	rén lèi	de	wèi lái,
university	as	truth	light	shine	human	's	future

给	人类	以	梦想	和	希望。
gěi	rén lèi	yǐ	mèngxiǎng	hé	xī wàng。
Give	mankind	as	dreams	and	hope.

The university shines the light of truth on the future of humanity, giving humans dreams and hope.

Shanghai Jiao Tong University, 2016

Example 29

赵老师 的 人生 是 幸福的, 他 像 炭火 一样,
 zhào lǎo shī de rén shēng shì xìng fú de, tā xiàng tàn huǒ yí yàng,
 Teacher Zhao 's life is happy, he like charcoal *fire* same,

燃烧了 自己, 温暖了 他人, 照亮了 莘莘
 rán shāo le zì jǐ, wēn nuǎn le tā rén, zhào liàng le shēn shēn
 burn oneself, warm others *illuminated* numerous

学子 的 求学 之路, 点亮了 千家万户
 xué zǐ de qiú xué zhī lù, diǎn liàng le qiān jiā wàn hù
 students 's study s road light up thousands of families
 的 幸福之 灯。
 de xìng fú zhī dēng。
 's happiness's *lamp*.

Mr Zhao's life is happy; he is like a charcoal fire, burning themselves, warm others, illuminate the road of the students to study, lit up the lamp of happiness of thousands of families.

Tsinghua University, 2020

In Example 28, the metaphor of "light (光芒)" was employed to symbolize the inspiring and guiding power of education. This metaphor underscored the transformative and enlightening role that education and universities played in shaping the future. The phrase "illuminating the future of humanity" further reinforced this imagery, suggesting that universities, through education and research, provided the direction and guidance necessary for humanity to progress and thrive.

In Example 29, the metaphor shifts to comparing Professor Zhao's life to a charcoal "fire (火)." This symbolized the selfless dedication and the warmth to others, especially his students. Zhao's life was depicted as one that burned brightly for the benefit of others, illuminating the path of learning for students and spreading joy. The comparison to a charcoal fire emphasized his role in nurturing and providing warmth, guidance, and inspiration to countless individuals. His actions were compared to the way fire sustains warmth and lights up its surroundings, representing Zhao's profound influence in both education and the lives of those he touched.

Both examples highlighted the profound impact of education and educators in guiding, nurturing, and illuminating the path for students and society as a whole. They also illustrated how these metaphors emphasized the selfless dedication of teachers and the transformative power of knowledge and wisdom. Through these vivid comparisons, the examples conveyed the enduring influence of educators in shaping minds, inspiring growth, and fostering progress within both individual lives and the broader community.

4.1.11 EDUCATION IS A CONTAINER

As shown by Table 18, there were various metaphorical expressions related to container metaphors in Chinese commencement speeches, with 4 types of total 15 occurrences.

Table 18 The Expressions, Tokens, and Mapping Structure of CONTAINER metaphor

Expression	Ping Ying	Translation	frequency
容器	róng qì	container	6
投入、融入、注入、倾注	tóu rù、róng rù、zhù rù、 qīng zhù	pour into, fill in	6
储备	chǔ bèi	reserve	2
熔炉	róng lú	forge	1

Total			15
Source Domain:		Target Domain:	
CONTAINER		EDUCATION	
container	→	the student/learner	
fill in	→	the teaching and learning process	
reserve	→	the knowledge/resources	
forge	→	the school	

The CONTAINER metaphor in education described the process of learning and knowledge transmission by conceptualizing the mind or brain as a container that is filled with knowledge, ideas, and experiences. The most frequently used expressions within this metaphor include terms such as "容器-container" and "投入、融入、注入、倾注" (pouring into or filling in), highlighting the active process of students absorbing and internalizing knowledge. This metaphor underscored the dynamic interaction between educators that impart knowledge, and learners that receive and integrate what is learned into their understanding.

Other related expressions, such as "储备"(reserve), depicted students as empty containers awaiting the infusion of knowledge. Meanwhile, the less frequently used "熔炉"(forge) portrayed the school as a forge that shapes and molds students into distinct containers. This imagery emphasizes the transformative role of education, where students were not merely passive recipients but also were actively refined and reshaped through their educational experiences.

Example 30

感恩	学校	为	培养	你们的	投入。
gǎn ēn	xué xiào	wéi	péi yǎng	nǐ mén de	tóu rù,
Thank	school	for	cultivate	your	put in,

老师	对	你们	成长的	倾注。
lǎo shī	duì	nǐ mén	chéng zhǎng de	qīng zhù
teachers	to	your	growth	pour into

You should be grateful for the school's contribution for your development, and for the teachers' dedication to your growth.

Tongji University, 2019

Example 31

你们	在	中国科大	的	熔炉	里	锻造，
nǐ mén	zài	zhōng guó kē dà	de	róng lú	lǐ	duàn zào,
You	in	USTC	's	melting pot	in	forge

深深地	打上了	中国	科大	的	烙印！
shēn shēn dì	dǎ shàng le	zhōng guó	kē dà	de	lào yìn!
deeply	hit	China	USTC	's	sear!

Forged in the furnace of USTC, you have deeply stamped the brand of HKUST and become true USTC people. I am proud of you all!

University of Science and Technology of China, 2018

In Example 30, the terms "put in (投入)" and "pour into (倾注)" were used to describe the contributions and efforts of schools and teachers toward students' growth and education. Schools were depicted as investing and allocating various resources, including teachers (human resources), facilities (material resources), and curricula (educational resources), into the process of educating students. Meanwhile, teachers were described as "pouring into devotion," emphasizing the personal care, attention,

and dedication they provide in nurturing students' development. These expressions underscored the significant and lasting impact that schools and teachers have in shaping students' intellectual, emotional, and personal growth.

In Example 31, the original meaning of "melting pot (熔炉)" referred to a furnace used for smelting metals, a device designed to melt, refine, and shape metals. Here, it was metaphorically used to compare the educational environment of a school to a melting pot, symbolizing the intense and transformative process through which students are shaped and refined. Just as metals are melted and forged in a furnace, students undergo significant personal and academic growth, during which they are profoundly influenced by the values and identity of the school. This metaphor highlighted the school's pivotal role in molding students' character, abilities, and overall development.

4.1.12 EDUCATION IS A PLACE

The Table 19 encompasses three types of place-related metaphorical expressions used within the context of education. These metaphors include "palace hall (殿堂)," "dock (码头)," and "harbor (港湾)," with a combined total of 11 occurrences. These expressions illustrated the diverse ways in which education was conceptualized, emphasizing themes of grandeur, transition, and refuge in the learning journey.

Table 19 The Expressions, Tokens, and Mapping Structure of OBJECT Metaphor

Expression	Ping Ying	Translation	Tokens
港湾	gǎng wān	harbor	7
殿堂	diàn táng	palace hall	2
码头	má tóu	dock	2
加油站	jiā yóu zhàn	gas station	1
Total			12

Source Domain		Target Domain
PLACE		EDUCATION
harbor	→	the safe and supportive learning environment for students
palace hall	→	the school
dock	→	the school
gas station	→	the school

The metaphor of a "harbor (港湾)," which appeared seven times, portrayed educational settings as safe and nurturing spaces where students gain knowledge and experience. The school was depicted as providing safety, guidance, and support for students' growth, much like a harbor offers ships shelter, protection, and the resources needed to continue their journey. This metaphor emphasized the role of educational institutions as places of refuge and preparation, equipping students with the tools and confidence to navigate future challenges.

"Dock (码头)" and "palace Hall (殿堂)" both appeared less frequently, with two occurrences each. The "Palace Hall" metaphor evoked feelings of reverence and respect by portraying the school as a prestigious and distinguished educational institution. Meanwhile, the "dock" metaphor depicted the school as a transitional space where students embark on their educational and exploratory journeys, preparing them for the opportunities and challenges ahead. Although "gas station (加油站)" was the least common expression, it suggested that the school serves as a place where individuals or students are "refueled" or revitalized, ready to continue their pursuits with renewed energy and focus.

Example 32

北大，是 新 思想 不断 萌发

běi dà, shì xīn sī xiǎng bú duàn méng fā
Peking University, is new ideas continue sprout

和 成长 的 学术 殿堂。
hé chéngzhǎng de xué shù diàn táng。
and growth 's learning palace.

*Peking University is an academic **palace** where new ideas sprout and grow.*

Peking University, 2015

Example 33

母校, 就 像 一座 码头,
mǔ xiào, jiù xiàng yì zuò mǎ tóu,
Alma mater, just like a dock.

目送 一艘艘 小船 启航, 驶 向 远方
mù sòng yì sōu sōu xiǎo chuán qǐ háng, shǐ xiàng yuǎn fāng
witness send one by one little boat departure heading to distance.

Alma mater, just like a dock, sees the ships one by one set sail and head off to the distance.

Peking University, 2013

In Example 32, Peking University was metaphorically described as an academic "palace (殿堂)" where new ideas continually sprouted and flourished. This metaphor highlighted the university's prestigious role in fostering intellectual growth and innovation. It conveyed a sense of grandeur and high status, symbolizing Peking University's noble

and esteemed position within higher education, particularly in China. The metaphor portrayed the university as a revered space where academic pursuits were highly valued, and where students were provided with the resources and environment necessary to cultivate their ideas and aspirations.

In Example 33, the alma mater was compared to a "dock (码头)," where ships—representing students—embarked on their journeys. This metaphor emphasized the university as the starting point for students' exploration of life and knowledge. It also illustrated the cyclical nature of education, with students leaving (graduating) but later returning to reflect, celebrate, or pursue further learning. Just as a dock serves as a gathering place for ships, the university was depicted as a hub where students accessed knowledge, resources, and support from peers and teachers. This metaphor highlighted the university's role as a center of opportunities and resources, providing an environment for both collaboration and personal development.

4.1.13 EDUCATION IS RELIGION

As shown by the table, there were two types of religion-related metaphors within an educational context for analysis, including the metaphor "baptism" (洗礼), appearing once, and "信仰", translated as "faith," appearing four times. These metaphors drew on religious imagery to convey the transformative and deeply meaningful nature of education, emphasizing its power to inspire, purify, and instill values in students.

Table 20 The Expressions, Tokens, and Mapping Structure of RELIGION metaphor

Expression	Ping Ying	Translation	Tokens
洗礼	xǐ lǐ	baptism	1
信仰	xìn yǎng	faith	4
Total			5

Source Domain:

RELIGION

Target Domain:

EDUCATION

baptism



the students transition period from ignorance
to knowledge, from immaturity to maturity

faith



the acceptance or recognition of the school,
educational process, educators, or learning

Example 34

我	要	祝贺	你们	经过	大学	生活的	洗礼,
wǒ	yào	zhù hè	nǐ mén	jīng guò	dà xué	shēng huó de	xǐ lǐ,
I	want	congratulate	you	after	college	life 's	baptism
迎来了		自己的		毕业			典礼。
yíng lái le		zì jǐ de		bì yè			diǎn lǐ。
greet		own		graduation			ceremony.

I want to congratulate you on the baptism of college life, ushered in your graduation ceremony.

Zhejiang University, 2021

Example 35

南大	的	四年,	到底	给予了	我们	什么?
nán dà	de	sì nián,	dào dǐ	jǐ yǔ le	wǒ mén	shén me?
Nanjing University	's	four year,	at last	give	us	what

给了 我们 理想! 给了 我们 **信仰!** 给了 我们 价值观!
 gěi le wǒ mén lǐ xiǎng! gěi le Wǒ mén **xìn yǎng!** gěi le wǒ mén jià zhí guān!
 Give us ideal! Give us **faith!** Give us values!

What does the four years at Nanjing University truly give us? It gives us ideals! It gives us **faith**! It gives us values!

Nanjing University, 2017

The original meaning of "洗礼(baptism)" (in Example 34) refers to a Christian sacrament involving the use of water for purification, symbolizing the cleansing of sins and the spiritual rebirth of the individual. In this context, it was used metaphorically to describe the experiences and challenges of four-year university life that symbolically "purify" students. This process was portrayed as helping them evolve into well-rounded, mature individuals, prepared to face future challenges. Thus, the phrase "experiencing the baptism of university life" suggested that through diverse academic and personal experiences at university, students underwent a transformative journey of growth and development, equipping them for graduation and the path ahead.

"信仰(faith)" originally referred to a strong conviction and reverence for a specific religion, doctrine, philosophy, or ideology. In Example 35, "faith" was used to describe the trust and devotion students place in their school, the educational process, their teachers, or the act of learning itself. This metaphor conveyed a firm belief in the value and effectiveness of education, reflecting a commitment to the principles and values that underpin educational endeavors. More specifically, it emphasized that Nanjing University embodies educational ideals aimed at unlocking students' inherent potential and wisdom, guiding them to become well-rounded individuals with a strong sense of social responsibility.

4.1.14 Summary of Educational Metaphors in Chinese Commencement Speeches

Table 21 presented the total number of tokens, types, and resonance, with 13 source domains of education in commencement discourse, including CULTIVATION,

FAMILY, CONSTRUCTION, WAR, JOURNEY, NATURE, BODY, ECONOMY, LIGHT, OBJECT, CONTAINER, PLACE, and RELIGION.

Table 21 the Overall Data of Educational Metaphors in Chinese Commencement

Speeches

Source Domains	Total Types	% of Total Types	Total Tokens	% of Total Tokens	Resonance	% of Total Resonance
CULTIVATION	21	20.19	408	32.1	8568	52.88
CONSTRUCTION	15	14.42	199	15.66	2985	18.43
WAR	15	14.42	145	11.41	2175	13.43
FAMILY	4	3.85	271	21.32	1084	6.69
NATURE	8	7.69	50	3.93	400	2.47
JOURNEY	4	3.85	82	6.45	328	2.02
OBJECT	12	11.54	16	1.26	192	1.18
BODY	6	5.77	28	2.2	168	1.04
ECONOMY	5	4.81	23	1.81	115	0.71
LIGHT	4	3.85	17	1.34	68	0.42
CONTAINER	4	3.85	15	1.18	60	0.37
PLACE	4	3.85	12	0.94	48	0.3
RELIGION	2	1.92	5	0.39	10	0.06
Total	104	100	1271	100	16201	100

As shown by the data, CULTIVATION is the most dominant, with 21 types and 408 tokens, accounting for approximately 52.88% of the total resonance and achieving the highest resonance of 8,568. This suggested that education is analogized to the natural environment, where schools are compared to botany, garden or teaching to gardening and cultivating.

CONSTRUCTION and WAR exhibited considerable resonance in educational discourse, contributing 18.43% and 13.43% to the total resonance, respectively. There were 15 metaphor types in these two domains, but with distinct differences. The metaphors in CONSTRUCTION, with 199 instances, were more frequently used than WAR, where there were 145 instances. By evoking images of architectural design, urban planning, and infrastructure development, the metaphors in CONSTRUCTION symbolized the structured and progressive nature of educational and school development. In contrast, the metaphors in WAR embodied conflict and strategy, with educational challenges compared to battles and military campaigns, emphasizing competition, struggle, and the overcoming of obstacles. As a result, they reflected the adversarial and competitive elements of education, such as student rivalry, institutional competition, and national education standards.

There was an interesting aspect, FAMILY metaphors, totaling 271, exceeded those of CONSTRUCTION (199) and WAR (145). However, in terms of type diversity and resonance contribution, FAMILY was confined to 4 subcategories, only accounting for 6.69% of the total resonance. The high usage but less resonance rate showed that it may rely more on specific cultural, social, or emotional contexts to describe education as family, thereby not showing its significantly impacts.

JOURNEY and NATURE exhibited similar resonance rates, 2.47% and 2.02% respectively, implying a moderate use of journey-related or nature-related metaphors in the commencement speeches. Lastly, five source domains, including ECONOMY, LIGHT, CONTAINER, PLACE, and RELIGION, exhibited low resonance rates, all below 1%. There would be relatively weaker associations between these source domains and

educational contexts, thus limiting their applicability. For example, RELIGION metaphor would only resonate in specific cultural or social contexts.

4.2 The Contribution of the Educational Metaphors in Ten Universities

This section offered a comprehensive analysis of the use of educational metaphors in ten leading Chinese universities from 2013 to 2023. It began with an in-depth examination of the educational expressions along with the frequency and types of occurrences for metaphors, and examples in these institutions, including Peking University, Tsinghua University, Shanghai Jiao Tong University, Fudan University, the University of Science and Technology of China, Zhejiang University, Tongji University, Wuhan University, Nanjing University, and Harbin Institute of Technology. By delving into the distinct metaphorical frameworks employed by each university, the analysis not only emphasizes their unique contributions but also enhances the broader understanding of how metaphors shape educational discourse, influence institutional identity, and impact the development of students and their future careers.

4.2.1 The contribution of the educational metaphors in Peking University

The table 22 at Peking University included 12 domains, CULTIVATION, WAR, CONSTRUCTION, JOURNEY, BODY, CONTAINER, PLACE, LIGHT, FAMILY, ECONOMY, OBJECT, and NATURE.

Table 22 Source Domains and Educational Metaphors of Peking University

Source domain	Educational expression	Token	Type	Resonance
1) CULTIVATION	1.成长 growth (6) 2.成熟 ripe (1) 3.收获 harvest (5) 4.培养, 培育 cultivate (10) 5.结果, 果实 the fruit (4) 6.种子 seed (1) 7.扎根 take root (2)	33	10	330

	8.花朵 flower (1) 9.耕耘 plough and weed (1) 10.土 soil (2)			
2) WAR	1. 抗争, 战斗, 攻克 fight, conquer (15) 2.一线 front line (2) 3.武器 weapon (2) 4.枪弹 bullet (1) 5.士兵 soldier (2) 6.变革 reform (1) 7.牺牲 sacrifice (1) 8.战略 strategy (2) 9.后盾 backup force (1)	27	9	243
3) CONSTRUCTION	1.建设, 建立 build (7) 2.基础 foundation (6) 3.基石 footstone (3) 4.桥梁, 桥 bridge (3) 5.筑塔 tower building (1) 6.结构 structure (1)	19	6	114
4) JOURNEY	1.走过, 走出 walk (5) 2.路, 道路 road (3) 3.步子 step (2) 4.足迹 footprint (1)	11	4	44
5) FAMILY	1.家 family (8) 2.学校 School (13)	21	2	42
6) BODY	1.脊梁 backbone (1) 2.血脉 blood (3) 3.心 hear (1)	5	3	15

7) CONTAINER	1.容器 container (1) 2.承载 hold (1) 3.注入 pour into (1)	3	3	9
8) FIRE	1.火 fire (3) 2.点燃 ignite (1)	4	2	8
9) PLACE	1.殿堂 palace (2) 2.码头 dock (2)	4	2	8
10) NATURE	1.星 star (2) 2.风 wind (1)	3	2	6
11) OBJECT	1.镜子 mirror (2) 2.钥匙 key (1)	3	2	6
12) ECONOMY	1.垄断 monopoly (1) 2.财富 wealth (2)	3	2	6
Total		136	47	831

The data reveals that the CULTIVATION metaphor is the most frequently used educational domain at Peking University, with 330 instances across 10 types. This highlights a strong emphasis on themes of growth, nurturing, and development within the university's educational discourse. Similarly, the WAR metaphor is notable, with 9 types and 27 tokens, resulting in 243 resonances. This suggests a focus on themes of struggle, resilience, and strategic thinking in education. In contrast, the ECONOMY, OBJECT, and NATURE domains appear with the lowest frequency, each recorded only 6 times. These domains exhibit a balanced distribution of expressions, with each term appearing once or twice, indicating their minimal yet consistent presence in the educational context.

Specifically, Example 36 was selected from the top three most frequent (CONSTRUCTION) metaphor, with Example 37 chosen for its uniqueness of OBJECT metaphor.

Example 36

一百年 前， 蔡元培先生 来 北大 担任 校长
 yì bǎi nián qián, cài yuán péi lái běi dà dān rèn xiào zhǎng

A hundred years ago Cai Yuanpei come Peking University serve as president

时， 提出了 “思想 自由， 兼容 并包” 的 主张
 shí, tí chū le “sī xiǎng zì yóu, jiān róng bìng bāo” de zhǔzhāng
 time, propose "Thought freedom, compatibility inclusiveness 's opinion

奠定 了 现代 中国 大学 的 思想 基础。
 diàn dìng le xiàn dài zhōng guó dà xué de sī xiǎng jī chǔ.
 Lay -ed modern Chinese university 's idea foundation.

When Mr. CAI Yuanpei came to Peking University as president, he put forward the idea of "freedom of thought, inclusiveness and inclusiveness", which laid the ideological foundation of modern Chinese universities.

Example 37

终身 学习 的 能力
 zhōng shēn xué xí de néng lì
 lifelong learning 's capacity

是 同学们 打开 未来 大门 的 钥匙。

shì tóng xué men dǎ kāi wèi lái dà mén de yào shi.

Is students open future big door 's **key**.

Lifelong learning ability is the **key** to open the door to the future of students.

In Example 36, the term "foundation(基础)" metaphorically represented the role of teachers as planners and builders, like the process of constructing a building. As the architect of Peking University's modern educational system, Mr. Cai Yuanpei laid a robust "foundation" for modern higher education in China. His contributions included implementing the elective and credit systems, integrating Chinese and Western educational philosophies, enriching the learning environment through diverse academic, cultural, and artistic activities, and emphasizing the significance of campus culture. He also prioritized cultivating students' personalities, practical abilities, and innovative spirit. His advocacy for academic freedom, professor-led governance, and the synthesis of diverse cultural philosophies formed the cornerstone of this structure, establishing the framework for a modern university education system and ensuring Peking University's enduring development and innovation.

In Example 37, the term "钥匙(key)" literally was referred to a tool that unlocks or opens something (Modern Chinese Dictionary, 2016). Metaphorically, the "key" in the context of Peking University's educational approach emphasized the pivotal role of "learning ability" in unlocking students' potential and opportunities. Peking University equips students with this "key" through curriculum-based ideological and political education, interdisciplinary research initiatives, and online education platforms. These resources empower students to confront future challenges, seize opportunities, and achieve sustained personal and professional growth. The metaphor underscores the university's commitment to fostering lifelong learning and adaptability in its students.

4.2.2 The contribution of the educational metaphors in Tsinghua University

As show by Table 23, there were educational expressions used in different source domains at Tsinghua University. Across eight categories of source domains, this university demonstrates a rich use of educational metaphors, featuring 118 tokens and

34 distinct types of metaphorical expressions. These collectively generate a total resonance of 628, reflecting the depth and variety of metaphorical language employed.

The CULTIVATION domain leads with the highest resonance at 288, encompassing 8 educational expressions such as "成长(growth)", "培养, 培育(cultivate, nurture)", which appear 36 times. This underscores the university's emphasis on nurturing and development. The WAR domain, with 7 expressions like "奋斗, 战胜, 对抗 (struggle, overcome, confront)" and "战略(Strategy)," occurs 22 times, achieving a resonance of 154, reflecting themes of resilience and strategic thinking. In contrast, the OBJECT and LIGHT domains have the lowest resonances, at 9 and 12 respectively, featuring rare expressions like "尺子(ruler)," "工具箱(tool kit)," and "灯(lamp)." Meanwhile, the FAMILY and JOURNEY domains, with resonances of 28 and 42 respectively, demonstrate moderate usage, indicating their balanced yet significant role in the university's educational discourse.

Table 23 Source Domains and Educational Metaphors of Tingshua University

Source domain	Educational expression	Token	Type	Resonance
1) CULTIVATION	1.成长 growth (7) 2.成熟 ripe (3) 3.青涩 greenness or un-ripeness (1) 4.收获 harvest (4) 5.结果, 果实 fruit (3) 6.培养, 培育 cultivate, nurture (14) 7.扎根 take root (3) 8.厚植 deep plant (1)	36	8	288
2) WAR	1.奋斗, 战胜, 对抗 fight (10)	22	7	154

	2.战略 strategy (1) 3.改革, 变革 reform (3) 4.冠军 victory (4) 5.牺牲 sacrifice (1) 6.战袍 coat armor (2) 7.一线; 前线 front line (1)			
3) NATURE	1. 星 Star (1) 2. 风 Wind (6) 3. 气象 Weather (1) 4. 风景 Landscape (1) 5. 云, 云端 cloud (1)	10	5	50
4) CONSTRUCTION	1. 建设, 建立 build (10) 2. 平台 platform (3) 3. 柱 column (2)	15	3	45
5) JOURNEY	1. 走, 前行 Go, go forward (9) 2. 路, 道路 Road (4) 3. 历程 journey (1)	14	3	42
6) FAMILY	1. 家 family (12) 2. 母校 mother school (2)	14	2	28

7) OBJECT	1. 尺子 Ruler (1) 2. 画卷 Picture scroll (2) 3. 工具箱 tool kit (1)	4	3	12
8) FIRE	1. 光 Light (1) 2. 火 fire (1) 3. 灯 lamp (1)	3	3	9
Total		118	34	628

Example 38

今天，你们每一个人 都穿上了 以紫色打底、
jīn tiān, nǐ men měi yí gè rén dōu chuān shàng le yǐ zǐ sè dǎ dǐ、
Today you everyone all wear Aspurple background,

以紫荆花 丁香花 装饰的 新版 学位服，
yǐ zǐ jīng huā dīng xiāng huā zhuāng shì de xīn bǎn xué wèi fú,
As Chinese redbud Lilac Decorative new version degree uniform,

同学们 说 这是 学校的 给大家 披上
tóng xué men shuō zhè shì xué xiào de gěi dà jiā pī shàng
Students say it is School's For all dress

紫荆战袍。

zǐ jīng zhàn páo。

The Redbud coat armor

此时此刻，身披	战袍、	意气风发的	你们
cǐ shí cǐ kè, shēn pī	zhàn páo、	yì qì fēng fā de	nǐ mén
Now wear	coat armor,	vigor	you

是	清华园	最美的	风景
shì	qīng huá yuán	zuì měi de	fēng jǐng
are	Tsinghua Park	most beautiful	scenery

Today, each of you is wearing a new version of the degree uniform decorated with purple background and lilacs, which students say is the "purple robe" put on by the school. At this moment, you are the most beautiful scenery of Tsinghua Park with your battle robes and vigor.

Example 39

在	过去的	四年中，	我们	一同	见证了	奋进的
zài	guò qù de	sì nián zhōng,	wǒ mén	yì tóng	jiàn zhèng le	fèn jìn de
In	in past	four year,	we	together	witness	moving-forward

清华	不断	呈现	新气象，	变革的
qīng huá	bú duàn	chéng xiàn	xīn qì xiàng,	biàn gé de
Tsinghua	keep	show	new atmosphere,	reformative

清华	持续	展现	新作为
qīng huá	chí xù	zhǎn xiàn	xīn zuò wéi

Tsinghua continue show new achievement

In the past four years, we have witnessed together the advancing and reformative Tsinghua constantly presenting new and positive atmosphere and continues to show new achievements.

In Example 38, the term "战袍(coat armor)" did not literally refer to combat attire but instead, it symbolized the academic gowns worn by graduates, akin to a badge of honor and pride. The purple color and the Chinese redbud, emblematic of Tsinghua University, were woven into the design of the academic robe, representing the institution's spirit and culture. The Purple Robe embodied Tsinghua University's rich traditions, history, and individual honor. It served as a reminder to students of their role as inheritors of the university's esteemed legacy and achievements, reflecting their academic accomplishments and the challenges they will face in the future. This metaphor emphasized the courage, resilience, and determination students demonstrated in overcoming academic challenges, symbolizing the battles they undertake for both academic and personal growth.

In Example 39, there was an integration of multiple metaphorical domains, including JOURNEY, NATURE, and WAR, to collectively construct a dynamic and evolving image of Tsinghua University's development. The phrase "奋进的 (moving-forward)" employed the JOURNEY metaphor, likening the university's growth to a journey and emphasizing its dynamic, forward-moving, and exploratory nature. The term "新气象(new atmosphere)" draws on the NATURE metaphor, where "气象 (atmosphere)" typically refers to meteorological phenomena such as weather and climate. Here, it symbolized Tsinghua University's progress and improvements, conveying a sense of natural, gradual, and positive transformation as the institution strives for excellence. Lastly, "变革(reforming)" utilized the WAR metaphor, with evoking imagery of battle, struggle, and strategic resource allocation. This comparison suggested that Tsinghua's significant changes and innovations are achieved through deliberate effort and perseverance, highlighting the challenges and triumphs inherent in

its development. Together, these metaphors painted a vivid picture of Tsinghua University as an institution in constant motion, embracing change and striving for continuous improvement.

More specifically, Tsinghua University achieved remarkable progress in advancing discipline development, enhancing research innovation capacity, and implementing the "Double First-Class" initiative, significantly boosting its global reputation and influence. Through comprehensive reforms and strategic global initiatives, Tsinghua ascended to 22nd place in the world university rankings, serving as a testament to China's broader efforts to modernize and elevate its higher education system. This progress reflected the university's commitment to excellence, innovation, and international collaboration, positioning it as a leading institution on the global stage.

4.2.3 The contribution of the educational metaphors in Shanghai Jiaotong

University

The Table 24 provided insight into the frequency and importance of various metaphorical expressions across different thematic domains at Shanghai Jiaotong University. With 12 distinct source domains, there are a total of 109 tokens and 34 different types of educational metaphorical expressions, culminating in an overall resonance of 710.

Table 24 Source Domains and Educational Metaphors of Shanghai Jiaotong University

Source domain	Educational expression	Token	Type	Resonance
1) CULTIVATION	1.成长 growth (9)	42	12	504
	2.培养, 培育 cultivate (7)			
	3.收获 harvest (5)			
	4. 青 涩 green and astringency (2)			

	5.结果, 果实 fruit (2) 6.草 grass (1) 7.树 tree (2) 8.扎根; 根 root (9) 9.厚植, 植 plant (1) 10.枝叶 branch and leave (1) 11.成熟 ripe (2) 12.苗圃 nursery garden (1)			
2) CONSTRUCTION	1. 搭建, 建立 build (6) 2. 基础, 基石 foundation (2) 3. 梁, 大梁 beam (6) 4. 桥梁 bridge (1)	16	4	64
3) FAMILY	1. 家 home (12) 2. 母校 mother (6) 3. 故乡 hometown (3)	21	3	63
4) WAR	1. 奋斗, 攻克 conquer (3) 2. 大捷 victory (1) 3. 后盾 backup force (3)	8	4	32

	4. 战场 battlefield (1)			
5) JOURNEY	1. 走过, 前行 go; move forward (6) 2. 路, 道路 road (2) 3. 旅程 journey (1)	9	3	27
6) FIRE	1. 火 fire (2) 2. 点燃, 点亮, 照亮, 发光 shine (3)	5	2	10
7) OBJECT	1. 镜子 mirror (1) 2. 地图 map (1)	2	2	4
8) BODY	1. 血脉 blood (2)	2	1	2
9) NATURE	1. 高峰 peak of the mountain (1)	1	1	1
10) CONTAINER	1. 器 container (1)	1	1	1
11) PLACE	1. 港湾 harbor (1)	1	1	1
12) RELIGIOUS	1. 信仰 faith (1)	1	1	1
Total		109	35	710

The CULTIVATION domain led with the highest number of tokens (42), types (12), and the total resonance (504), featuring “成长(growth)” and “扎根; 根(root)” as its most frequent expressions, each cited 9 times. Conversely, several domains, namely NATURE, BODY, ECONOMY, CONTAINER, PLACE and RELIGION, had the lowest token count (1), each with only a single expression. Importantly, while the FAMILY domain was more frequently used (21 tokens) compared to the CONSTRUCTION domain (16 tokens), the latter showed a broader perspective of expressions (4 types versus 3 in FAMILY). Despite this, the CONSTRUCTION domain still achieved a slightly higher resonance (64) than the FAMILY domain (63), indicating a nuanced impact of its expressions.

Following part listed the specific application examples (Example 40-41) were selected from the top three most frequent metaphors- CULTIVATION; WAR) and a detailed analysis of these data to gain a more comprehensive understanding of how these expressions are applied and their impact in the educational context at Shanghai Jiaotong University.

Example 40

育人的	苗圃，	历经了	大学
yù rén de	miáo pǔ,	lì jīng le	dà xué
cultivate person's	nursery garden,	experience	university

生活	你们	已经	长成了	青葱的	树苗，
shēng huó	nǐ mén	yǐ jīng	zhǎng chéng le	qīng cōng de	shù miáo,
life,	you	have	Grow into	green	saplings

即将	前往	更	广阔	的	土地，	开始	新的	生长。
jí jiāng	qián wǎng	gèng	guǎng kuò	de	tǔ dì,	kāi shǐ	xīn de	shēng zhǎng

Will Go to more wide 's land, start new growth.

University is a nursery garden for nurturing; after the university life, you have grown into a green sapling, and will soon go to a wider land to start a new growth.

Example 41

春季	学期	到来	之时,
chūn jì	xué qī	dào lái	zhī shí,
spring	semester	comes	Time,

我们	无法	相聚在	校园,	上课、
wǒ mén	wú fǎ	xiāng jù zài	xiào yuán,	shàng kè、
We	cannot	gather	in campus,	attending classes,

升学、	求职的	主	战场	从
shēng xué、	qiú zhí de	zhǔ	zhàn chǎng	cóng
Entering higher schools,	job hunting	main	battlefield	from

线下	转到了	线上。
xiàn xià	zhuǎn dào le	xiàn shàng。
offline	change	to online.

When the spring semester came, we couldn't meet on campus, and the **main battlefield** of attending classes, pursuing higher education, and seeking jobs was transferred from offline to online.

In Example 40, Shanghai Jiao Tong University was compared to a "nursery garden (苗圃)," and students are likened to "saplings (树苗)." On one hand, this metaphor illustrated that university education is not merely a place for knowledge

transfer but also a nurturing environment for personality development, intellectual enlightenment, and preparing students to face life's challenges. It reflected the educational philosophy of Jiao Tong University, which prioritizes a "student-oriented and comprehensive development" approach, offering students a high-quality learning and research environment. On the other hand, saplings symbolized the potential and growth possibilities of students. Just as saplings require time, patience, and care to thrive, students' growth depends on the university's nurturing support, including mentorship, peer assistance, and psychological counseling. These resources could help students overcome difficulties, face challenges, and realize their self-worth, embodying the university's commitment to fostering holistic development.

In Example 41, the metaphor of a "battlefield (战场)" was used to describe the challenges of the education process, particularly during the COVID-19 pandemic when the traditional "battlefield" (the classroom) shifted to online learning and teaching platforms. The university adeptly navigated these challenges by introducing innovative cloud classroom models and flexible teaching arrangements. It pioneered a novel approach, combining live teaching for larger classes on the Zoom platform with smaller, interactive online discussion groups facilitated through the Rain Classroom platform and WeChat groups (Yan, 2023). Additionally, the teaching team implemented a detailed division of tasks to ensure the seamless execution of the educational process.

4.2.4 The Contribution of the educational metaphors in Fudan University

For the commencement speeches in Fudan University, there were 11 types of educational metaphors and these domains collectively cover 126 occurrences and 35 types of educational expressions, contributing to an overall resonance score of 796.

Table 25 Source Domains and Educational Metaphors of Fudan University

Source domain	Educational expression	Token	Type	Resonance
1) CULTIVATION	1.成长 growth (9)	41	10	410
	2.培养, 培育 cultivate			

	(15) 3.收获 harvest (3) 4.土 soil (1) 5.结果, 果实 fruit (2) 6.养分 nutrient (2) 7.树 tree (3) 8.播种 sow (1) 9.厚植, 植 plant (2) 10.萌芽 sprout (1)			
2) CONSTRUCTION	1. 构建, 搭建, 建设 construction (11) 2. 建构者, 建设者 builder (2) 3. 平台 platform (4) 4. 大门 front door (5) 5. 舞台 stage (2) 6. 基础 foundation (5) 7. 桥梁 bridge (1) 8. 楼阁 pavilion (1) 9. 温室 greenhouse (2)	30	9	270
3) FAMILY	1. 家 home (16)	27	2	54

	2. 母校 mother (11)			
4) WAR	1. 奋斗 fight (4) 2. 牺牲 sacrifice (3) 3. 后盾 backup force (2)	9	3	27
5) JOURNEY	1. 走过, 走 walk (4) 2. 路, 道路 road (1)	5	2	10
6) ECONOMY	1. 财富 wealth (4) 2. 品牌 brand (1)	5	2	10
7) FIRE	1. 火, 火种 fire (3) 2. 点燃 ignite (1)	4	2	8
8) NATURE	1. 星 star (1) 2. 风 wind (1)	2	2	4
9) BODY	1. 基因 gene (1)	1	1	1
10) CONTAINER	1. 大器 container (1)	1	1	1
11) OBJECT	1. 温床 hotbed (1)	1	1	1
Total		126	35	796

The CULTIVATION Domain stand out as the most prominent, with the highest frequency of 41 tokens and 10 types, resulting in a resonance score of 410. Key terms such as "成长(growth)" and "培养, 培育(cultivate)" highlighted a strong emphasis on nurturing and development within the educational framework. Following this, the CONSTRUCTION Domain, with a resonance of 270, reflected a focus on building and establishing a robust educational foundation. These expressions showed the university's commitment to fostering students' growth and creating a solid infrastructure for their academic and personal development.

Meanwhile, the other domains—BODY, CONTAINER, and OBJECT—though featuring fewer expressions and a lower resonance score (1), each contributed a unique perspective to the educational metaphors. Expressions like "基因(gene)," "器(container)," and "温床(hotbed)" highlighted diverse dimensions of the educational experience. These metaphors collectively created a multifaceted portrayal of education at Fudan University, emphasizing themes such as the inheritance and influence of knowledge, the role of education as a vessel that provides students with ample space and optimal conditions for learning, and the nurturing environment that fosters growth.

The following presented some typical examples that serves as the basis for further qualitative analysis. The reason for selecting is Example 42 is notable for its unique use of dual expressions in the JOURNEY metaphor, and Example 43 is distinctive as the sole instance featuring and combing the CONSTRUCTION and OBJECT metaphor.

Example 42

学校	走出了	一条	在	融合	创新	中
xué xiào	zǒu chū le	yì tiáo	zài	róng hé	chuàng xīn	zhōng
school	walk out	a	in	integrated	innovation	in

“顶天立地”	的	科技	创新	之	路。
“dǐng tiān lì dì”	de	kē jì	chuàng xīn	zhī	lù。

able to hold up the heavens, and to

's scientific innovation s **road**.

support the earth-indomitable spirit

The school has **walked out the road** of a "indomitable" scientific and technological innovation".

Example 43

复旦园 是 成长的 “温室” ,
fù dàn yuán shì chéng zhǎng de “wēn shì” ,
Fudan Garden is growth 's "greenhouse",

而 不是 “躺平” 的 温床,
ér bù shì “tǎng píng” de wēn chuáng,
And not d "lying flat" 's hotbed,

绝大 部分 复旦 学子 都在 闯关夺隘、 努力奋斗。
jué dà bù fēn fù dàn xué zǐ dōu zài chuǎngguān duó ài、 nǚ lì fèn dòu。
Most part Fudan students are in Overcome obstacles, endeavor fight.

Fudan Garden is a "**greenhouse**" of growth, not a "lying flat" **hotbed**, the vast majority of Fudan students are in the pass, struggle.

The phrase "走出道路(walk out the road)" symbolized Fudan University's endeavors in scientific and technological innovation, representing a carefully planned and diligently constructed path for students to pursue the unknown, challenges encountered, and quest for new knowledge. There are multiple examples, including the reforms to strengthen collaborations with industries, the creation of science parks, research institutes, and incubators, as well as partnerships with companies like Huawei

to address technical challenges. Key milestones, such as the "Top-notch Student Training Program in Basic Disciplines," reflected the university's efforts to equip students with the skills required for innovation (Yu, 2019). Fudan University's technological innovation was portrayed not merely as a series of actions but as a dynamic and interactive expedition, marked by continuous learning, overcoming obstacles, and fostering collaborations, aiming at achieving technological advancement and societal progress. By using these metaphorical depictions, the steps taken by the university and the ongoing pursuit of innovation were vividly presented .

In Example 52, "greenhouse (温室)" was referred to a nurturing and protective environment for students' growth and development. Similarly, "hotbed (温床)" was used to describe unfavorable educational conditions, meaning poorly designed learning environments, which would result in students' failure due to laziness or a lack of ambition. By contrasting the metaphors of a "greenhouse for growth" and a "hotbed for lying down," these expressions vividly highlighted Fudan's dedication to fostering a learning environment for development rather than the avoidance of challenges. Through this metaphorical comparison, Fudan University conveys a clear educational philosophy: it prioritizes hard work, initiative, and the courage to face and overcome obstacles (Fudan University official website, 2019).

4.2.5 The Contribution of the educational metaphors in University of Science and Technology of China

As shown by Table 26, there was a total of 147 tokens, with 12 different source domain types, contributing to an overall resonance score of 955.

Table 26 Source Domains and Educational Metaphors of University of Science and Technology of China

Source domain	Educational expression	Token	Type	Resonance
1) CULTIVATION	1. 成长 growth (8) 2. 培养, 培育, 养育	48	11	528

	cultivate (19) 3. 收获; 丰收 harvest (5) 4. 耕作; 耕耘 farming (2) 5. 花 flower (3) 6. 种子 seed (1) 7. 萌芽 bud (1) 8. 草 grass (1) 9. 盛开, 绽放 bloom (2) 10. 果实 fruit (4) 11. 土 soil (2)			
2) CONSTRUCTION	1. 基础 foundation (8) 2. 创建, 建立, 建设 build (9) 3. 框架 frame (1) 4. 支撑 support (1) 5. 象牙塔 tower of ivory (1) 6. 砥柱 pillar (1)	22	6	132
3) WAR	1. 奋斗, 战斗 fight (8) 2. 武装 military equipment (1) 3. 后盾 backing (2) 4. 生力军, 排头兵 soldier (4) 5. 战略 strategy (4) 6. 武器 weapon (1)	20	6	120
4) FAMILY	1. 家 home (4) 2. 母校, 父亲、母亲 father, mother (25) 3. 孩子 child; children (1)	30	3	90

5) NATURE	1. 星 star (2) 2. 风 wind (2) 3. 云, 云端 cloud (4) 4. 高峰 peak (3) 5. 空中 in the air (1)	12	5	60
6) JOURNEY	1. 走过, 前行 walk (4) 2. 旅程, 征程, 历程 journey (1)	5	2	10
7) BODY	1. 脊梁 backbone (2) 2. 血脉 blood (1)	3	2	6
8) ECONOMY	1. 品牌 brand (1) 2. 财富 wealth (1)	2	2	4
9) RELIGIOUS	1. 信仰 faith (2)	2	1	2
10) FIRE	1. 火 fire (1)	1	1	1
11) OBJECT	1. 标签 label (1)	1	1	1
12) CONTAINER	1. 熔炉 furnace (1)	1	1	1
Total		147	41	955

Significantly, the CULTIVATION domain is the most prominent, with 48 instances across 11 types, resulting in a remarkable 528 resonances. The frequent use of plant-related terms, such as "growth," "cultivate," "harvest," "fruit," and "nurture," reflected the nurturing of skills and knowledge, the rewards from hard work, and the achievement of meaningful outcomes. This was followed by CONSTRUCTION domain, with 132 resonances, highlighting the use of building and supporting metaphors in an educational context. This domain emphasizes the essential and supportive role of education, illustrating how the process of constructing knowledge and skills is vital for personal and academic development. At the same time, the WAR domain provided the

competitive and strategic dimensions of education, describing it as a lively and demanding journey that requires careful planning, resilience, and a fighting spirit. On the other hand, categories such as RELIGION, LIGHT, OBJECT, and CONTAINER appeared less frequently, playing a more subtle role in the metaphorical landscape and offering fewer contributions to the broader narrative.

Example 44 was specifically chosen for their distinctive characteristics within the commonly employed metaphorical domains of CONSTRUCTION, while Example 45 focuses on the uniqueness of RELIGION domain.

Example 44

四年来,	你们	不满足于	在	象牙塔里
sì nián lái,	nǐ mén	bù mǎn zú yú	zài	xiàng yá tǎ lǐ
Four year since,	you	not satisfy	with in	ivory tower
修身立德、	学成	文武	艺。	
xiū shēn lì dé、	xué chéng	wén wǔ	Yì。	
in cultivate ones morality	Learn become	arts martial	Arts.	
你们	即将	走出	“象牙塔”。	
nǐ mén	jī jiāng	zǒu chū	“xiàng yá tǎ”。	
You	will	go out	"ivory tower."	

Over the past four years, you have not been satisfied with cultivating yourself in the ivory tower and learning civil and martial arts. You are about to emerge from the Ivory Tower.

Example 45

“两弹一星” 精神 所蕴含的 科学 和 教育 信仰

“liǎngdàn yì xīng”	jīngshén	suǒ yùn hán de	kē xué	hé	jiào yù	xìnyǎng
"atomic bomb"	spirit	contain	science	And	education	faith

始终	鞭策着	科大人	在	建设	航天	强国
shǐ zhōng	biān cè zhe	kē dà rén	zài	jiàn shè	háng tiān	qiáng guó
Always	urge	USTC people	In	build	spaceflight	power

的	道路上	勇担重任	冲锋在前。
de	dào lù shàng	yǒng dān zhòng rèn	chōng fēng zài qián。
's	road	take responsibility bravely	charge in front.

The spirit of Two Bombs, One Satellite, embodying a deep faith in science and education, constantly drives the people of the University of Science and Technology to take on significant responsibilities and lead the charge in building a powerful space-faring nation.

In architecture, the term "ivory tower" (象牙塔) evokes images of height, detachment, and grandeur (Farrell, 1939). In Example 44, however, there was a different meaning, symbolizing the traditional academic world of higher education, often seen as a realm disconnected from real-world problems and societal concerns. The phrase of "You are about to step out of the ivory tower" implied that students, who have spent their university years striving for academic and moral excellence ("cultivating themselves and mastering the arts and sciences"), are now prepared to leave the confines of this isolated, theoretical environment. They were ready to apply their knowledge and skills into real-world issues and challenges (Derek & Bok, 2001). USTC, in particular, has been urged to bridge the gap between academic achievements and societal needs, embracing a more socially responsible role in addressing practical, real-world problems.

In Example 45, "faith 信仰" took on a more specific meaning within a religious context, representing a steadfast belief in religious teachings, deities, or traditions. However, in this context, the phrase was used metaphorically to describe students' perseverance and dedication as a "test of faith." This conveyed a deep, unwavering commitment to scientific principles and a strong trust in the value of university education.

Since its founding, the University of Science and Technology of China (USTC) has been closely connected with China's technological advancement. Its pivotal role in the "Two Bombs, One Satellite" project highlighted a profound sense of national pride and a commitment to scientific innovation (Zi, 2015). This sense of dedication has been elevated to a level of reverence, elevating science and education to a near-sacred status. As a premier institution for research and education, USTC had a strong emphasis on fostering a scientific spirit and encouraging innovative thinking, treating academic research as a solemn, almost sacred duty.

4.2.6 The Contribution of the educational metaphors in Zhejiang University

As shown by Table 27, there was a diverse range of educational expressions in Zhejiang University, a total of 31 different types and 91 token of educational expressions across 12 various domains. The total number of resonances across all domains was up to 443.

Table 27 Source Domains and Educational Metaphors of University Zhejiang University

Source domain	Educational expression	Token	Type	Resonance
---------------	------------------------	-------	------	-----------

1) CULTIVATION	1. 培养, 养成, 培育 cultivate (16) 2. 成熟 ripe (1) 3. 根 root (4) 4. 生态 ecology (4) 5. 植 plant (2) 6. 成长 growth (2) 7. 果 fruit (1) 8. 收获 harvest (1)	31	8	248
2) CONSTRUCTION	1. 构建, 构筑, 创建 build (6) 2. 基础 foundation (5) 3. 平台 platform (1) 4. 空间 inner space (2) 5. 栋梁 pillar (1)	15	5	75
3) WAR	1. 奋斗, 战斗 fight (4) 2. 战略 strategy (2) 3. 变革, 革命 revolution (7) 4. 战胜 victory (1)	14	4	56
4) FAMILY	1. 家 home (6) 2. 母校 mother school (6)	12	2	24
5) FIRE	1. 光, 光芒 light (1) 2. 火 fire (1) 3. 灯 lamp (1) 4. 点燃 ignite (1)	4	4	16
6) JOURNEY	1. 走, 迈, 进, 行 go, walk (3) 2. 路 road (1)	4	2	8

7) NATURE	1. 星 star (1) 2. 高峰 the peak of mountain (2)	3	2	6
8) OBJECT	1. 标签 tags; labels (1) 2. 指南针 compass (1)	2	2	4
9) BODY	1. 血脉 blood (2)	2	1	2
10) PLACE	1. 港湾 harbor (2)	2	1	2
11) CONTAINER	1. 储备 reserve (1)	1	1	1
12) RELIGIOUS	1. 洗礼 baptism (1)	1	1	1
Total		91	33	443

The CULTIVATION domain stood out as the most prominent, leading in both frequency (31 tokens) and diversity (8 types), with a total of 248 resonances. Domains such as CONSTRUCTION, WAR, and FAMILY showed moderate usage, with 75, 56, and 24 resonances, respectively. Meanwhile, the NATURE, OBJECT, BODY, PLACE, CONTAINER, and RELIGION domains exhibited limited usage, each with fewer than 10 tokens. Among these, the CONTAINER, RELIGION, PLACE, and BODY domains show the least diversity, each containing only a single type.

The expressions within the CULTIVATION domain at Zhejiang University (Example 46) highlighted a focus on growth, development, and strength within its educational environment. In contrast, Example 47 clearly demonstrated the use of the LIGHT metaphor. These metaphors played a crucial role in shaping the university's

distinctive educational narrative and cultural identity, and could be further explored through the following representative examples.

Example 46

学生们 体验了 以 四课堂 融通 为 代表的
 xué shēng men tǐ yàn le yǐ sì kè táng róng tōng wéi dài biǎo de
 Students experienced as Four classes Integration as representative's

新教育 生态
 xīn jiào yù shēng tài
 new education ecology

The students have experienced the new education ecology represented by the four-classroom integration

Example 47

浙大学生 支教团 连续 20 多年 奔赴
 zhè dà xué shēng zhī jiào tuán lián xù 20 duō nián bēn fù
 ZJUS tudent volunteer Teaching continue 20 more years to

祖国 西部, 用知识 点燃 希望的 火种,
 zǔ guó xī bù, yòng zhī shí diǎn rán xī wàng de huǒ zhǒng,
 homeland west part with knowledge spark hopeful fire,

以 教育扶贫 助力 乡村振兴。
 yǐ jiào yù fú pín zhù lì xiāng cūn zhèn xīng。

through educate the poor assist rural revitalization.

The Zhejiang University student volunteer teaching team has been traveling to the western part of the motherland for over 20 years, igniting the spark of hope with knowledge, empowering rural revitalization through educational poverty alleviation.

The term "ecology(生态)" was typically used to describe the complex system and relationships between organisms (including plants) and their environments, covering aspects such as physiological traits and behavioral habits (Modern Chinese Dictionary, 2016). However, in Example 46, "ecology" was applied to the educational environment, focusing on how it supported student learning and development. Zhejiang University's "Four-Classroom Integration" model was compared to a plant ecosystem, emphasizing the diversity and interaction of various educational methods, ideologies, and practices. The Primary Classroom provided foundational knowledge and skills, while the Secondary Classroom fostered interdisciplinary collaboration through programs like the Student Research Training Program and campus cultural and sports activities. In addition, the Tertiary Classroom closely integrated with social practice, aligning students' professional skills with societal needs, while the Quaternary Classroom promoted internationalization through overseas study exchange programs. Much like the different elements of an ecosystem supporting a plant's life cycle, each type of classroom type played a crucial role in enhancing the overall educational experience.

In Example 47, the metaphor of "igniting the spark of hope with knowledge" was used, with "knowledge" compared to "the spark and fire of hope(点燃希望的火种)". The term "spark(点燃)" literally was referred to the small flame that ignites a larger fire. In this context, "spark " symbolically represented how education can dispel the "darkness" of ignorance and confusion. Zhejiang University's student teaching teams, by bringing knowledge to poor regions, sparked hope and opened educational opportunities for children. These initiatives not only fueled a passion for learning but also changed the course of children's lives by providing them with the tools for further education and personal growth. In addition, these efforts also contributed to the development of the

wider community, and drove social and economic progress. Just as a tiny spark that ignites a great fire, this metaphor vividly illustrated how education and knowledge could inspire optimism and foster societal development.

4.2.7 The Contribution of the educational metaphors in Tongji University

In Tongji University's educational expressions, there were a total of 122 tokens and 31 types across 10 domains, cumulatively resonating 553 times.

Table 28 Source Domains and Educational Metaphors of Tongji University

Source domain	Educational expression	Token	Type	Resonance
1) CULTIVATION	1. 培养, 培育 cultivate (18) 2. 土 soil (2) 3. 成长 growth (10) 4. 收获 harvest (5) 5. 青涩 green and unripe (1) 6. 成熟 ripe (3)	39	6	234
2) FAMILY	1. 家 family (17) 2. 母校 mother (14) 3. 孩子 children (1)	32	3	96
3) CONSTRUCTION	1. 建成, 筑 built (7) 2. 栋梁 pillars (2) 3. 基础, 基底 basement (7) 4. 柱 column (1) 5. 架桥 bridge (1)	18	5	90
4) WAR	1. 后盾 backing shield (1) 2. 奋斗, 攻克, 奋进, 攻坚 conquer (7) 3. 一线 first line (1)	15	6	90

	4. 改革 reform (1) 5. 战略 strategy (4) 6. 集团军 group army (1)			
5) JOURNEY	1. 走, 迈, 进, 行 go (5) 2. 路 road (3)	8	2	16
6) BODY	1. 唇 lip (2) 2. 齿 tooth (2) 3. 脊梁 backbone (1)	5	3	15
7) CONTAINER	1. 储备 reserve (1) 2. 注入 put into (2)	3	2	6
8) ECONOMY	1. 品牌 brand (1) 2. 财富 wealth (1)	2	2	4
9) NATURE	1. 浪 wave (1)	1	1	1
10) OBJECT	1. 书 book (1)	1	1	1
Total		122	31	553

The CULTIVATION domain makes a significant contribution to the overall resonance, reaching 234. This domain highlights the university's strong tendency to use plant-based metaphors in its educational discourse. Similarly, both the CULTIVATION and WAR domains exhibited great diversity, each with 6 unique types of expressions. In comparison, the CULTIVATION domain surpassed the WAR domain in token frequency, suggesting that plant-related expressions were more commonly used.

There were strong similarities between JOURNEY and BODY domains, with their resonance counts close, 16 for JOURNEY and 15 for BODY. While the JOURNEY domain had more tokens, 8 compared to 5 for BODY. In addition, the BODY domain stood out in diversity, with 3 different types of expressions, whereas JOURNEY only had 2. This suggested that BODY-related expressions were used less frequently but in a wider variety of ways. In contrast, the NATURE and OBJECT domains were at the lower end,

with the fewest tokens, types, and resonances, and each appearing only once in different categories. This analysis revealed the varying levels of focus and diversity within the thematic domains of Tongji University's educational narrative.

To further explore the use of educational metaphors, the analysis was conducted, focusing on examples from Tongji University. In Examples 48 and 49, there were distinct metaphorical expressions within the NATURE and OBJECT domains. These examples provided valuable insights into the diverse metaphors used in the educational context, shedding light on the university's unique perspectives and educational ideologies.

Example 48

新	时	代	的	同	济	“后浪”，	传	承	的	是	百	年	学	府
xīn	shí	dài	de	tóng	jì	“hòu làng”，	chuán	chéng	de	shì	bǎi	nián	xué	fǔ
new	era's	Tongji				"back wave",	inherit		is		century-old	institution		

与	民	族	命	运	休	戚	与	共	的	历	史	根	脉	
yǔ	mín	zú	mìng	yùn	xiū	qī	yǔ	gòng	de	lì	shǐ	gēn	mài	
and	nation	destiny			Share	weal	and	woe		historical		roots		

The "new waves" of Tongji in the new era carry on the historical roots shared between the century-old institution and the nations destiny.

Example 49

百	年	同	济	，	是	一	部	以	与	祖	国	同	行
bǎi	nián	tóng	jì	，	shì	yí	bù	yǐ	yǔ	zǔ	guó	tóng	xíng
One	hundred	years	tongji	，	is	a	as	with		motherland	together	walk	

以	“科	教	济	世”	为	题	的	厚	重	大	书。
yǐ	“kē	jiào	jì	shì”	wéi	tí	de	hòu	zhòng	dà	shū。

science and education help
with world as title 's heavy big **book**

The centennial Tongji University is a heavy **book** with the title of "Walking with the motherland to help the world through science and education".

In Example 48, the metaphor of "waves(浪)" was used to represent the rise of new generation of students at Tongji University and their potential to drive societal progress. This analogy was from the natural pattern of ocean waves, with each successive wave stronger than the last. This symbolized how new generations of students had the potential to surpass the previous one. Just as a wave begins with a single movement, Tongji University was established in response to China's modernization needs, gradually gaining strength, playing a crucial role during challenging periods like the Anti-Japanese War. After the founding of the People's Republic of China, the university became a key force in national engineering and infrastructure development. Similar to a wave reaching distant shores, Tongji continuously contributed to global sustainable development and international cooperation through initiatives like the "Belt and Road." The metaphor of "new waves" vividly showed the evolving identity and lasting impact of Tongji University.

In Example 49, the development of Tongji University was compared to a "book"(书), with each chapter representing a key aspect of the university's history, culture, spirit, and achievements, helping readers trace its growth over time. The early chapters presented the university's founding, its growth in academic disciplines, and its efforts in talent cultivation. Established during the Qing Dynasty, Tongji became one of China's first modern universities, particularly known for its medicine and engineering programs (Tongji University official website, 2023). In addition, there were also highlights on the university's major contributions in fields like civil engineering, architecture, transportation, and medical science, at home and abroad. The final chapters focused on the future development, including educational reforms, artificial

intelligence, interdisciplinary research, and innovations in areas such as smart cities and intelligent healthcare. Tongji University's development can be seen as a book that illustrated its pivotal role in education, research, and social service. With its rich content and diverse chapters, the story of Tongji was a unified narrative, presenting its significant influence in China's higher education and on the global stage.

4.2.8 The Contribution of the educational metaphors in Wuhan University

As shown by Table 29, there was a wide range of educational metaphors for Wuhan University, with a total of 792 resonances, 149 tokens, and 33 types.

Table 29 Source Domains and Educational Metaphors of Wuhan University

Source domain	Educational expression	Token	Type	Resonance
1. CULTIVATION	1. 成长 growth (17) 2. 培养, 培育, 育 cultivation (24) 3. 成果 fruit (2) 4. 耕耘 plough and weed (2) 5. 种子 seed (1) 6. 根 root (8) 7. 树 tree (6) 8. 收获 harvest (1)	61	8	488
2. FAMILY	1. 家 family (12) 2. 母校 mother (22) 3. 孩子 children (7)	41	3	123
3. CONSTRUCTION	1. 建设, 建立 build (5) 2. 平台 platform (1) 3. 大门 front door (1) 4. 基础 foundation (6) 5. 蓝图 blueprint (1) 6. 栋梁 pillars (1)	15	6	90

4. WAR	1. 战线, 一线 front line (2) 2. 改革 reform (2) 3. 奋斗者 fighter (1) 4. 奋战, 战胜 fight (3)	8	4	32
5. JOURNEY	1. 走, 迈, 进, 行 go (9) 2. 领路人 guide (1)	10	2	20
6. NATURE	1. 浪 wave (1) 2. 高峰 the peak of mountain (1) 3. 风 wind (1) 4. 云 cloud (1)	4	4	16
7. BODY	1. 血 blood (1) 2. 脊梁 backbone (2) 3. 心 heart (2)	5	3	15
8. ECONOMY	1. 产品, 生产 product (2) 2. 财富 wealth (1)	3	2	6
9. CONTAINER	1. 注入 put into (2)	2	1	2
Total		149	33	792

At Wuhan University, an analysis of educational metaphors across 9 domains was conducted, revealing that the CULTIVATION domain was the most significant, with 61 tokens, 8 types, and a high resonance of 488. This was followed by FAMILY domain, with 41 tokens, but has fewer types (only 3) and a lower resonance of 123. The CONSTRUCTION and WAR domains showed notable differences in resonance; the CONSTRUCTION domain had a resonance of 90, while the WAR domain had a much smaller resonance of 32. The JOURNEY, NATURE, and BODY domains, showing a reasonable number of tokens and types, had relatively low resonance, indicating that

they are used less frequently in the educational narrative. The ECONOMY domain was quite limited, with only 3 tokens and 2 types, while the CONTAINER domain was the least represented, with just 2 tokens and 1 type, suggesting that these domains were more narrowly focused in their application.

To gain a deeper understanding of differences in educational metaphors, attention was paid to the JOURNEY and CULTIVATION domains at Wuhan University. Example 50 was selected for its unique depiction of the role of teachers in the educational process. Example 51, as an adaptation of poetry written by Wuhan University students, served as a typical metaphorical expression. This detailed analysis helped uncover how these metaphors were intricately woven into the university's educational frameworks, highlighting the variety of metaphors that shaped its distinct educational philosophies and approaches.

Example 50

要让	辅导员	真正	成为	你们的	知心人、
yào ràng	fǔ dǎo yuán	zhēn zhèng	héng wéi	cnǐ mén de	zhī xīn rén、
Must Let	counselor	really	become	your (students)	confidant,

贴心人	与	领路人
tiē xīn rén	yǔ	lǐng lù rén
considerate person	and	guide

*Let the counselor really become your confidant, close friend and **guide**!*

Example 51

武大	的	学子	也是	树，	是	带着
wǔ dà	de	xué zǐ	yě shì	shù,	shì	dài zhe
Wuhan University	of	Students	also are	trees	is	with

武大	之树的	魂魄	走向	四面八方的。
wǔ dà	zhī shùde	hún pò	zǒu xiàng	sì miàn bā fāng de。
Wuhan University	tree's	soul	go to	all directions

武大	学子的	根	不管	植于	何处，
wǔ dà	xué zǐ de	gēn	bù guǎn	zhí yú	hé chù,
Wuhan University	Students's	root	no matter	plant in	anywhere

总会	有	一支	伸向	珞珈山。
zǒng huì	yǒu	yì zhī	shēn xiàng	luò jiā shān。
always be	have	one	stretching toward	Luojia Shan

The students of Wu University are also trees, carrying the spirit of the tree of Wu University to all directions.

No matter where the root of Wujia students is planted, there is always one that reaches to the Luoja Mountain (one of the landmarks of Wuhan University).

The term "领路人(guide)" literally refers to someone who leads the way, during travel, exploration, or navigating unfamiliar territory (Modern Chinese Dictionary, 2016). In Example 50, faculties were metaphorically described as "guides." These individuals took on important responsibilities, including ideological and political education, daily management, mental health support, and career planning. They served as a crucial link between students and the university administration, helping students adjust to university life, develop personal qualities, and address challenges in their studies and daily lives. In Wuhan University, the principle was emphasized, "Centering on Students' Life, Cultivating Morality, Serving the Comprehensive Growth and Talent Development of Students" as the central focus of counselor work (Da-zhi, 2002).

In Wuhan University, A Tree and Mount Luojia are long considered as symbols of the campus, witnessing its growth and transformation over the past 120 years. These landmarks have weathered more than a century of challenges, holding countless stories, upholding traditions, radiating elegance, and bearing witness to generations of students flourishing on Mount Luojia. In Example 51, graduates were creatively compared to "trees(树木)," with teachers compared to gardeners who nurture students, helping them take root, absorb the nutrients of knowledge, and grow strong and resilient. The "roots(根)" symbolized the foundation that students build through their education, representing the knowledge, values, and culture gained from the university, which would guide them in their future lives and careers.

In the phrase "the soul of Wuhan University is spreading in all directions", the soul here metaphorically refers to the Wuhan University's core values—independent thinking, freedom, openness, and proactivity. And spreading to all directions further means as the students graduate and move into the wider world, they may carry the them the institution's enduring spirit. These principles and spirit are not confined to the campus but are being disseminated through its students, faculty, and alumni, influencing diverse fields and communities around the globe. Wuhan University envisioned its graduates as carriers of this spirit, extending its influence beyond the campus and into society, ultimately creating a global impact. This vision aligned with the university's educational philosophy of "pursuing excellence, openness, inclusiveness, and social responsibility." By instilling these principles, Wuhan University aims to cultivate graduates who not only excelled academically but also contributed to society, realizing their personal potential and value. These metaphor of the "tree" and "root" further enriched this narrative. Just as a tree's roots anchor it firmly to the ground, the university's education and values deeply rooted students in its ethos. No matter where life takes them, graduates remain connected to their university, carrying its spirit with them as they step into the world.

4.2.9 The Contribution of the educational metaphors in Nanjing University

The data of educational metaphors in Table 30 at Nanjing University reveals there marked its extensive usage with 130 tokens and an impressive range of 44 types, culminating in a significant resonance of 985.

Table 30 Source Domains and Educational Metaphors of Nanjing University

Source domain	Educational expression	Token	Type	Resonance
1) CULTIVATION	1. 植 Plant (3) 2. 根 Root (10) 3. 青涩 Green and unripe (1) 4. 成长 Growth (8) 5. 成熟 ripe (1) 6. 果 Fruit (2) 7. 培养, 培育 Cultivate (17) 8. 营养 Nutrition (1) 9. 叶 Leaf (1) 10. 树 Tree (1) 11. 土 soil (1) 12. 种子 seed (2) 13. 播种, 撒播 sow (2)	50	13	650
2) WAR	1. 武装 Armed (1) 2. 改革、革命 revolution (2) 3. 桂冠 victory (1) 4. 利器 weapon (1) 5. 战士 Warrior (1) 6. 后备力量 backing force (1) 7. 战胜, 攻克, 奋战 conquer, fight (4) 8. 后盾 backing shield (2)	14	9	126

	9. 军令状 military order (1)			
3) FAMILY	1. 家 home (10) 2. 母校 mother school (18) 3. 子 children (2)	30	3	90
4) JOURNEY	1. 走, 迈, 进, 行 go, move (5) 2. 步子 step (1) 3. 历程 journey (3) 4. 路 road (3)	12	4	48
5) NATURE	1. 高峰 the peak (1) 2. 云 cloud (4) 3. 空中 in the air (1) 4. 风雨 wind and rain (1)	7	4	28
6) CONSTRUCTION	1. 建, 建立 build (6) 2. 基础 foundation (1) 3. 栋梁 pillar (2)	9	3	27
7) BODY	1. 心 heart (1) 2. 基因 gene (1) 3. 血液 blood (1)	3	3	9
8) ECONOMY	1. 产物 product (1) 2. 财富 wealth (1)	2	2	4
9) OBJECT	1. 拼图 puzzle (1)	1	1	1
10) PLACE	1. 港湾 Harbor (1)	1	1	1
11) RELIGIOUS	1. 信仰 faith (1)	1	1	1
Total		130	44	985

A predominant focus can be shown on the CULTIVATION domain, compared to other 10 domains, which was characterized by a high usage with 50 tokens and a remarkable diversity of 13 types, achieving a substantial resonance of 650. Significantly, this dominance stressed a strong emphasis on growth, rooting, and nurturing themes on education. In comparison, the WAR domain, although significant with 14 tokens and 9 types, was less prominent than CULTIVATION, indicating a moderate use of warfare and fighting metaphors to discuss education.

Although the FAMILY domain contained a large number of tokens (with 30 tokens), it has fewer types (3 types), indicating that this domain primarily focuses on a few cores but certain concepts or images, such as *"home," "parents,"* or *"children"* when addressing education-related themes. Additionally, other domains like JOURNEY, NATURE, CONSTRUCTION, BODY, and ECONOMY displayed a balanced distribution of tokens and types but are less resonant overall. Conversely, the domains of OBJECT, PLACE, and RELIGION were minimally represented, each with only 1 token and type.

The following part narrowed down to the particular examples at this university in order to gain a deeper understanding of how metaphors related to CULTIVATION—the most commonly used metaphorical domains—were employed in an educational context to reflect the university's ethos and values.

Example 52

你们	积极主动地	参与	到	“三三制”	本科
nǐ mén	jī jí zhǔ dòng dì	cān yù	dào	“sān sān zhì”	běn kē
You	actively	participated	in	"Three-three-system"	undergraduate
培养	体系，	学会	独立	思考	和 自主 选择
péi yǎng	tǐ xì,	xué huì	dú lì	sī kǎo	hé zì zhǔ xuǎn zé
cultivate	system,	learn	independent	think	and autonomous choose

You have actively participated in the "three-three-system" undergraduate cultivating system, and learned to think and choose independently.

Example 53

学成毕业,	是	南大	学习	中	最后
xué chéng bì yè,	shì	nán dà	xué xí	zhōng	zuì hòu
Graduating from		Nanjing			
	is		learning	in	last
school		University			

一块	小小	的	“拼图”
yí kuài	xiǎo xiǎo	de	“pīn tú”
piece	small	's	“puzzle”

Graduating from school is the last small "piece" of the "puzzle" in studying at Nanjing University.

The Example 52 firstly presented the CULTIVATION metaphor by using "cultivate(培养)" process of a plant to refer to the "Three-Three System" training frame for the undergraduate in Nanjing University (Kai et al., 2013). Such training and teaching frame just like providing more specific care tailored to its type for different plants, "Three-Three System" was divided the four-year study into Three stages(general education, specialized training, and development stages) and Three Development Paths(professional academics, interdisciplinary integration, and employment or entrepreneurship) for undergraduate to branching out, flowering, or bearing fruit, helping them to have a systematic, flexible, and personalized educational experience, cultivating self-growth and career goals.

For Example 53, "puzzle(拼图)" worked as a metaphor for the whole learning process. Literally, a puzzle was composed of many small pieces, each with its unique shape and position, all indispensable. Comparing learning and graduation to a "puzzle"

metaphorically represented students' education at Nanjing University as a systematic process that must be completed step by step. Graduation was not an isolated event but a natural continuation of the overall learning journey. This metaphor also reflected Nanjing University's emphasis on the concept of "process education", highlighting the importance of each stage and movement of learning. Graduation, described as "the last small piece of the puzzle," signified that the educational process at Nanjing University was not a singular experience but an interconnected whole, with each stage laying the foundation for students' growth and development.

4.2.10 The Contribution of the educational metaphors in Harbin Institute of

Technology

Under 10 different source domains, the Table 31 below listed 156 various educational expressions categorized across 48 types, achieving the resonance of 832, as used by Harbin Institute of Technology.

Table 31 Source Domains and Educational Metaphors of Harbin Institute of Technology

Source domain	Educational expression	Token	Type	Resonance
1) CONSTRUCTION	1. 基础 basement (7) 2. 桥梁 bridge (1) 3. 栋梁 pillar (4) 4. 创建, 建设 build (15) 5. 结构, 框架 structure (10) 6. 支撑 support (1) 7. 平台 platform (1)	39	7	273
2) CULTIVATION	1. 收获 harvest (7) 2. 根 root (2) 3. 发芽 sprout (1)	29	9	261

	4. 成长 growth (9) 5. 培养, 涵养, 培育 cultivate (5) 6. 成果, 硕果 fruit (2) 7. 青涩 green and unripe (1) 8. 成熟 ripe (1) 9. 土 soil (1)			
3) FAMILY	1. 家 family (12) 2. 母校 mother (30) 3. 故里 hometown (1)	43	3	129
4) WAR	1. 攻坚, 奋战, 克服 fight (4) 2. 后盾 backing shield (1) 3. 告捷 victory (1) 4. 重器 sharp weapon (1) 5. 改革 revolution (1) 6. 冲锋 assault (1)	9	6	54
5) NATURE	1. 风 wind (1) 2. 星 star (2) 3. 浪 wave (1) 4. 云 cloud (3)	7	4	28
6) ECONOMY	1. 产出 product (1) 2. 财富 wealth (3) 3. 品牌 brand (4)	8	3	24

7) FIRE	1. 光, 光芒 light (1) 2. 火, 火种 fire (2) 3. 点亮, 照亮 ignite (2)	5	3	15
8) OBJECT	1. 摇篮 cradle (2) 2. 名片 business card (1) 3. 标签 tags/labels (1)	4	3	12
9) JOURNEY	1. 走, 迈, 进, 行 go (2) 2. 路 road (1) 3. 历程 journey (1)	4	3	12
10) CONTAINER	1. 倾注 pour into (1) 2. 炉 furnace (2) 3. 储存 reserve (1)	4	3	12
11) PLACE	1. 港湾 harbour (3) 2. 加油站 gas station (1)	4	2	8
12) BODY	1. 心 heart (1) 2. 血 blood (1)	2	2	4
Total		156	48	832

The CONSTRUCTION domain had the highest resonance of 273 occurrences, featuring commonly used terms like "basement," "bridge," "pillar," and "build," emphasizing the strong focus on building and structural development concepts within the educational context. This was followed by the CULTIVATION domain, with expressions such as "growth," "harvest," and "cultivate," reflecting a significant use of

growth and nurturing metaphors, and a resonance of 261. Then, FAMILY domain introduced terms like "family," "mother," and "hometown," with a resonance of 129, underscoring themes of familial bonds and a sense of belonging. Interestingly, unlike other universities where the WAR metaphor was most frequently used, the WAR-related metaphors here were less prominent, with a resonance of only 54. Lastly, the BODY domain, the least utilized, consisted of just 2 tokens across 2 types, including terms like "heart" and "blood," with a minimal resonance of only 4.

Example 54 and 55 related to the WAR and PLACE domains were presented, further highlighting the typical features and values of this university.

Example 54

教职工	冲锋	在前,	奋战	在	线上	教学、
jiào zhī gōng	chōng fēng	zài qián,	fèn zhàn	zài	xiàn shàng	jiào xué、
Teachingstaff	assault	in	fight ,	in	Online	teaching,
就业	服务、	心理	辅导、	安全		
jiù yè	fú wù、	xīn lǐ	fǔ dǎo、	ān quán		
employment,	service,	psychological	counseling,	Security		
保卫、	后勤	保障	和	医疗	服务	
bǎo wèi、	hòu qín	bǎo zhàng	hé	yī liáo	fú wù	
guard,	logistics	support,	and	medical	services	

The faculty has worked hard in online teaching, employment services, psychological counseling, security, logistics and medical services.

Example 55

当 你 感到 知识 匮乏 需要 充电的 时候,

dāng nǐ gǎn dào zhī shí kuì fá xū yào chōng diǎn de shí hòu,

When you feel knowledge lack need charge's time,

哈工大 是 你的 **加油站。**

hā gōng dà shì nǐ de jiā yóu zhàn.

Harbin is your **gas station.**

When you feel lack of knowledge and need to be charged, Harbin is your **gas station**.

In Example 54, during the pandemic, the various routine educational and administrative tasks of teaching staff were described as “charging forward”(冲锋) and “battling or fighting on the front lines(奋战在前线)”. Such acts of bravery on the battlefield highlighted their courage and adaptability in facing challenges during the pandemic. Under the shadow of the pandemic, they quickly adapted to the transition from offline to online teaching, overcame technical challenges, maintained student engagement and enthusiasm for learning, and demonstrated a spirit of exploration and dedication, like warriors clad in armor, stepped into this unknown battlefield without hesitation. Take Teacher Yan Jinhong as example, she recorded videos for all topics in advance, each topic, and repeatedly practiced live video teaching with colleagues in dozens, or even hundreds of times, exchanging feedback on teaching effectiveness in order to provide perfect class for students.

These metaphorical expressions also reflected the urgency and adaptability of teaching staff in the face of sudden events and challenges. Viewing educational activities as a war can inspire educators fighting spirit and add momentum to collectively advance the progress of the educational cause.

A “gas station(加油站)” is a place where cars and other vehicles could be refueled, ensuring the energy needed to keep moving forward on the journeys (Modern Chinese Dictionary, 2016). Just as vehicles need fuel to keep running, people also need

to continuously learn and gain new knowledge to maintain their energy and drive to progress. In this way, Harbin Institute of Technology (HIT) acted as a "gas station" for its students, offering a unique and comprehensive educational philosophy and training model that fuels their growth. For example, the "leading mentor + multidisciplinary team" approach (Ru, 2014), which focuses on engineering applications, along with its policies promoting multidisciplinary innovation teams and partnerships with enterprises, is like providing students with custom, high-quality fuel. These initiatives could ensure that students are equipped with the skills, knowledge, and practical experience they need to excel in their future development.

4.3 The Effects of Metaphors on Chinese Students' Reasoning Across Different

Metaphorical Frames

In the experimental design, the metaphors of WAR, CONSTRUCTION and CULTIVATION were chosen, based on the analysis of the texts of commencement speeches of the ten most prestigious schools in China, as the three metaphorical frames, which represent different theoretical perspectives on education and strategic understanding of educational action. These metaphors are not only representative in terms of semantic frequency, but also reflect the diverse values of the Chinese education system: in the WAR frame, education is seen as a competitive and challenging process; In the CONSTRUCTION frame, education is seen as a systematic process that requires collaboration, design and accumulation; while in the CULTIVATION frame, education is understood as a process of support, care and growth. These metaphorical frames influence the way students conceptualize and reason when thinking about educational practices through different source domains and target domains. Furthermore, the use of Non-metaphorical frame as a control group, it may ensure that any differences or effects observed are specifically due to the use of metaphorical frames, rather than other variables like language style, emotional tone, or content.

Table 32 Frequency and Main Code of Students' Responses on Educational Questions

Question	Main Code	Construction	Cultivation	War	Non-metaphorical
1	Educational Approaches	28	14	13	9
	Evaluation Methods	10	17	7	6
	Learning Methods	7	8	15	8
	Comprehensive Quality Development	5	2	8	-
	Career Planning	3	5	3	14
	Psychological and Emotional Support	1	3	13	-
	Learning Culture development	-	1	-	-
	Social Responsibility and Community Engagement	-	-	-	5
2	Education Fairness	7	8	12	5
	Education Resource Sharing	15	10	9	8
	Teacher Development and Curriculum Reform	9	1	5	4
	Self-Development	1	-	-	-

	Financial Assistance	11	8	3	6
	Infrastructure Development for the Rural Schools	4	-	8	7
	Psychological Support and Emotional Care	-	17	2	8
	Community Support Programs	-	-	-	6
Total		101	94	98	86

As shown in the table 32, the three dominant metaphorical frames—WAR, CULTIVATION, and CONSTRUCTION—provided a greater number and total of strategy items comparing to the non-metaphorical frame. Furthermore, the CONSTRUCTION frame proposes the highest number and total of strategy items, with a total of 101, significantly higher than the other two metaphorical frames. This suggests that students tend to favor a collaborative, structured, and systematic approach to understanding and solving educational problems. This result reflected that metaphorical approaches may offer cognitive advantages by engaging students in creative thinking and providing multiple spaces for deeper understanding. Non-metaphorical strategies, on the other hand, may appear more straightforward but could be perceived as less engaging and appeal, potentially leading to lower student involvement comparatively.

The primary focus and proposed solutions varied across the different metaphorical frames. The Educational Approaches received high attention in CONSTRUCTION frame, Evaluation Methods in CULTIVATION frame and Learning Strategies in WAR frame in addressing Question 1. When comparing another educational question of inequality, the CONSTRUCTION frame emphasized resource sharing through collaborative and systematic approaches. The CULTIVATION frame focused most on psychological and emotional support, highlighting students' preference for caring solutions. Meanwhile, the WAR frame focused on policy support, guiding

students to make decisions from a competitive and strategic perspective. While the non-metaphorical category shows a stronger focus on career planning and community support programs, with the total count across frames indicating varied emphases on different educational aspects. Such findings showed metaphorical frames provide students with different cognitive pathways and problem-solving strategies, leading to varied approaches to educational questions and decisions, which was consistent with the hypothesis.

This next section explores the responses of participants under reading materials of different metaphorical frames, focusing on the WAR, CONSTRUCTION, and CULTIVATION metaphors. Each frame is analyzed across multiple dimensions, including the detailed responses in Group 1 to 4, comparisons between experimental and control groups (Group 5), and social factors such as gender and educational level.

4.3.1 CULTIVATION Frame Results

Overall Response Patterns in Different Groups (Group 1-4)

To better understand how the CULTIVATION frame influenced students' reasoning, the overall responses from the four experimental groups (Group 1-4) were analyzed, so we can gain insights into how different groups engage with the metaphor and how it shapes their reasoning and decision-making in educational contexts.

Question 1: How does educational theory fit into practice?

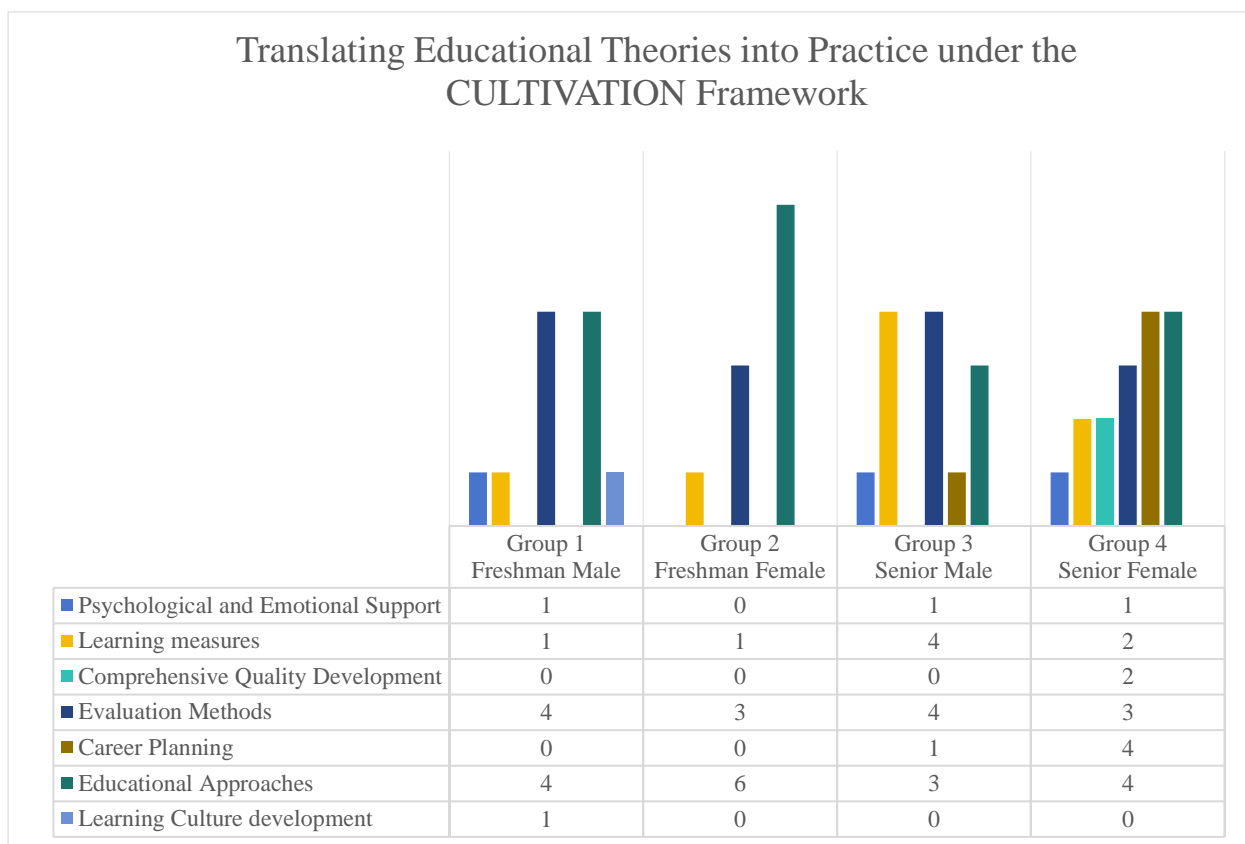


Figure 6 the distribution of responses of Q1 under the CULTIVATION Framework

Guided by the CULTIVATION framework, students from Groups 1 to 4 proposed seven distinct strategies for integrating educational theories into practical application, offering a total of 50 keywords. Group 4 presented the most keywords and strategies, reflecting the group's various perspectives and approaches to their implementation.

The theme of **Educational Approaches** was the most frequently discussed across all groups, with a total of 17 mentions, and Group 2 (Freshman Female) led the discussions on this approach. Six responses mostly referred to the role a teacher plays in students' development: *"Teachers should design diverse course materials to promote students' all-around development."* Furthermore, Groups 1 and 4 both had four responses each. Participants in Group 1 highlighted that *"practice is key to making theory 'blossom and bear fruit.' Without practice, theory is like a seedling that has*

never grown." In Group 4, the focus was on creative teaching methods, with one participant stating, *"Teachers should use creative methods to foster each student's uniqueness, helping us showcase our personal strengths."* Keywords such as *"blossom and bear fruit," "seed and grow,"* and *"foster"* collectively embodied the core idea of the CULTIVATION framework, which is to foster the growth of theory through nurturing and practice.

Meanwhile, another important direction discussed by the students was **Evaluation Methods**, with a total of 14 mentions. Both groups shared a similar number of keywords on this topic, meaning they believe the implementation of educational theories can be better realized through *"diversified and flexible assessment approaches," "AI-based assessment,"* or *"project assignments, group discussions, and class participation."* One participant in Group 1 also suggested, *"Grades are important, but even more so is the cultivation of comprehensive abilities."* These responses also mention keywords related to the CULTIVATION framework and reveal how students perceive the flexibility of the assessment system in developing each student's full potential.

Further, students across all groups highlighted **Learning Measures**. Both Group 3 and Group 4 placed the most emphasis on offering elective courses and internships to nurture students' individual interests and strengths, while Groups 1 and 2 stressed the need for students to focus on individual learning planning and tools, setting goals in education, and adjusting learning strategies.

Psychological And Emotional Support was a comparatively less frequently mentioned theme but remained relevant and important. Group 1 highlighted the role of teachers in *"fostering student growth through timely communication to help them address gaps in learning."* Group 3 also emphasized the need for *"mental health services to help students cope with academic and life pressures,"* while Group 4 noted that teachers should have *"individual conversations with students to understand their personal interests and hobbies."*

Interestingly, only Groups 3 and 4 (seniors) mentioned **Career Planning** strategies, possibly because they are closer to graduation and are thinking about how

their education translates into future career opportunities. What's more, the fact that **Comprehensive Development** was only addressed in Group 4 suggests a holistic approach to education, emphasizing the balance between academic, social, emotional, and career growth, while **Learning Culture** was mentioned solely in Group 1, highlighting the value of continuous learning and personal growth throughout life.

Overwhelmingly, the CULTIVATION framework guides students to focus more on the process of nurturing, supporting, and growing by emphasizing how educational practice must progress at an individual and/or collective level.

Question 2: How to address educational inequalities?

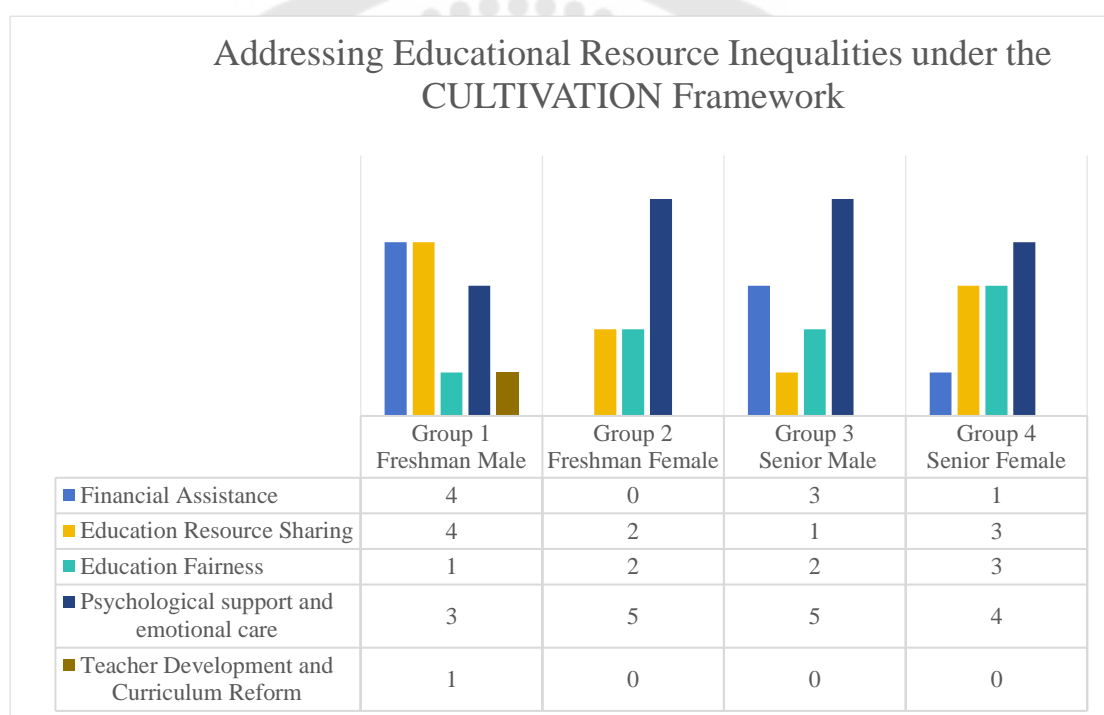


Figure 7: the distribution of responses of Q2 under the CULTIVATION Framework

On the issue of educational resource allocation, participants across groups proposed five different strategies, as shown in the Figure 7. Group 1 presented the highest number of keywords comparatively.

The theme that received the most attention overall was **Psychological Support and Emotional Care**, with a total of 17 mentions. Group 2 and Group 3 each mentioned it 5 times, Group 4 mentioned it 4 times, and Group 1 mentioned it 3 times. All groups

unanimously agreed that creating a supportive and understanding environment and providing appropriate emotional support is key to helping students overcome educational resource inequalities. By contrast, Group 1 proposed *“setting up psychological support systems such as group counseling and mental health seminars,”* while Group 2 emphasized that *“schools and teachers should create an inclusive and supportive environment”* where students can freely express their difficulties and needs. Similarly, Group 3 also suggested that schools and teachers should avoid treating students differently based on their academic performance. Group 4 particularly emphasized *“providing a growth-promoting environment”* for students from low-income families. This framework emphasizes growth and careful nurturing, encouraging students to offer solutions from a well-rounded and humanistic perspective.

Education Resource Sharing became another major topic, with a total of 10 mentions. Group 1 again mentioned this the most, focusing on suggesting technology and resource allocation as ways of bridging access gaps, *“helping all students thrive.”* Other groups further emphasized the use of online platforms and video resources to bring educational content to underdeveloped areas. Similarly, Group 3 and Group 4 discussed how renowned university professors could record micro-lectures for students in impoverished areas, enhancing classroom cooperation and active participation in training activities.

Meanwhile, students also mentioned **Education Fairness** and **Financial Assistance**, with 8 mentions for each. This suggests that students believe inequality can be effectively alleviated through fair policy support and financial assistance. Notably, Group 1 shared the most keywords on these issues. However, it is worth noting that **Education Fairness** was addressed by all groups, while **Financial Assistance** was only mentioned by three groups. In terms of Education Fairness, responses from Group 1 emphasized the need for policies to be *“transparent and fair”* to ensure resources reach areas where they are most needed. Other responses from Group 4 suggested that preferential admission policies could be explored in underdeveloped regions to balance opportunities for students. On the other hand, the eight responses related to financial

aid across all groups emphasized the need to relieve the financial burdens on poor rural families.

Based on the data from the CULTIVATION framework across Groups 1 to 4, participants proposed various strategies to address educational challenges. For Question 1, the most common answer focused on Educational Approaches, such as diverse teaching methods and combining practice with theory in different class settings. For Question 2, the focus was on providing psychological support, such as special counseling and support systems, as well as communication between teachers and parents. Among these responses, the most interesting one was *“practice is key to making theory ‘blossom and bear fruit,’*” which uses a CULTIVATION metaphor to describe the relationship between theory and practice. Through reading previous materials related to this metaphorical framework, participants may have gained a deeper and more concrete understanding of education and, consequently, applied the metaphor to address educational issues in a more insightful way.

Comparison between Experimental Group and Control Group

Table 33 Comparison of Key Responses in Experimental and Control Groups

Question	Experimental Group	Total	percentage	Control Group	Total	percentage
Q1	Educational Approaches	7	34%	Internship and Practical Opportunities	10	23.8%
Q2	Psychological support and emotional care	17	34%	Access to Technology	8	18.1%

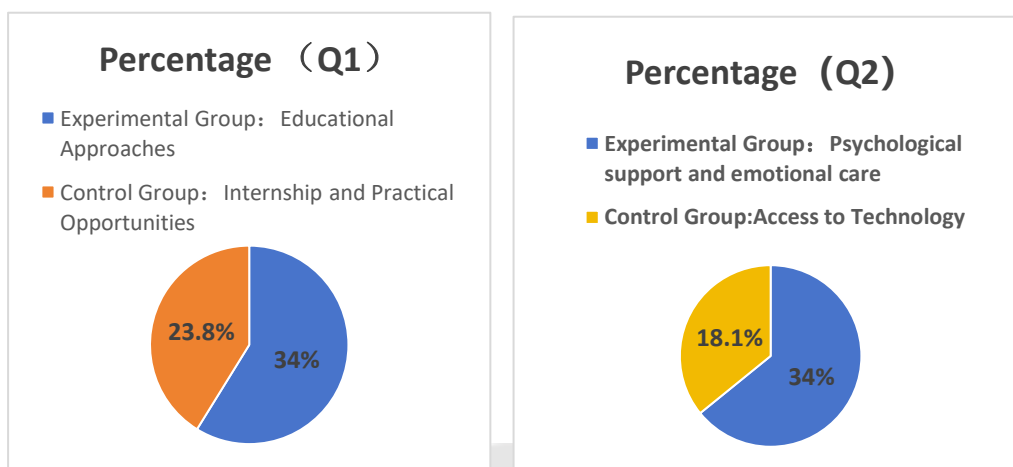


Figure 8 Distribution Percentages of Responses between Experimental Group and Control Group Percentages

The results show a clear difference in the response patterns of participants within the CULTIVATION framework compared to those in the control group for both questions.

In Question 1, participants in the experimental group identified **Educational Approaches**, with 17 mentions and covering 34% of total percentage. This suggests a view of education that emphasizes nurturing and fostering teaching methods, creating a supportive, growth-oriented environment for students to thrive. In contrast, the control group primarily emphasized **Internship and Practical Opportunities** (with 23.8%), indicating a preference for experiential, hands-on methods of bridging theory and practice.

In Question 2, regarding ways to address inequities in educational resources, guided by the CULTIVATION framework, the experimental group focused more on **Psychological Support and Emotional Care** (17 mentions and 34%), highlighting the importance of mental well-being as a solution to reduce disparities in education. The control group, on the other hand, concentrated more on **Access to Technology** (8 mentions and 19%), suggesting that technological solutions could improve the learning environment and educational outcomes.

These distinct differences illustrate the impact of the CULTIVATION framework in guiding participants toward solutions that emphasize educational approaches and psychological support, aligning with the idea of education as a process of nurturing and development. In contrast, the control group, lacking a metaphorical framework, leaned more toward practical, resource-oriented solutions, such as internships and technology access.

Gender Differences

Under the CULTIVATION frame, differences between gender were noticed in terms of how respondents answered questions regarding how educational theory would be applied in practice.

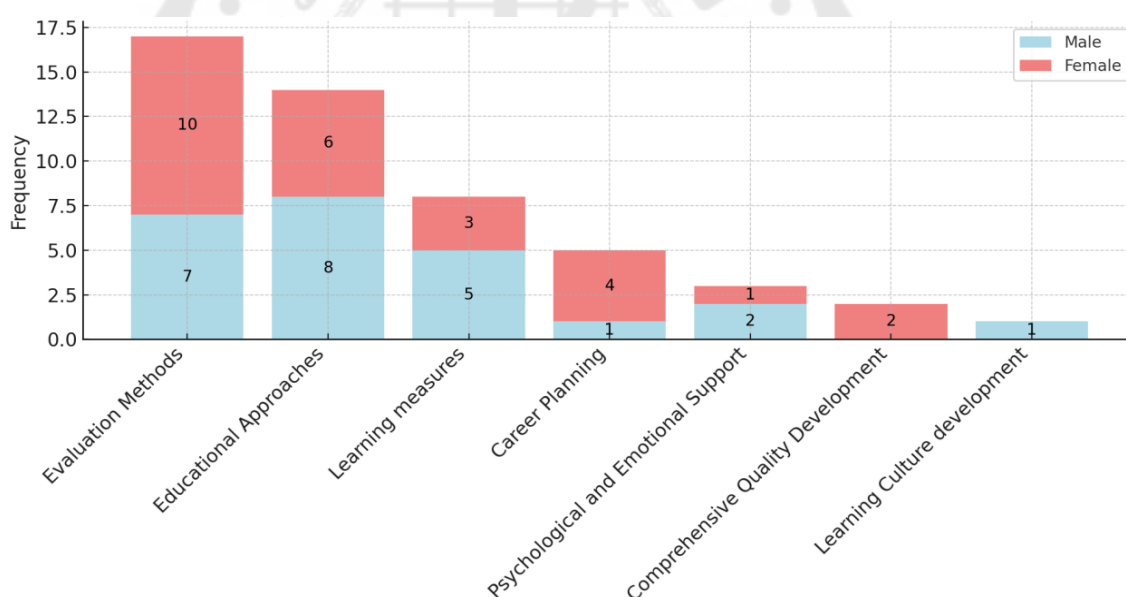


Figure 9 Gender Distribution of Q1 under the Frame of CULTIVATION

First of all, females seem to focus more on Evaluation Methods and they provided 10 mentions while males accounted for 7 mentions. The finding depicted that immediate growth and learning outcomes through evaluation would feature strongly and mainly by females. The contribution of males of Teaching Methods was higher than females at 8 mentioning against 6, indicating that males inclined more towards and emphasized the

broader, long-term development through systematic teaching methods than females. These differences reflected varying strategies within the CULTIVATION metaphor—females tend to emphasize assessment and measurable outcomes, indicating a focus on how growth is evaluated. In contrast, males are more concerned with broader teaching methods, reflecting an emphasis on the instructional process that supports long-term development.

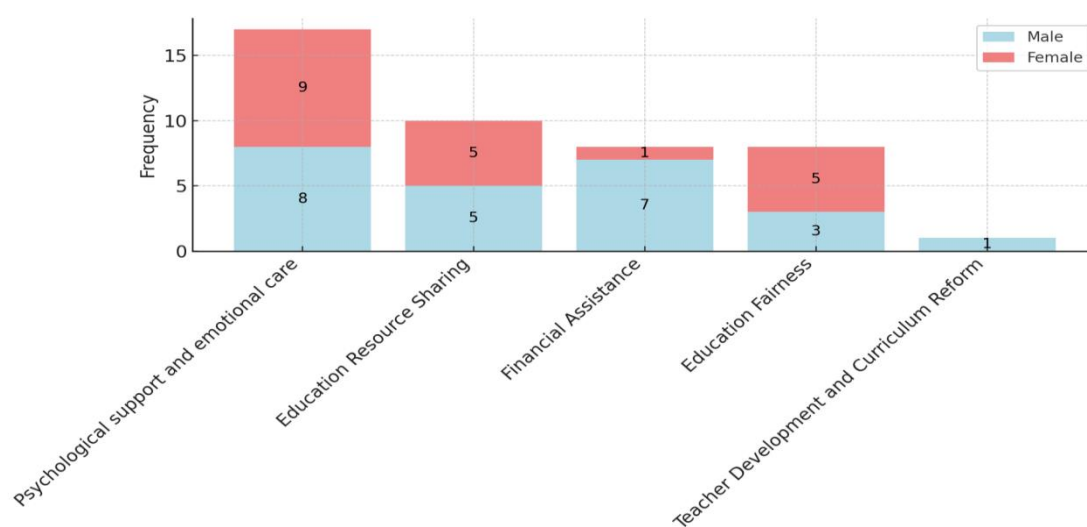


Figure 10 Gender Distribution of Q2 under the Frame of CULTIVATION

For the second question, **Psychological Support and Emotional Care** stood out as the most frequent category (17 mentions), with males only contributing 8 mentions and females contributing 9 mentions. This highlighted a shared understanding across genders of the importance of emotional well-being in addressing educational inequities, with females showing a slightly higher emphasis. **Financial Assistance** was overwhelmingly inconsistent between genders with males giving 7 mentions while females gave 1, thus indicating the existence of a male-specific solution for providing financial help. These results indicated that under the CULTIVATION frame, males place significant emphasis on practical solutions such as financial assistance, while females prioritize fairness and emotional care in addressing educational inequities.

Educational Level Differences

Differences among these groups - freshmen (Group 1 vs. Group 2), seniors (Group 3 vs. Group 4)-became relevant in the reasoning on solving educational problems.

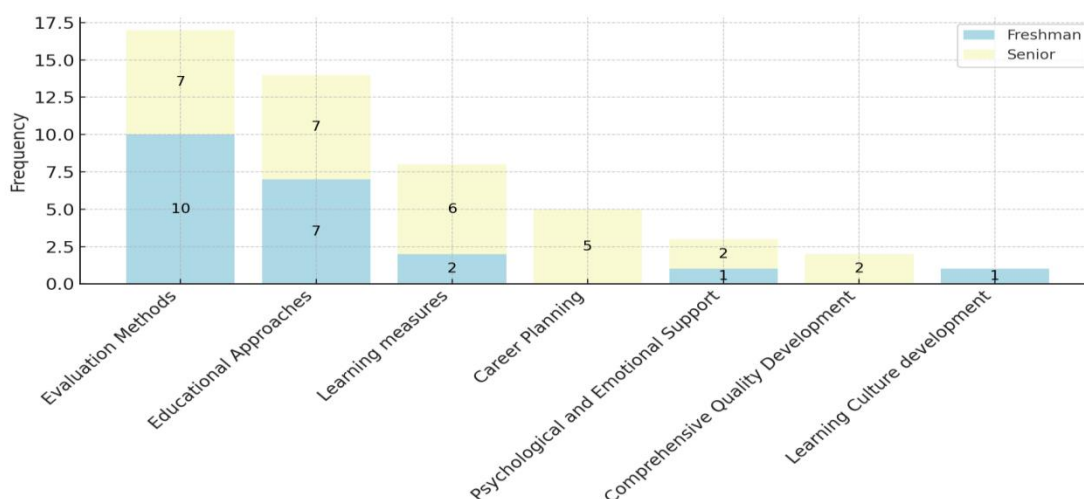


Figure 11 Education Levels Differences of Q1 under the CULTIVATION Frame

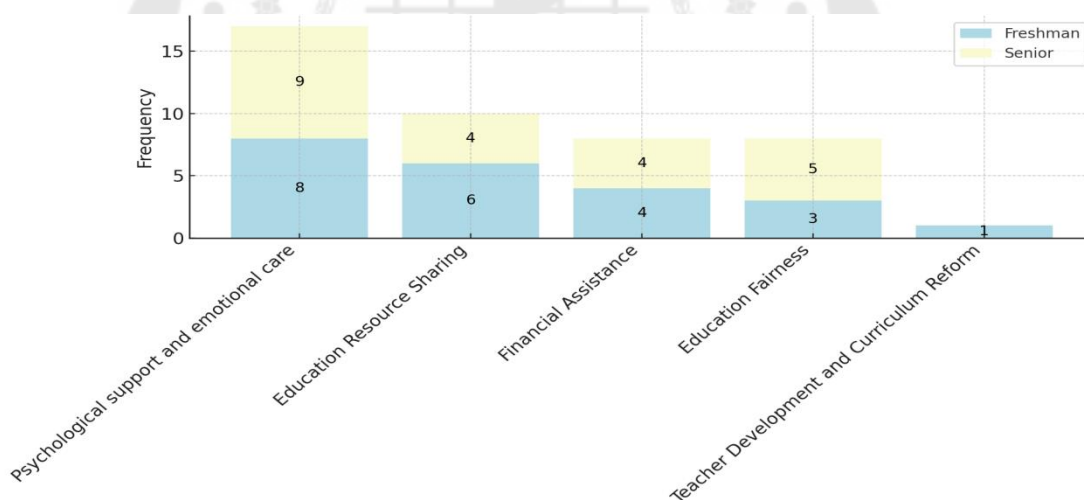


Figure 12 Education Levels Differences of Q2 under the CULTIVATION Frame

Based on the figure above, both freshmen and seniors highly emphasized **Evaluation Methods**, particularly in terms of academic assessment and classroom performance. Another commonality was observed in addressing educational inequality, as both groups placed significant emphasis on **Psychological Support and Emotional Care**. **Financial assistance** was also regarded as equally important by both groups, with 4 mentions in each case.

The Cultivation framework revealed interesting contrasts in the priorities of freshmen and seniors. While seniors' responses were primarily focused on career planning, learning measures, and educational fairness, this may be attributed to the increased real-world pressures they face, such as employment and social adaptation after graduation. In contrast, freshmen concentrated more on creating a positive academic and learning environment, adapting to teachers and courses, and sharing resources. Developmentally, the Cultivation framework appears to magnify the differences between freshmen and seniors, with freshmen focusing on foundational issues and seniors leaning toward an outcome-oriented equity strategy.

4.3.2 CONSTRUCTION Frame Results

Overall Response Patterns in Different Groups (Group 1-4)

In the context of CONSTRUCTION, the answers of the four experimental groups (Groups 1-4) to the question about educational practices and resources reveal some focus and common characteristics.

Question 1: How does educational theory fit into practice?

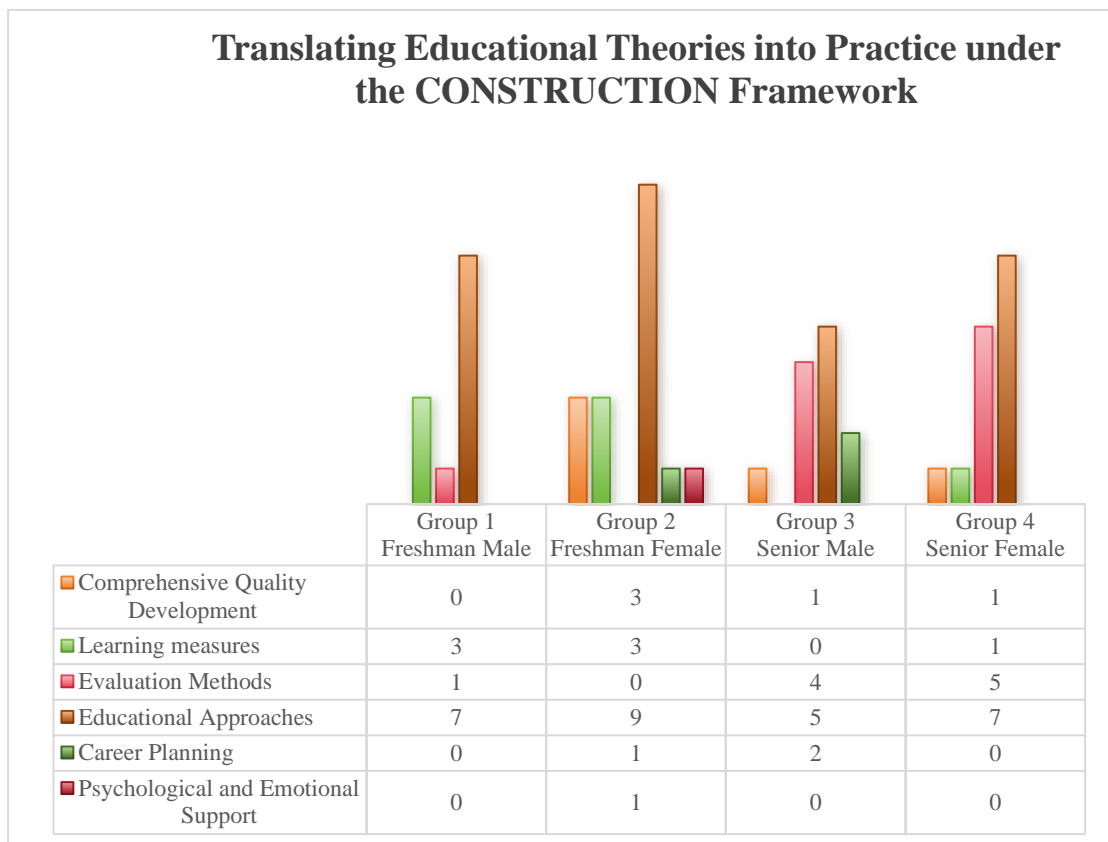


Figure 13 The distribution of responses of Q1 under the CONSTRUCTION Framework

In the CONSTRUCTION model, the four experimental groups had different responses with a total of 54, and **Educational Approaches** being the most discussed theme, with 28 mentions.

Group 2 listed the highest responses on **Educational Approaches**, with 9 mentions and stress on teaching methodology diversification and student-oriented learning plans. Group 2 (Freshman Female), with 9 references, also spoke about diverse teaching approaches, calling for personalized education (*“Providing students with opportunities and platforms to express their unique ideas, and recognizing unconventional thinking”*). And Group 3 underlined bridging between knowledge in class and that at practice. As phrased by one of the respondents, teachers and schools *“create more space for students”* and *“build more bridges connect classroom*

knowledge with real life". Group 4 also emphasized the variety of teaching methods, practical education. One of the members recommended that *"introduce high-quality courses from both domestic and international sources to build a solid knowledge foundation"*; practical education *"as it is a key pillar of the educational process."*

The second most commonly referenced theme was **Evaluation Methods** with 10 sources. Expert Group 2, other groups placed a greater emphasis on more varied evaluation methods that went beyond standardized testing. As explained by the participants in Group 1 and 3, *"This way, education is no longer a single framework but a continuous improvement and development process."*; *"Exam scores are not the parts supporting our overall development."*

Learning Measures was mentioned 7 times, with Group 1 and Group 2 emphasized evenly. Group 1 focused on the need to give students enough *"structure"* and *"space"* to cultivate their strengths, asserting that *"not limiting students within a specific standard framework provides enough 'structure' for us to develop our strengths."* Group 2 also focused on individual goal setting according to students' individual interests and talents, with one member proposing that students should *"deeply understand and develop in the fields they are good at and interested in."*

Career Planning was mentioned less, with a total of 3 references. Only Group 2 and Group 3 placed emphasis on internship projects and collaboration with industries. As described by a Group 3 participant, *"by establishing internship projects or collaborating with industries, we can learn more in practice; these platforms will connect what we learn in school with its application in our future careers."*

In general, as for question 1, Teaching Methods took center stage in CONSTRUCTION frame. Application of construction-oriented metaphors from the answer of enough *"structure"* for students, the *"curriculum design"* in Group 1 to provide *"platform"* and *"support"* the development in Group 2, from Group 3's *"build m bridges, single framework and establish internship projects"* to Group 4 of *"build a solid knowledge foundation"* and *"a key pillar"*, indicates that they viewed education as a complex structure that requires careful planning, organizing, and supporting process.

Question 2: How to address educational inequalities?

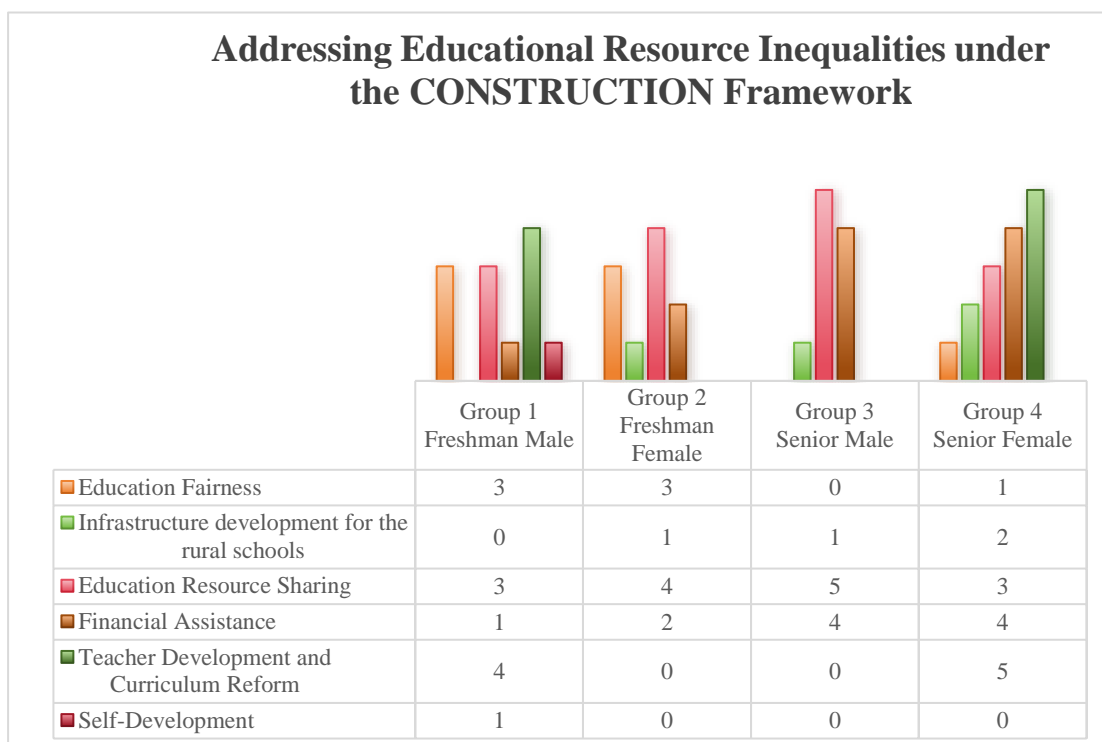


Figure 14 The distribution of responses of Q2 under the CONSTRUCTION Framework

Informed by the CONSTRUCTION model, Group 1 to 4 came up with different forms of strategies in addressing education resource inequalities, presenting a total of 46 different keywords and Group 3 (Senior Male) presented the most keywords.

Education Resource Sharing was the most referenced subject by all of the groups with 15 citations, which indicated that there was a common consensus among the participants that there was a requirement to optimize the use of educational resources. *“High-quality teaching content should be delivered to more students, especially those in areas far from premium resources, enabling them to learn on the same foundation.”* This Group 2 quotation echoes the consensus that sharing resources—particularly across regions and through assistance for poor regions' education—was at the heart of reducing disparity. Group 3 also responded to the necessity of remote education projects, and one of them said, *“remote education support centers at the local level, equipped with necessary technology and professional teachers, to assist local students in using online learning platforms.”*

calling for stable, fast access to the learning platform as preconditions for guaranteeing accessibility of quality teaching. Moreover, one respondent in Group 4 suggested, *“establish a national or regional educational resource database, including e-books, multimedia teaching materials, and simulated experiments.”* Such keyword such as *“same foundation,” “learning platform”* and *“establish”* further reflected the effects on educational metaphorical frame in the respondents’ answers.

In the meantime, **Financial Assistance** was also among the subjects addressed under the CONSTRUCTION paradigm with 11 occurrences. Financial assistance, including tuition fee exemptions and scholarships for needy students, was emphasized as a key factor in promoting equity in education. In Group 3, one of the members highlighted lowering economic barriers, *“by reducing their financial burden through scholarships and grants, enabling them to focus more on their studies.”*

The third big area covered was **Teacher Development and Curriculum Reform**, but it was mentioned by Group 1 and 4. Group 1 underscored the need for teachers to *“explore teaching methods suited for rural students, such as situational teaching, tiered instruction, and project-based learning, to improve teaching effectiveness.”* Group 4 echoed this, suggesting the *“strengthening local teacher training to improve their teaching abilities and educational concepts, providing high-quality educational resources for students.”* These responses showed that teacher quality and curriculum relevance issues were central to closing the gap in education between regions.

Educational Fairness was also a significant focus, with 7 responses stressing the importance of equal opportunities for students in Group 1, 2 and 4. For example, *“we should provide every individual with equal opportunities, allowing everyone to have equal access to education and the ability to learn.”* Another called for government action, suggesting, *“the national government should pay more attention to addressing the gaps in this area.”*

The Rural School Infrastructure Development was also cited as a need, with Groups 2 to 4 evenly distributing this strategy. Group 3 said that *“some rural schools may lack the necessary teaching resources and advanced equipment,”* while Group 4

pointed out the availability of *“providing necessary teaching and learning equipment and ensuring students have a conducive learning environment.”*

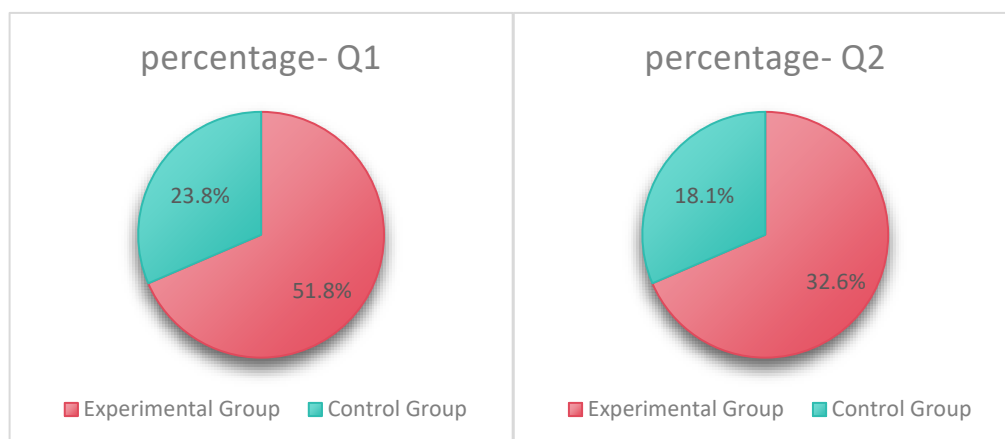
Last but not least, **Self-Development** was only brought up by Group 1 members, wherein the group talked about the need for students to build their own learning abilities, one of them even suggesting *“learning should not rely on others but be self-driven.”*

In total, the prevailing solution to education inequity under the CONSTRUCTION paradigm was Resource Sharing. The application of CONSTRUCTION metaphors in participants’ responses, including *“establishing online platforms,” “on the same foundation,”* and *“establishing a solid structure,”* underscores their perception that creating equity in education entails a systematic and flexible system capable of addressing various student needs and learning environments. The metaphors refer to the perception that building an inclusive and nurturing educational system is central to combating inequality.

Comparison between Experimental Group and Control Group

Table 34 Comparison of Key Responses between Experimental Group and Control Group

Question	Experimental Group	Total	percentage	Control Group	Total	percentage
Q1	Educational Approaches	28	51.8%	Internship and Practical Opportunities	10	23.8%
Q2	Education Resource Sharing	15	32.6%	Access to Technology	8	18.1%



The experimental results highlighted the impact of the CONSTRUCTION frame on the approach taken by test participants to reason through and make decisions about educational problems. In relation to Question 1, the experimental group prominently reported Educational Approaches, with 28 mentions, accounting for approximately 51.8%.

For Question 2, both groups mentioned similar ways of utilizing resources and technology in education, but the experimental group focused more on resource sharing. This suggests that they are not only providing access to technology but also ensuring that resources are distributed effectively and collaboratively, fostering a more integrated and dynamic learning environment. The control group, with fewer mentions, may have more limited access to technology, using it in a more isolated or traditional manner.

The CONSTRUCTION framework prompted respondents to adopt a more systematic and structured approach to perceiving educational problems, with an emphasis on strategies that focus on the design and integration of resources. In contrast, the control group, lacking any metaphoric framework, tended to focus more on direct, practically effective solutions.

Gender Differences

Under the frame of CONSTRUCTION, sharp contrasts were recorded among the male and female participants' reasoning on application of the theory to practice and management of inequities in educational resources.

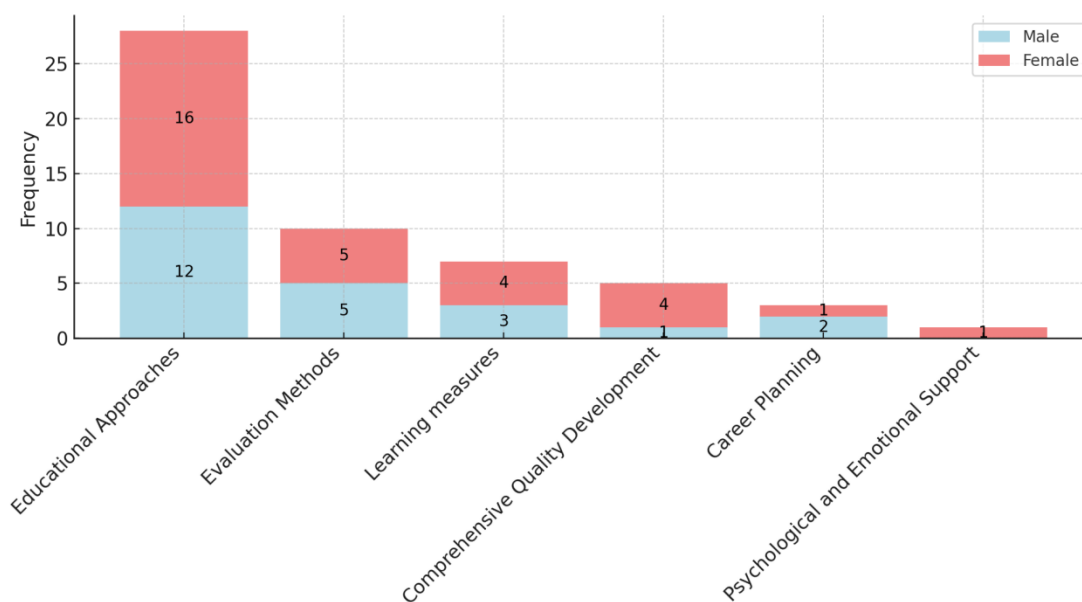


Figure 15 Gender Differences of Q1 under the Frame of CONSTRUCTION

In response to Question 1, both genders prioritized **Educational Approaches**, with males mentioning it 12 times and females mentioning it 16 times. This suggests that both sexes viewed systematic methods and structured approaches as key ways to operationalize educational theory, although females placed a stronger emphasis on this approach. Additionally, **Evaluation Methods** were mentioned with equal frequency by both genders, with 5 mentions from each, implying a shared concern with assessment and outcome measurement.

However, some notable differences were observed in other categories. **Comprehensive Quality Development**, showed a wide gap, with females mentioning it 4 times compared to only 1 mention from males. Interestingly, **Psychological and Emotional Support** was mentioned exclusively by females (1 mention), highlighting a specific female concern for the emotional aspects of education, which was entirely absent in the male responses.

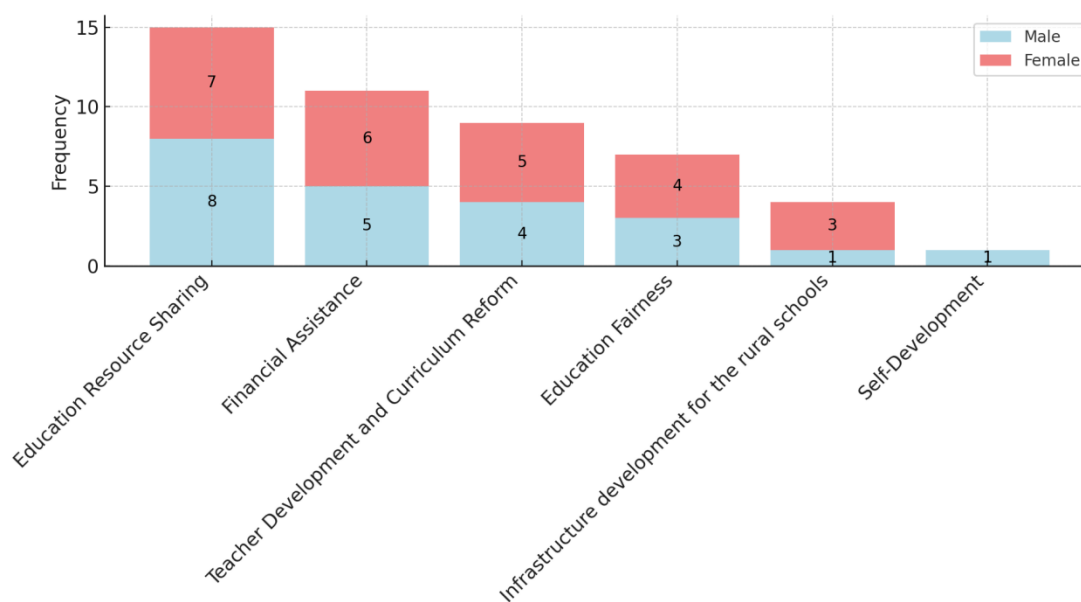


Figure 16 Gender Distribution of Q2 under the Frame of CONSTRUCTION

Question 2 revealed that among the most frequently stated solutions, the sharing of **Educational Resources** was mentioned by both males (8 mentions) and females (7 mentions). This indicates a shared belief in the importance of mutual resource allocation and equality. However, the slightly higher frequency with which females mentioned these topics suggests that they may perceive areas such as financial aid, teacher development, curriculum reform, and education fairness as more critical to their educational or professional development. In contrast, **Self-Development** was mentioned exclusively by males (1 mention), suggesting that males may place a stronger emphasis on individual capacity-building as part of the solution.

Educational Level Differences

As for educational level, differences between freshmen and seniors emerged in their approaches to educational challenges.

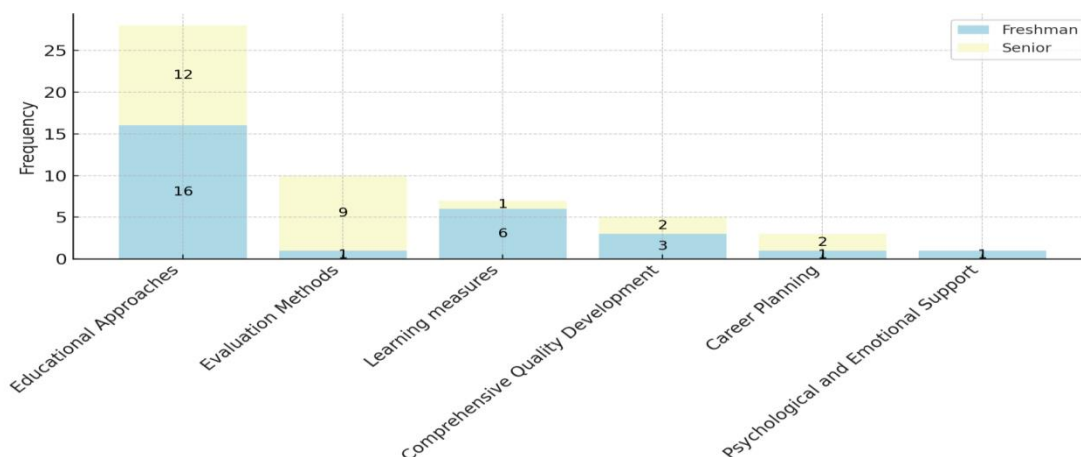


Figure 17 Education Levels Difference of Q1 under the Frame of CONSTRUCCION

Evaluation Methods were discussed far more frequently by seniors than by freshmen (9 vs. 1), likely because seniors have a clearer understanding of how they are being assessed and may place a greater emphasis on performance and outcomes. In contrast, **Learning Measures** were mentioned more often by freshmen than by seniors, reflecting their interest in personalized strategies and tools to improve their learning experience. Moreover, seniors seemed to focus more on **Career Planning**, which is understandable given that they are closer to graduation and the transition into the workforce.

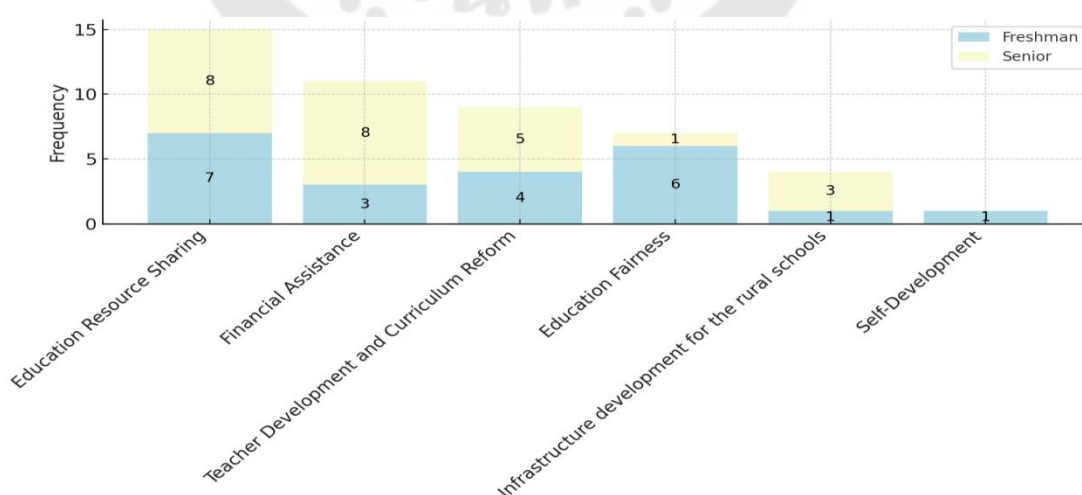


Figure 18 Education Levels Difference of Q1 under the Frame of CONSTRUCCION

For Question 2, the results also showed contrasting another preference. **Financial Assistance** was prioritized heavily by seniors (8 vs. 3 for freshmen). Another greater difference was shown in **Education Fairness**: Freshmen show greater concern for education fairness, possibly reflecting their early-stage concerns about equal opportunities and treatment in education.

Overall, these differences suggested that as students' progress in their education, their focus shifts from educational support and learning measures to practical issues such as performance assessment, career planning, and addressing long-term disparities in educational infrastructure.

4.3.3 WAR Frame Results

Overall Response Patterns in Different Groups (Group 1-4)

Within the WAR frame, the responses of the four experimental groups to the two core questions demonstrated a clear overall pattern of responses.

Question 1: How does educational theory fit into practice?

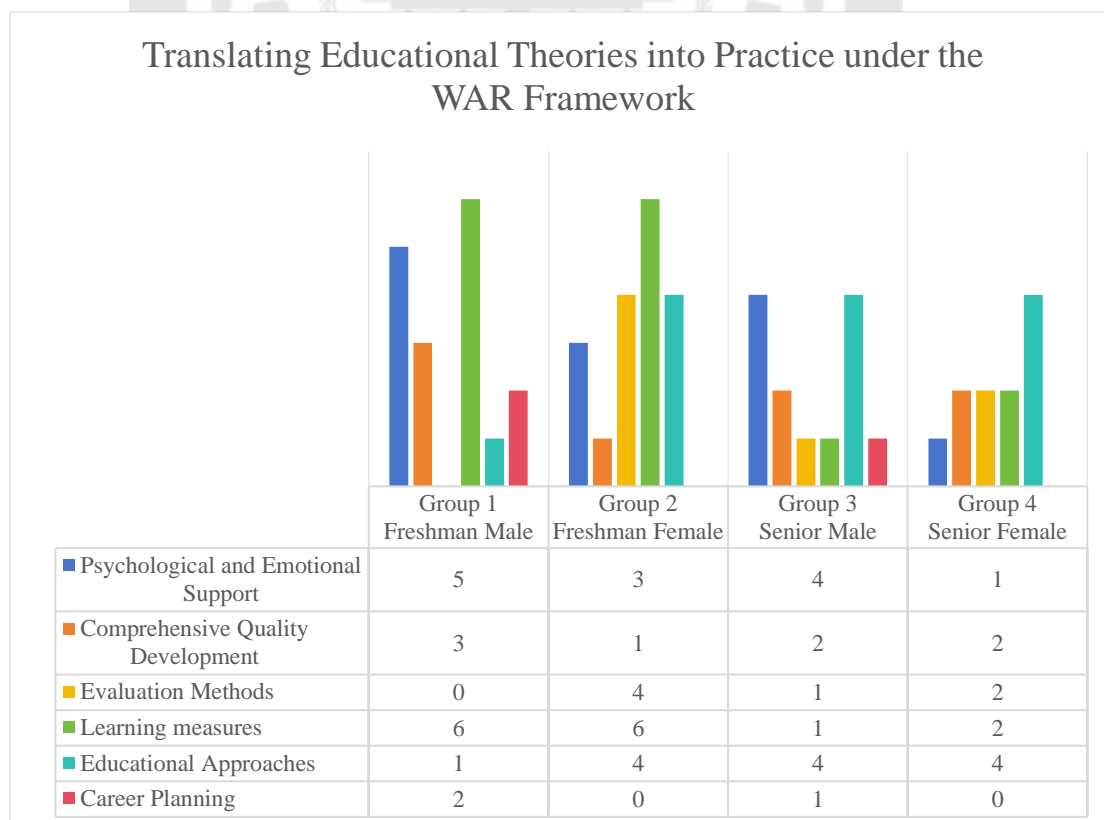


Figure 19 The distribution of responses of Q1 under the WAR Frame

Supported by the WAR framework, Group 1 to 4 students proposed various strategies for implementing educational theories into practice, coming up with a total of 59 various keywords and Group 2 (Freshman Female) contributed the highest number of keywords.

The **Learning Measures** theme was the most discussed theme across all the groups, with a reference of 15. The majority of the students in Group 1 and 2 were interested in specific goal direction, adaptive approach, and learning plans for students. *"Set learning goals and adjust strategies based on personal development needs, creating personalized learning plans to achieve personal growth and improvement."* Group 1's response focuses on the need for planning and adaptive approach according to individuals' needs. Group 2 also shared the same opinion, *"need a plan to allocate time effectively for learning, socializing, and self-improvement."* These answers reflected the significance of well-formulated learning strategies in an effort to implement educational theory into practice.

Psychological and Emotional Support was another category with a count of 13 and Group 1 provided the most response. It talked about the role of strong will in overcoming challenges because, in the words of one of the students, *"University life is full of challenges, and students need to maintain a positive mindset and strong will to overcome difficulties and succeed in competition."* Group 4 also talked about emotional support, particularly in the event of excessive academic pressure, *"focus on maintaining physical and mental health, ensuring a balanced diet, regular exercise, and adequate rest to provide long-term energy for academic challenges"*. These answers indirectly reflected the competitive and challenging academic environment fostered by the warfare frame and they need to remain emotionally strong in such challenges.

Educational Approaches was the third overarching theme uncovered within the groups, with 12 mentions. Group 3 suggested that *"Teachers can use different kinds of teaching methods, like group work or case studies to enable more active learning and thinking."* This is reflective of the need for more interactive and active forms of teaching. Group 3 and 4 also talked about the necessity of individualized teaching plans

according to students' strengths and interests: *"present personalized teaching plans and learning goals."* Or *"encourage self-directed learning and help students better understand themselves."*

Comprehensive Quality Development and Evaluation Methods were mentioned less but was still a theme. Group 1 talked about the need for club activity and internship participation and Group 2 emphasized the more flexibility and practicality in assessment.

Career Planning was the least discussed topic, and it was only brought up 3 times in all groups. Still, there were males who emphasized career development and internships, specifically in Group 1, where a respondent said, *"Internship opportunities are important to understand the demands of the workplace and gain a competitive advantage in future careers."*

Lastly, the general themes arising from the responses under the WAR frame were **Learning Measures, Psychological and Emotional Support, and Educational Approaches**, with the overall focus being on the provision of orderly, positively and adaptively in competitive learning environments, retaining emotional resilience, and using varied teaching approaches. The use of war metaphors such as and *"adjust strategies," "full of challenges," "competition" and "long-term energy" in their answers* further reflected the competitive nature and the strategic mindset fostered by the WAR metaphorical frame.

Question 2: How to address educational inequalities?

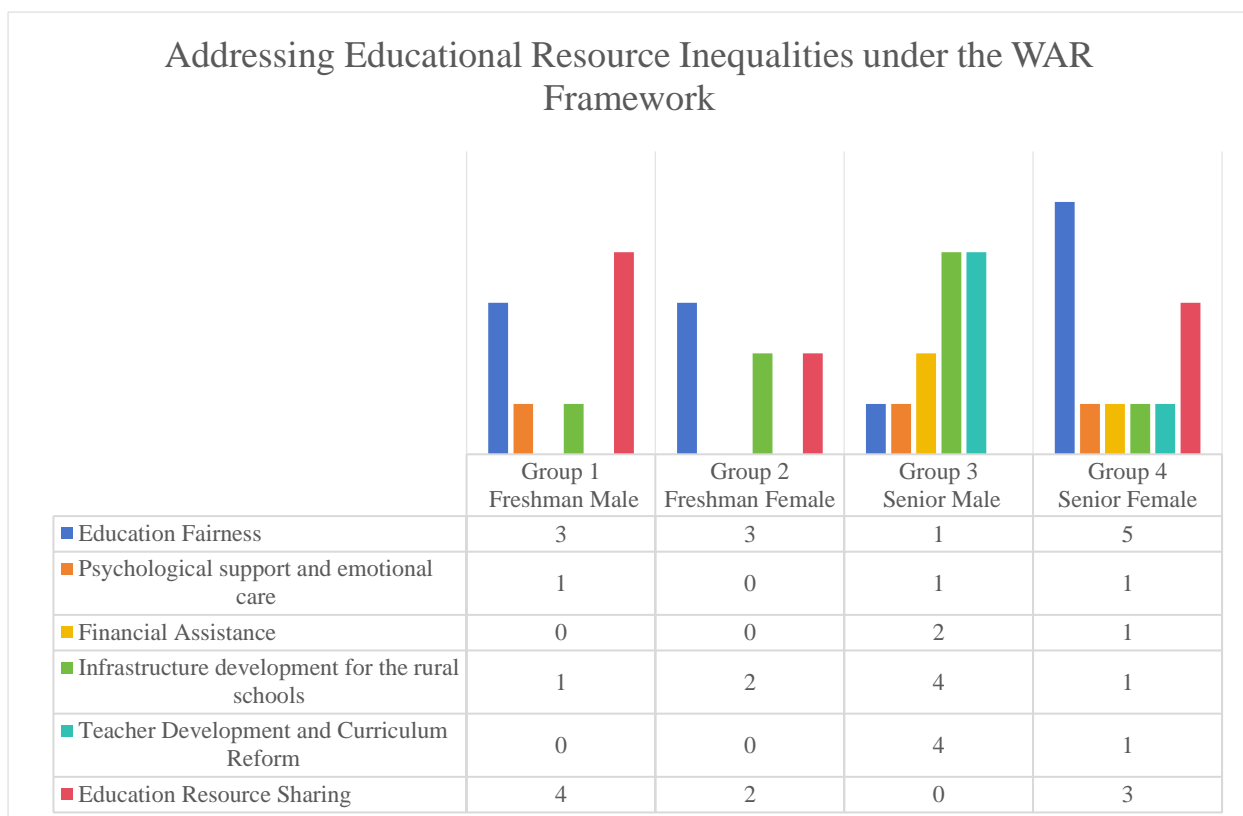


Figure 20 The distribution of responses of Q2 under the WAR Frame

Guided by the WAR framework, students from Group 1 to Group 4 suggested diverse solutions to the inequality issue in school facilities, coming up with a combined total of 39 keywords while Group 3 (Senior Male) had the most keywords.

Education Fairness was the most frequent in all the groups and was raised 12 times and Group 4 presented the most answers. Most students recognized that *“policy support”* ought to be the primary channel to tackle educational equity, pointing out guaranteeing equal resource allocation. One of the Group 1 students opined, *“the government must take the lead by introducing special education support and reform policies.”* Group 4 also agreed with the perception that *“suitable policies help us fight together to achieve common goals.”* These perceptions demonstrate an awareness on the students' part that useful policy reforms are needed to close the challengeable gap between rural and urban schools.

The theme of **Education Resource Sharing** was the other major theme, which was mentioned 9 times by all groups with Group 1 had the highest. Members in all groups

repeated the importance of *“sharing educational resources through collaborative measures and optimizing resource allocation in underprivileged areas.”* as proposed by one member in Group 1. Besides, resource-sharing programs, like urban-rural student exchange programs, were deemed vital in attaining educational equity. As one participant in Group 4 put forward, *“Conduct exchange activities between urban and rural students to promote resource sharing and achieve educational equity.”*

Infrastructure Development in rural schools was also highlighted as a critical strategy, with a total of 8 mentions across the groups. Group 2 stressed the importance of improving school facilities and providing a conducive learning environment. One participant mentioned, *“only when schools’ hardware facilities meet standards can students be given a chance to ‘fight’ and have the opportunity to succeed in this educational competition.”* Group 3 also emphasized the need for better infrastructure in rural schools, with one participant noting, *“Ensure that students have a comfortable learning environment in school so that they can fully focus on their ‘battle,’ improve learning efficiency, and achieve success.”*

Teacher Development and Curriculum Reform was another mentioned theme, discussed 5 times presented only by senior groups. Group 3 suggested that enhancing teacher training in rural and impoverished areas is essential for improving teaching quality. One participant noted, *“Enhance teacher training in rural and impoverished areas to improve teaching quality.”* Group 4 also mentioned teacher exchanges as a way to improve rural education, stating, *“teacher exchange programs can supplement the quality of rural education.”*

Psychological Support and Financial Assistance were mentioned less frequently, with only 2 or 3 responses each. However, Group 1 emphasized the importance of family involvement, with one participant stating, *“Raise the importance rural and impoverished area parents place on education, creating a good learning atmosphere at home.”* Regarding financial assistance, Group 3 suggested providing scholarships and increasing teacher salaries in rural areas to attract high-quality educators. *“To*

*attract more outstanding talents to rural education, their salaries and benefits must be improved much like providing **commanders with more 'rewards.'***, said one participant.

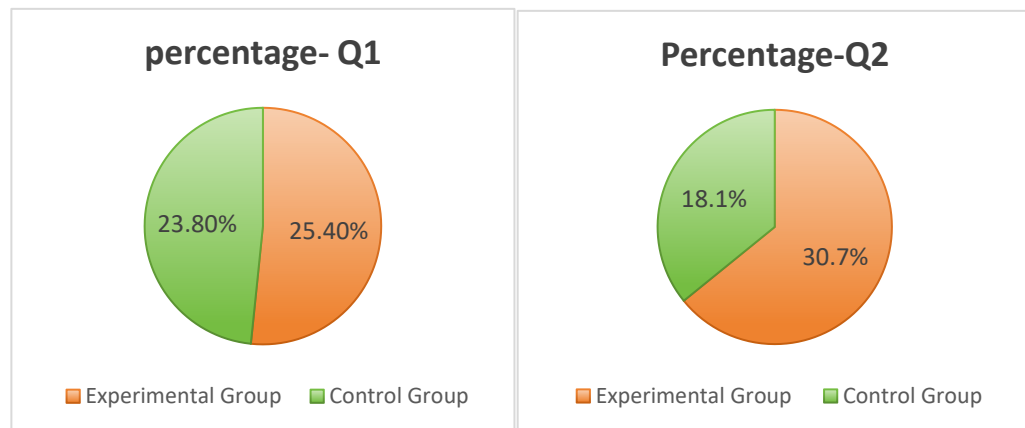
In conclusion, the strategies proposed within the WAR frame emphasized Education Resource Sharing, Education Fairness as the key approaches to addressing educational resource inequalities. The use of metaphors related to competition and struggle, such as *"students be given a chance to 'fight'"* and *"fighting together with a common goal,"* *"competition or battle"* and *"commanders with more 'rewards.'* reflected the students' view of education as a highly competitive and strategic process. By clear goals, fighting spirit, and effective incentive reforms and strategies, they can overcome disparities and achieves success.

Comparison between Experimental Group and Control Group

Table 35 Comparison of Key Responses between Experimental Group and Control

Group

Question	Frame	Primary Focus for MALES	Primary Focus for FEMALES
Q1	CULTIVATION	Educational Approaches	Evaluation Methods
	CONSTRUCTION	Educational Approaches	Educational Approaches
	WAR	Psychological Support	Learning Strategies
Q2	CULTIVATION	Financial Aid	Psychological Support
	CONSTRUCTION	Educational Resource Sharing	Educational Resource Sharing
	WAR	Infrastructure development	Policy Support



The experiment findings revealed that, when answering both questions, subjects who were put into the material with the WAR frame differed sharply from the control group with non-metaphorical frame. Specifically, regarding learning measures (Q1), the experimental group scored 15, consisting of 25.4%. This frame likely guided participants to focus on how to design more flexible and specific learning strategies based on students' different needs, abilities, and backgrounds to "*overcome difficulties and succeed in competition*". In contrast, the control group focused on internships and practice opportunities (10 mentions and of 23.5%).

Meanwhile, in the area of education fairness (Q2), participants in the experimental group of the WAR frame emphasize educational equity (12 mentions). This highlights the focus on ensuring equity as the primary "*battleground*," addressing inequality directly and strategically. On the other hand, the control group favored technology access (8 mentions), emphasizing technology as a tool to mitigate resource inequality, with less focus on system equity or equality.

Overall, the experimental group demonstrated greater strategic depth and flexibility in addressing these two educational issues, showing the significant impact of the WAR frame metaphor on educational interventions.

Gender Differences

It goes to the underlying thought that, under the WAR frame, males and females responded differently to educational challenges and, therefore, reflected different priorities and strategies in problem-solving.

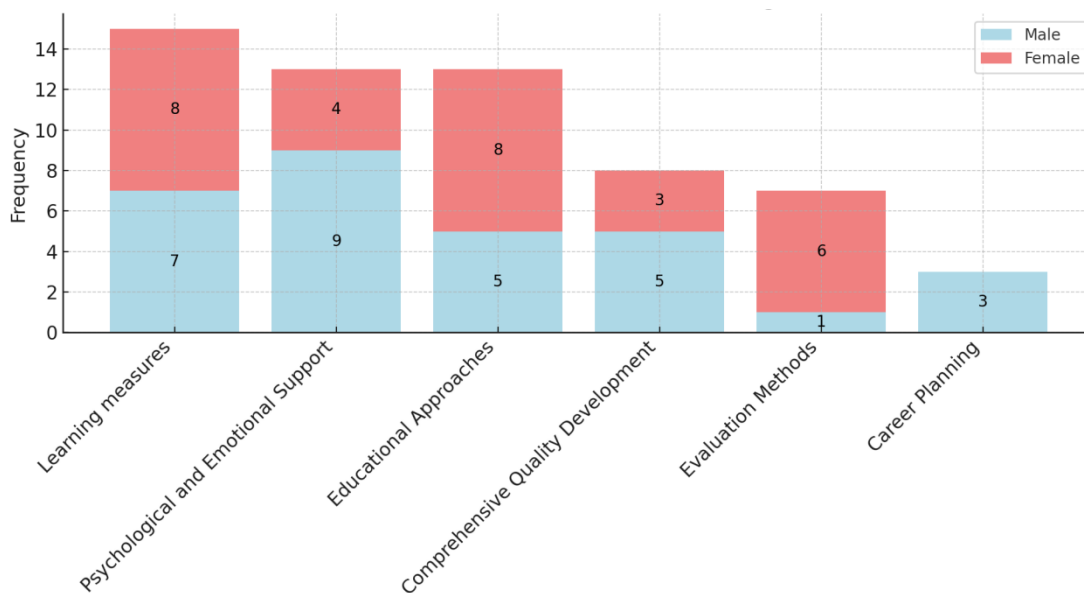


Figure 21 Gender Distribution of Q1 under the Frame of WAR

For question 1, the most pronounced mentioned area presented by males was **Psychological and Emotional Support** (9 times). Females, on the other hand, were more focused on the specific steps of theory application, such as **Learning Measures** (8 times) and **Educational Approaches** (8 times), indicating their emphasis on improve educational outcomes through systematic teaching methods and assessable learning strategies. The most gender difference in solving this issue was that females concerned more about the evaluation methods, while males focus on psychological adjustments.

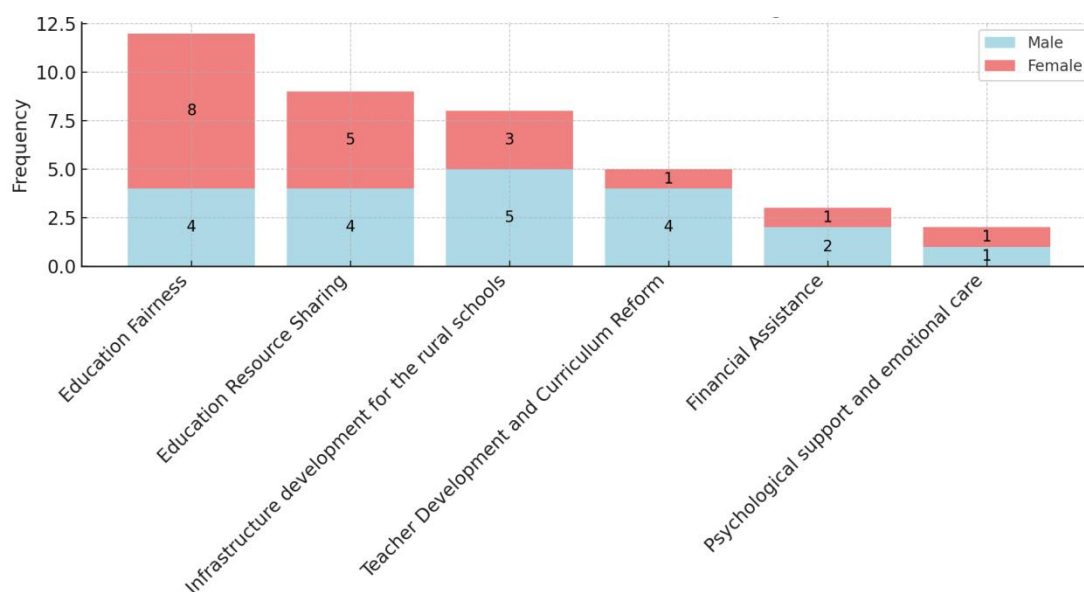


Figure 22 Gender Distribution of Q2 under the Frame of WAR

For Question 2, the gendered differences were also evident. **Education Fairness** for policy support emerged as the most different response, 8 of which came from females and 4 of which came from males. This therefore speaks to a strong female emphasis on equity-driven solutions, highlighting the concept of “*fighting for justice*” through equitable policies. On the other hand, males participants also mentioned the need for **Infrastructure Development** and **Curriculum Reform**, with their mentions far outnumbering those of female participants.

In summary, the WAR frame amplified different gendered priorities. These differences reflect how the metaphorical frame molds gender-specific reasoning and problem-solving approaches, where males tend to be more practical solutions in their approach such as infrastructure development, and emotional support, whereas females tend to be more tactical, direct-driven, and equity-focused ones on policy support and educational methods.

Educational Level Differences

For educational level, significant differences emerged between freshmen and seniors in their approaches to educational challenges.

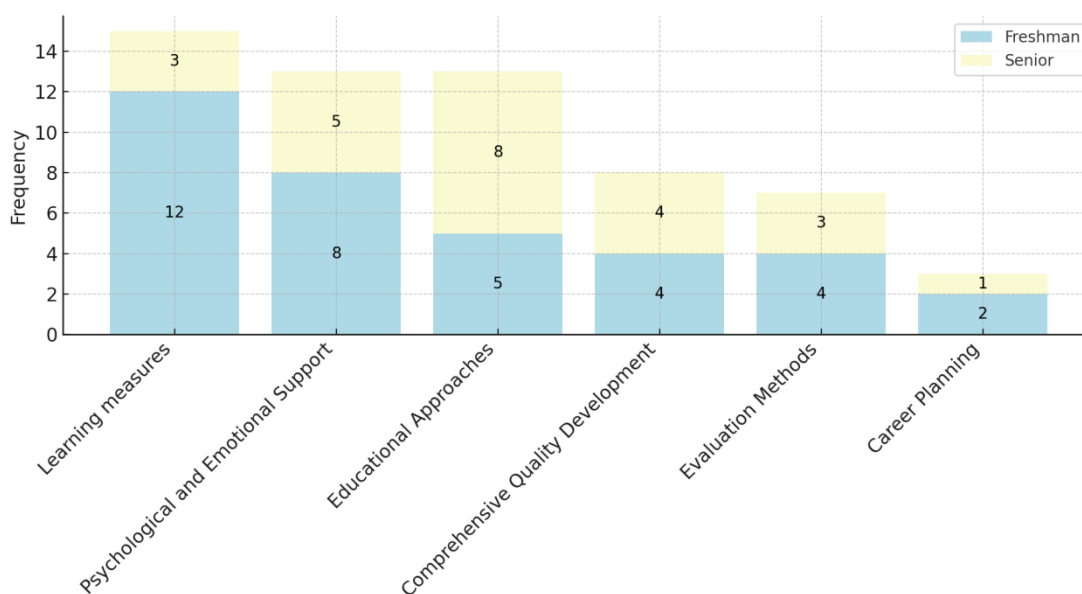


Figure 23 Educational Level Differences of Q1 under the Frame of WAR

In the WAR frame, the students from different stages in education reasoned quite differently over educational practices: freshmen students in Group 1 and Group 2 stressed more specific, tactical and measurable actions and short-term results-oriented on **Learning Measures**; for example, goal setting, flexible strategy adjustment. They also mentioned the **Psychological Support**. On the contrary, seniors, perhaps more experienced in education, placed greater importance on **Educational Approaches**, showing a preference for refining teaching practices and educational frames to address deeper, more systemic challenges in the learning environment.

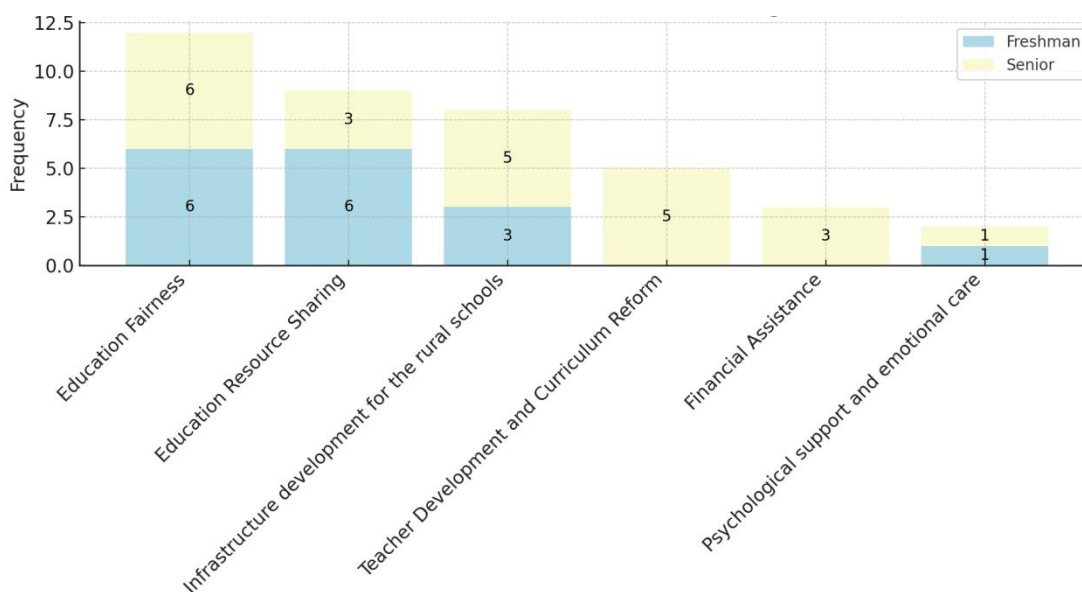


Figure 24 Educational Level Differences of Q2 under the Frame of WAR

In the context of the WAR metaphor in Question 2, both freshmen and senior viewed “fight For Education Fairness” as an immediate battle for equal access to resources and opportunities. What’s more, Teacher Development and Curriculum Reform was exclusively highlighted by seniors (5 mentions), indicating their focus on systemic and long-term improvements to the educational system. However, for the freshmen, they preferred the Resource Sharing to optimize educational resources across districts. This difference clearly showed how the WAR frame guides students to develop different “battle strategies” depending on their educational stages.

4.3.4 Summary of the Results

Comparing the Main code of each frame, it suggests that different frames present distinct measures for addressing two educational issues: the integration of theory and practice, and educational equity.

As shown in the table 34, the three dominant metaphorical frames—WAR, CULTIVATION, and CONSTRUCTION—provided a greater number and total of strategy items comparing to the non-metaphorical frame. Furthermore, the CONSTRUCTION frame proposes the highest number and total of strategy items, with a total of 101,

significantly higher than the other two metaphorical frames. This suggests that students tend to favor a collaborative, structured, and systematic approach to understanding and solving educational problems. This result reflected that metaphorical approaches may offer cognitive advantages by engaging students in creative thinking and providing multiple spaces for deeper understanding. Non-metaphorical strategies, on the other hand, may appear more straightforward but could be perceived as less engaging and appeal, potentially leading to lower student involvement comparatively.

The primary focus and proposed solutions varied across the different metaphorical frames. The Educational Approaches received high attention in CONSTRUCTION frame, Evaluation Methods in CULTIVATION frame and Learning Strategies in WAR frame in addressing Question 1. When comparing another educational question of inequality, the CONSTRUCTION frame emphasized resource sharing through collaborative and systematic approaches. The CULTIVATION frame focused most on psychological and emotional support, highlighting students' preference for caring solutions. Meanwhile, the WAR frame focused on policy support, guiding students to make decisions from a competitive and strategic perspective. While the non-metaphorical category shows a stronger focus on career planning and community support programs, with the total count across frames indicating varied emphases on different educational aspects. Such findings showed metaphorical frames provide students with different cognitive pathways and problem-solving strategies, leading to varied approaches to educational questions and decisions, which was consistent with the hypothesis.

Gender and Educational Levels Differences in Educational Responses Across Metaphorical Frames

The experiment further tests the reasoning differences of gender and education levels in metaphorical framing effects.

Table 36 Gender Differences in Primary Focus of Responses Across Metaphorical Frames

Question	Frame	Primary Focus for MALES	Primary Focus for FEMALES
Q1	CULTIVATION	Educational Approaches	Evaluation Methods
	CONSTRUCTION	Educational Approaches	Educational Approaches
	WAR	Psychological Support	Learning Strategies
Q2	CULTIVATION	Financial Aid	Psychological Support
	CONSTRUCTION	Educational Resource Sharing	Educational Resource Sharing
	WAR	Infrastructure development	Policy Support

From the perspective of gender, females have a higher response frequency generally than males under CULTIVATION and WAR frames, while males show a higher response frequency within the CONSTRUCTION metaphorical frame. And this result did not support the hypothesis that “males propose more strategies” as this was not clearly reflected in the result.

In the CULTIVATION frame, males are more likely to address the gap by focusing on teaching methods. In contrast, females place greater importance on evaluation methods for assessing the effectiveness of educational theory. Another interesting finding was that WAR frame showed males prioritize psychological support in the first question whereas females emphasized learning strategies through individualized learning methods and techniques. Such difference was completely reflected in solving the educational inequality under CULTIVATION frame, with females emphasize psychological support and males focus on financial aid. Both males and females have the same focus on two different problems in CONSTRUCTION frame, primarily on educational approaches and educational resource sharing.

These results showed that gender influenced students’ thinking and decision-making processes within CULTIVATION and WAR frames, which resonated

with the previous hypothesis. However, within CONSTRUCTION frame, both males and females proposed the same strategies.

In terms of educational levels, senior students exhibit a higher overall response frequency than freshmen.

Table 37 Educational Levels Differences in Primary Focus of Responses Across Metaphorical Frames

Question	Frame	Primary Focus for MALES	Primary Focus for FEMALES
Q1	CULTIVATION	Evaluation Methods	Learning Methods
	CONSTRUCTION	Educational Approaches	Educational Approaches
	WAR	Learning Methods	Educational Approaches
Q2	CULTIVATION	Educational Resource Sharing	Psychological support
	CONSTRUCTION	Educational Resource Sharing & Financial Assistance	Educational Resource Sharing
	WAR	Education Fairness of Policy Support	Education Fairness of Policy Support & Educational Resource Sharing

More specifically, in response to the first question, freshmen had a greater tendency to look at practical topics such as Learning Measures and Evaluation Methods under CULTIVATION and WAR frames. On the other hand, senior students shifted their focus more toward educational approaches. Notably, both freshmen and seniors focused on educational approaches under CONSTRUCTION frame.

For the second question, the differences between freshmen and seniors became more apparent in the CULTIVATION frame: freshmen were concerned about the

educational resource sharing while seniors focused on psychological support and emotional care. Both freshmen and seniors focused on educational resource sharing in the CONSTRUCTION frame. However, seniors expanded this focus to include financial aid. Freshmen appear to prioritize policy support in the WAR frame. In contrast, seniors went further and acknowledged both policy support and resource sharing. Furthermore, Educational Resource Sharing was a common focus raised by both freshmen and seniors, indicating that it is widely considered a key strategy in addressing educational inequality across all frames.

These results supported and were consistent with hypothesis: The differences in educational levels do influence students' thinking and decision-making processes. Meanwhile, senior students proposed more strategies in problem-solving, which supports the part of the hypothesis stating that "senior students are likely to generate more strategies than freshmen."

Overall, all three metaphorical frames—CONSTRUCTION, CULTIVATION, and WAR—shape students' problem-solving approaches, with each frame influencing distinct aspects of their reasoning and decision-making processes. Additionally, gender and grade differences also play a role in affecting students' perspectives. Such findings were consistent with the hypothesis that both the metaphorical framing influence students' reasoning on education and the gender and grade differences influence students' reasoning and decision-making under different educational metaphor frameworks.

CHAPTER 5

CONCLUSION, DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

This chapter begins with a summary of the overall study, followed by a discussion of the results, and concludes with the implications and recommendations of the study.

5.1 Conclusion of the study

The first part of the study focuses on identifying and analyzing the common educational metaphors used in Chinese Commencement speeches. By reviewing the total number of tokens, types, and resonance, and categorizing 13 source domains used to refer to education in commencement discourse. These domains included: EDUCATION IS CULTIVATION, EDUCATION IS FAMILY, EDUCATION IS CONSTRUCTION, EDUCATION IS WAR, EDUCATION IS JOURNEY, EDUCATION IS NATURE, EDUCATION IS BODY, EDUCATION IS ECONOMY, EDUCATION IS LIGHT, EDUCATION IS OBJECT, EDUCATION IS CONTAINER, EDUCATION IS PLACE, and EDUCATION IS RELIGION. Furthermore, after analyzing the educational metaphors across ten universities, the study further found that six metaphorical domains (PLANT, CONSTRUCTION, WAR, FAMILY, JOURNEY, and NATURE) are widely used, indicating a shared understanding of educational themes among these universities. The results of the study show that the CULTIVATION metaphor is the most prominent educational metaphor, viewing education as the growth process of plants, emphasizing its natural and organic nature, reflecting the cultural value placed on education and nurturing within Chinese culture. Following this, the CONSTRUCTION and WAR metaphors, compare education to building and warfare, highlighting the structural and progressive nature of education, as well as the challenges and competition faced during the learning process. Additionally, although the FAMILY metaphor appears frequently, its resonance is relatively low, suggesting that this metaphor may rely more on specific cultural or

emotional contexts in China, which is why it does not have a significant impact on a broader audience. Meanwhile, RELIGION metaphor shares the limited resonance, which



comparing education to a sacred mission, and notes that it is highly dependent on cultural and religious backgrounds. In non-religious or multi-religious cultures, including different cultural contexts within Chinese society, the understanding and acceptance of religious metaphors may vary. Using such metaphors in education contexts could lead to misunderstandings or feelings of exclusion, which limits their ability to resonate widely.

The use of educational metaphors is not just individual cognitive tools to help the audience to understand and resonate with but also closely tied to social and cultural contexts. The speakers of the speeches are mainly the presidents, who not only utilize metaphors to offer life advice to graduates but also call on them to raise their sense of social responsibility and take on social responsibilities, reflecting the spirit and ideals of the university. For instance, Chinese education has emphasized innovation, entrepreneurship in recent years and they may use metaphors such as *“the journey and step toward the innovation road”* to encourage students to actively participate in national construction and social progress or using *“the cracks in society”* to focus on issues like social inequality or the wealth gap. These metaphors not only help the speaker express their stance but also prompt the audience to reflect on the urgency of social problems. Each domain, with its unique perspective, provides valuable scope for a deeper understanding of the educational process, clarifying educational meanings, and analyzing educational issues.

The first part analyzes the common educational metaphors in graduation speeches, and the three most salient metaphors were then selected as the experimental stimuli for the second part of the research, providing a theoretical foundation. The results of the second part of the experiment confirmed that different metaphorical frames, compared to non-metaphorical materials, did respond with more answers and presented the different strategies to solve the educational problems mentioned in Commencement speeches. This finding revealed the metaphorical frames influence students' understanding of educational issues. Specifically, exposure to certain metaphors leads students to emphasize different problem-solving strategies: CULTIVATION frames emphasized emotional and psychological support, and holistic

student development; CONSTRUCTION frames focused on educational approaches and resource sharing approaches; CONSTRUCTION frames focused on educational approaches and resource sharing; WAR frames highlighted the learning strategies and educational fairness on policy.

Moreover, the study also finds that social factors like genders and educational backgrounds may mediate the effects of these metaphorical frames. For example, females showed a higher response frequency under CULTIVATION and WAR frames, while males tended to prefer CONSTRUCTION frame. In terms of educational levels, freshmen were more likely to focus on practical topics, such as learning measures and evaluation methods, especially within the CULTIVATION and WAR frames, while under CULTIVATION frame, senior students pay more attention to psychological support and emotional care. However, both freshmen and seniors adopted nearly identical measures within the CONSTRUCTION frames.

This intrinsic connection indicates that educational metaphors are not just rhetorical tools in speeches but are also significant factors influencing students' cognition and behavior. By integrating these two parts of the research, the paper comprehensively demonstrates that educational metaphors are not just linguistic expressions but fundamental cognitive structures that guide perception, reasoning, and decision.

5.2 Discussion of the results

5.2.1 Key Educational Metaphors in Chinese Commencement Speeches

The study firstly identified 13 education metaphors in Chinese commencement discourse, with CULTIVATION metaphor being the most prominent, followed by CONSTRUCTION and WAR metaphors. The findings of the research are mostly consistent with previous studies related to conceptual metaphors in Chinese Commencement speeches (Dong et al., 2018; Wang & Jiang, 2013; Zhang, 2016) Wang, 2015; Zhang, 2016; Dong & Liu, 2018; and Liu, 2020), which highlight the important role of CONSTRUCTION metaphor for underscoring the foundation of education and CULTIVATION metaphor for symbolizing students' growth and development. Moreover,

these metaphors serve key rhetorical functions, including motivation, emotional resonance, and cultural transmission, reinforcing the collectivist and hierarchical nature of Chinese educational discourse.

EDUCATION IS CULTIVATION

EDUCATION IS CULTIVATION appeared to be the most salient education metaphors in the Chinese Commencement Speeches. This prevalent use of this metaphor may involve China has been a major agricultural nation since ancient times, with its civilization deeply rooted in a self-sufficient agrarian society. Cultivation has become crucial to agricultural production and this practice has not only shaped people's way of life but also profoundly influenced cultural expressions (Chen & Yang, 2019).

Commonly used expressions of “*cultivate*”, “*grow*” and “*take root*” under this domain emphasize the supportive, patient and caring qualities of educational process by likening students to growing plants and implying that education would not bear its fruits unless carefully taken care of. This is perhaps due to the recurrent Chinese cultural focus on the development of the patient, and care nurturing of the individual, and the significance of fostering an appropriate and proper educational climate. It also suggests that the essence of education is to promote the natural growth of students rather than merely imparting knowledge (Gao, 2014). This sits well with the Chinese culture of training the heart and the mind and developing moral and ethical qualities, apart from content knowledge and skills.

As for the teacher's role as “gardener”, describing the teacher as “*ploughing and seeding in the farmland*”, this metaphor further places a moral demand on educators for wholehearted devotion. Chinese culture, which favors collectivist values, emphasizes the need for social and economic development, granting high importance to the dedication of educators (Gao, 2014). Teaching has been chosen as a profession symbolizing moral dedication, possibly because, in the Chinese cultural model, education is regarded as a vital element in sustaining society and cultural continuity.

Students are referred to as “tender shoots” and “plants”, with the learning process symbolized as their growth. However, the CULTIVATION metaphors also value learners’ differences that students can grow differently as different kinds of plants. Even when receiving the same sunlight and rain or the same education, the outcomes can vary greatly (Xiao, 2004). During the growth process, it is not about adjusting existing materials and techniques. The quality of growth is not determined by any single isolated factor but is the result of the combined effects of numerous natural and external factors. The growth process of life not only depends on an individual’s psychological state but also requires a harmonious external environment—air, sunlight, gentle breeze, rain, and nutrients—all working together harmoniously rather than as isolated elements.

Schools are also symbolized as garden; The launch of the Double First-Class Initiative in 2015 aims to elevate Chinese universities globally, focusing on improving research quality and international reputation (Liu, 2021). The development of elite and famous universities, such as Tsinghua and Peking University, collecting with the idea of selectively nurturing the “*best branches*” of the plant to create a “*robust global garden*”.

Students are referred to as tender shoots and plant, the education environment provided by schools as rich soil, and the teacher’s role as that of the hardworking gardener. The metaphor proves the humanistic facets of education and resonates with the values and expectations laid down by Chinese society regarding education.

It’s interesting to note that from the data of the experiment Psychological Support and Emotional Care received much attention within the frame of CULTIVATION, with a high occurrence frequency of 17 times. Participants under the influence of this frame frequently mentioned the need to set emotional bonds between teachers and students, provide psychological counseling, and promote student well-being. This close connection with attention ties directly to the aspects of care and patience inherent in the CULTIVATION metaphor, illustrating the emotional needs of students throughout the educational process. The students’ approach to problem-solving reflected a patient, tender, nurturing characteristic of this frame.

This metaphor is also a deep echo of the shift in China's current education system, which is gradually transitioning from an Exam-oriented approach to a Quality-oriented one, with a strong focus on fostering students' psychological health, emotional needs, and overall development. In response to social competition, academic pressure, and the increasing prevalence of psychological issues in Chinese society, many universities have established psychological health education systems, introduced comprehensive quality evaluation system to emphasizes their psychological qualities and personal emotional development (Zhao et al. ,2021). The metaphor of CULTIVATION serves not only to shape educators' and learners' perceptions of the educational process, but it is also the cultural key that moves Chinese education to pay more attention to students' mental health and their emotional support.

EDUCATION IS CONSTRUCTION

The second most salient metaphor is CONSTRUCTION metaphor, representing education as constructing and organizing knowledge and skills and it tends to use “*build*,” “*foundation*,” and “*support beam*” in describing how structural educational purposes and improvements are realized.

Such emphasis is consistent with the concept of “STUDENTS ARE BUILDERS”, “TEACHERS ARE ARCHITECTS,” while “SCHOOL IS A CONSTRUCTION SITE”. For Chinese higher education, undergraduate education not only lays a robust foundation toward a career or further academic pursuits for students (“*constructing the same buildings*”), but also highlights the goal-oriented nature of the educational process and the indispensable continuity and cooperation between its stages and platforms (“*build with bricks by bricks*”), achieving overall improvement in the education system through gradual refinement.

The CONSTRUCTION metaphor is frequently used in the Chinese context may involves the reason that it resonates with the cultural, and structural aspects of education in China. In Chinese culture, the idea of constructing something from the ground up carries deep symbolic meaning. The metaphor of building—whether it be a

house, a wall, or a bridge—often represents progress, stability, and achievement. The notion of constructing something solid and lasting ties closely with the Chinese cultural value of building for the future, achieving stability, and passing on a legacy, which closely connected with the progressive training model of China's higher education system, which follows the sequence of “undergraduate—master's—doctoral” studies” (Jin & Cortazzi, 2011). Such hierarchical structure and belief on gradual learning and advancement is deeply embedded in Chinese educational thinking.

Moreover, schooling in China is not simply an activity a student undertakes but rather a collective endeavor which families and communities participate in. The CONSTRUCTION metaphor highlights this notion of leaving a legacy as a culture focuses on how education is used to create a stable and prosperous future for the people and the nation. In addition, the metaphor is associated with the meritocratic system of Chinese society where education achievement is a result of effort or accomplishment seen as building on one's earned qualifications and reputation over time. The construction paradox in China's rapid modernizing period further enhances this metaphor because education is perceived as a key resource in Chinese national development (Gallelli, 2019). Hence, the metaphor “EDUCATION IS CONSTRUCTION” reflects the socio-cultural and educational phenomena of China's approach of education development.

In the nationwide “Strong School Initiative” launched in 2020, universities across China were encouraged to “*adopt collaborative planning methods*,” involving teachers, students, and governments in the educational decision-making process (*Higher Education Statistics: Enrollment and Graduation Rates*, 2020). This initiative reflects the spirit of cooperation inherent in the CONSTRUCTION metaphor, aiming to build a stronger and more cohesive educational environment through the collective efforts of the educational community.

What's more, the CONSTRUCTION metaphor occupies an important place in Chinese educational discourse, reflecting the socialist state's emphasis on collective construction and long-term planning (Zhang & Ping, 2016). Such metaphor also reflects,

to the full, the nature of China's goal-oriented education policies, such as the the construction of *"Double First-Class"* reforms emphasizes *"precise planning"* and *"scientific design,"* of CONSTRUCTION metaphors. The government and policies advocate *"laying a solid foundation and gradually building skills,"* and *"building world-class universities and disciplines,"* with emphasis on construction at world-class university and discipline level to contribute to the enhancement of the overall competitiveness of the country(Qiu, 2023). And the *"New Engineering Program"* well explains the planning and innovation capability of the education system to adapt to the economic transformation and social change (Lu, 2019). This metaphor helps to further reinforce the stepping position of education in national construction and emphasizes that education policies are deeply integrated with economic and social needs.

By constructing an ideal educational building, it also motivates people to work towards common goals (Chen & Yang, 2019). Such a metaphor not only vividly showcases the governments and principals' firm belief and grand plans for the future of education but also deeply reflects the core values of unity, cooperation, and collective dreaming in Chinese culture. This metaphor successfully integrates every student, teacher, and staff member into the grand construction team of education, collectively contributing to the dream of making China a strong educational nation. The essence of such a metaphor in commencement speeches lies in its ability to transcend realistic depictions and to ignite the public's and listeners' aspirations and actions toward the future.

EDUCATION IS WAR

Although not as frequently as CULTIVATION and CONSTRUCTION metaphor, WAR metaphor employed itself in the Chinese commencement speeches in conceptualizing education with some fights or struggles, highlighting the difficulties learners have to deal with on their way to success. Using terms like *"fight"*, *"strategy,"* and *"victory"* illustrates the contestation and struggling nature of learning, with which schools are seen as an *"armed force"* filled with *"mandatory and army exercises"*

conducted *"in unison"* and students compare as *"soldiers"* who demonstrate *"absolute obedience"*.

The extensive use of WAR metaphors may be motivated by war and warriors in Chinese culture in the sense that China had gone through numerous wars in its history and even modern Chinese education has been rooted in war (Gao, 2014). Since the reform and opening up, the competition-oriented culture has gradually developed in Chinese society. Additionally, it also positively highlights the urgency and importance of the educational cause (Chen & Yang, 2019). Chinese education values the concept of *"effort before enjoyment"* and *"fight before success"*, which expects everyone to struggle and fight with difficulties if they are to succeed in their study and life. Therefore, improving the educational system first requires identifying and addressing *"enemies"*, setting precise goals, tackling challenges one by one and finally *"achieving the victory"*. Also, employing the WAR metaphor paints education as a process that needs *"strategic"* thinking to win the war. They have to ensure that students are ready to face the odds and have the mindset of the strategy when studying.

However, the dominant use of WAR metaphors in the educational context tends to obscure the non-confrontational aspects of education, leading to various negative effects. Firstly, the war metaphor, which demands teachers and students to constantly exhibit a "fighting" stance and attitude, causes the public to focus only on the outcome of the "education war." This use of war metaphors in education often results in an overly tense and confrontational understanding of the educational process. For example, comparing the learning process to "battle" or "conquest" can increase students' psychological pressure, making them feel that learning is a battle that must be won rather than a process of exploring knowledge and developing the mind. Such metaphors tend to overlook the joy and creativity of learning, instead emphasizing competition and victory, which can lead to student anxiety and aversion to learning (Song, 2003). Furthermore, war metaphors tend to ignore the importance of cooperation and inclusiveness in the educational process. Education is not just about individual effort; it is also about collective effort and social support. While war metaphors

emphasize individual heroism and confrontation, education requires teamwork and collective progress. Therefore, WAR metaphors should be used cautiously in the educational context to reduce the aggressiveness in metaphorical language and avoid the negative impacts they bring.

An examination of Chinese commencement speeches shows that the prominent metaphors CULTIVATION, CONSTRUCTION, and WAR do appear to flow and coexist from one to the other in a distinct manner, each capturing a different perspectives of the education. The metaphor CULTIVATION which highlighted nurturing, personal growth and moral refinement is matched with traditional Chinese values of Confucian for character education in early educational period. The CONSTRUCTION metaphor that focuses on goal-oriented and systematic education came to the fore after 1949 as China sought to modernize its education system to meet national development needs, particularly after the 211 and 985 Projects. The WAR metaphor that marks the incessantly rising competitive forces associated with the gaokao and China's position on world academic rankings emerged in the late 20th century as China adopted globalization and competition. These metaphors reflect the shifting priorities in Chinese higher education and co-exist today, indicating the multifaceted realities of education in China which strives to preserve traditions, modernize, and address ever-changing policies and cultural priorities.

Other Metaphorical Domains: Diverse Perspectives on Education

Compared to other researches which placed JOURNEY metaphor as the most prevalent role in Chinese context (Dong et al., 2018)(Yang,2022; Dong& Liu ,2018; Wang, 2015; Zhang 2019), they found that the most commonly used conceptual metaphors in Chinese commencement speeches are JOURNEY and FAMILY with the most prevalent metaphors. This suggested that these metaphors play a significant role in conceptualizing educational concepts.

One particularly notable observation in the present study is the discrepancy between the ranking of the FAMILY metaphor by type total and by token count. Although

the FAMILY metaphor is ranked the lowest in terms of types of metaphorical expressions (4 types), it ranks second in the total number of tokens (with 271 tokens, just behind the CULTIVATION metaphor). This indicates that while there are fewer distinct FAMILY metaphors, the ones that do exist are used more frequently within the corpus, such as “*parents*” or “*home*” might be repeatedly used in the speeches.

The concept of family is deeply rooted in Chinese culture, where the responsibilities and obligations among family members extend beyond material support to include moral education and spiritual support (Li, 2007). The use of FAMILY metaphors emphasizes this sense of collective identity by likening education to a family, thereby underscoring the close relationships and shared goals among teachers, students, and parents, and also education is often seen as an extension of familial responsibility, aimed at nurturing and cultivating virtuous individuals. Specifically, these family expressions help to illustrate concepts related to learning environments (*School is hometown*), teacher-student relationships (*the teachers are parents and the students are children*). This perfectly describes the Chinese perception of education: care, support, interaction, and holistic development in the educational process, enhances the emotional and humanistic aspects of education, which helps build a more harmonious and effective educational system.

The use of JOURNEY metaphor views education as a journey that has a clear beginning and end, yet is fraught with challenges. The mention of the expression “*difficulty*” implies that the progress of education is not something that can be achieved overnight; it requires proper guidance and concerted efforts from all parties to achieve significant advancements. This is also consistent with the Chinese culture, which encourages that education and learning are continuous processes with no end and life-long study should be embraced at all ages (Chen & Yang, 2019). Additionally, Journey has clear goals and directions and the use of “*making great steps forward*”, “*running on different roads but arriving at the same destination*” serves to affirm the achievements in university’s development thus far, bolstering public confidence in the progress of the higher education sector. Furthermore, the JOURNEY is not just about

reaching the destination; it is also about experiencing the scenery and culture along the way. In Chinese higher education, there is an emphasis on diverse learning experiences, encouraging students to participate in various extracurricular activities, internships, and international exchanges.

RELIGION metaphor refers education as religious experiences connects education as a sacred and pure mission, similar to the task of preaching in religion. Students are endowed with a sense of mission, motivating them to change themselves and the world through learning. But it needs to be paid the attention that students from different cultural backgrounds have varying levels of understanding and acceptance of religious metaphors. Some religious metaphors may be highly effective in certain cultures but can cause misunderstanding or discomfort in others: in a cultural context that is predominantly non-religious or multi-religious, using a specific religious metaphor might lead to feelings of exclusion.

Educational Metaphor Usage Across Ten Universities: Reflecting Institutional Characteristics

The research on education metaphors provides new insight into the prevalent use of education metaphors across universities. The result showed that six major metaphorical domains—CULTIVATION, FAMILY, CONSTRUCTION, WAR, JOURNEY, and NATURE—are consistently used across all ten universities. Such domains try to reinforce universities' culture and identity (as in Wuhan University where *students* are compared to *trees* in the context of Green Campus Projects—this ties the qualities and growth of trees to the attributes of students, symbolizing their development and potential), to enhance the power of expression(*educational progress* is described as *constructing a solid foundation for building*), to align educational objectives with broader social goals(WAR highlights the important role of the university in preparing students to face societal and international challenges—whether in terms of academic rigor, global competition, or national development goals of the Talent-Strong Nation Strategy and the Internationalization and Global Strategy), facilitate emotional and

intellectual engagement (FAMILY helps to understand and inherit Chinese traditional culture and values), and inspire innovation and exploration (JOURNEY views *educational paths* as *a long journey*, encouraging exploration and the pursuit of new ideas and solutions in their academic and professional lives).

However, while these metaphorical themes are consistent across the universities, each institution reflects its own unique historical, cultural, and educational identity.

Nanjing University shares the most frequently use of CULTIVATION metaphors among ten universities, which may closely relate to the universities' the philosophy of "Cultivating Virtuous Talents". The emblem and school badge of Nanjing University also incorporates plant elements of the cedar tree. As an evergreen tree, the tree of cedar embodies the qualities of resilience and enduring vitality, representing Nanjing University's educational ideals of sustained "self- cultivation" and centered its mission on intellectual enlightenment and moral education for achieving holistic student development and reflecting students' perseverance and relentless pursuit of growth throughout their learning journey (Official Website, 2024). This may be attributed to the frequent mention of "*cultivate*" metaphorical expression (17 times) in this university's CULTIVATION domain directly.

Wuhan University frequently employs CULTIVATION metaphors to link its lush environment to student growth. The metaphor "*The Soul of the Trees on Luojia Mountain*" compares students to *trees*—rooted yet capable of thriving beyond their origins—symbolizing both resilience and global mobility. This reflects Wuhan University's deep cultural heritage and its expectation of student development beyond academia.

Another interesting metaphorical representation is in Tsinghua University, which use Bauhinia as the metaphor to embody the Tsinghua spirit of "self-discipline and social commitment" and "constant renewal of humanity" (Zhao, 2015). This integration of CULTIVATION with campus culture can be seen as a metaphorical expression, using the rebirth and bloom of Bauhinia to reflect Tsinghua's innovation and resilience in modern education.

In Harbin Institute of Technology (HIT), the most frequent use of CONSTRUCTION metaphor like the words “*constructing*” and “*foundation*” primarily reflects its unique and profound educational philosophy “Solid Foundation and Strong Development” contributing to the nation’s industrialization and technological innovation (Yang, et al., 2018). The students are described as “*builders of the nation*” emphasizing the need to master both theoretical and practical skills to tackle major engineering challenges. Furthermore, HIT also proposed Grand Engineering Vision, which is a cornerstone of its Educational Reform and seeing Education as a “complex construction project”, for requiring interdisciplinary knowledge to integrate mechanics, materials, and engineering management (building materials) (Zhu et al., 2018) and systematic design for designing phased goals in curriculum development (structural frame)(Dong et al., 2018). Another unique CONSTRUCTION metaphor of “*the National Column*” show the significant role in Tongji University, which is a symbol of spiritual space, guiding both faculty and students in their shared pursuit of academic excellence and personal integrity (Liang, 2007).

WAR metaphor has played a significant role in reflecting Peking university’s educational values. This historical background, such as the anti-Japanese resistance movement, the birthplace of the New Culture Movement and the May Fourth Movement (Official Website, 2024), has closely linked the term “*war*” closely with Peking University, making it a symbol of spirit to “Patriotism, Progress, Democracy, and Science”, focusing on enlightenment and encouraging them to explore their own interests and potential. These historical experiences imbue the WAR metaphor with profound cultural significance, symbolizing resistance, struggle, and breakthroughs and then forming an essential part of Peking University’s cultural heritage.

The RELIGION metaphor of “baptism” is skillfully employed twice in University of Science and Technology of China. Just as religious baptism symbolizes purification and rebirth, the university has continuously transformed through historical challenges, emerging stronger to serve national needs and advance global scientific innovation: from its “Two Bombs, One Satellite” as founding mission to its relocation during the

Cultural Revolution and rise post-Reform. These transformations cemented its “national priority” value and “advancing global scientific frontiers”.

Different universities employ various metaphors to reflect their educational philosophies and values. This approach not only enriches the meaning of the speech but also allows public to deeply appreciate the profound impact and valuable significance of the cultural and educational narratives in these institutions.

5.2.2 Metaphorical Framing Effects on Students Reasoning on Education

For the second research question on “How are these educational metaphors influence students’ reasoning on education and lead to different decisions on solving educational problems differently?” The metaphorical framing reasoning effects were found, through experimental research, participants in different metaphorical frames presented the different strategies to solve the educational problems mentioning in Commencement speeches, which imply such frames greatly influence the way students understood and reasoned about problems in education and directly influenced their decision-making in solving educational problems.

Accordingly, the first result showed that students overwhelmingly preferred metaphorical frameworks and responded more answers to non-metaphorical materials when solving educational problems. Compared to non-metaphorical materials, metaphorical frameworks are more likely to stimulate students' interest and engagement. By linking complex issues to familiar concepts, metaphors stimulate students to think and understand from multiple perspectives and the Metaphorical materials typically offer more creative and interpretive perspectives, helping students form deeper cognitive connections when thinking about educational issues. These frameworks provide students with more concrete, actionable thought paths, allowing them to be more engaged and think from multiple angles when solving problems.

Such findings were consistent with earlier studies showing that metaphors stimulate multi-angle thinking and influence how we think. They can also be powerful tools for shaping opinions on topics like abstract ideas (e.g., "ideas(Elmore,& Luna-Lucero,2017)"), emotional experiences (e.g., "romantic relationships(Krenn ,

2017)" , health issues (e.g., "cancer" (Hendricks et al., 2018) and "flu" (Scherer et al., 2015)), and sociopolitical matters (e.g., "crime (Thibodeau & Boroditsky, 2011)" and, "obesity(Xiang & Mario, 2021)" and "climate change" (Flusberg, Matlock, & Thibodeau, 2017). Furthermore, another result showed that students provide more responses to metaphorical materials than in non-metaphorical materials. This finding partly supported previous research (Steen, Reijnierse, & Burgers, 2014), showing that metaphors better stimulate interest and engagement by linking familiar concepts, fostering multi-angle thinking, and deepening understanding. These findings, together with this study, underscore the practical significance of metaphorical framing on how metaphor influences conceptual understanding and problem-solving reasoning.

Also, a follow-up research findings (Steen, Reijnierse, & Burgers, 2014) argued that the influence of metaphorical frameworks on thinking strategies may not be as significant as expected, especially regarding decision-making and strategy use, where no substantial differences were found between non-metaphorical and metaphorical materials. Such finding was contradicted to the present study, which showed that participants provided significantly different decisions when exposed to non-metaphorical versus metaphorical materials in the context of education. The previous study further pointed out that metaphors influence people's thinking under certain conditions when metaphors align with individuals' prior mental models or when their emotional tone matches the issue at hand. And in this study, educational metaphors are a familiar and widely understood topic, particularly for students. When the metaphorical framework involves self-relevant motivations, it is typically considered more persuasive (Steen, Reijnierse, & Burgers, 2014). That can explain why metaphorical framework indeed influence people's thinking under educational context. Another explanation may include that the non-metaphorical materials typically describe the problem directly, without guiding students to expand their cognitive space through metaphor or symbolism, which can result in limitations in thinking and a reduction in the number of strategies.

Furthermore, the influence of metaphorical framing was visible mainly in three spheres of students' perception of educational processes, their choices of solutions, and the areas of concentration. CULTIVATION, WAR, and CONSTRUCTION metaphorical frameworks offer different ways of thinking or value orientation that set ways for the students to frame the educational problems in the light of competition, care, or planning.

CULTIVATION Metaphorical Framing

It's interesting to note that from the data of the experiment Psychological Support and Emotional Care received much attention within the frame of CULTIVATION, with a high occurrence frequency of 17 times. Participants under the influence of this frame frequently mentioned the need to set emotional bonds between teachers and students, provide psychological counseling, and promote student well-being. This close connection with attention ties directly to the aspects of care and patience inherent in the CULTIVATION metaphor, illustrating the emotional needs of students throughout the educational process. The students' approach to problem-solving reflected a patient, tender, nurturing characteristic of this frame.

This metaphor is also a deep echo of the shift in China's current education system, which is gradually transitioning from an Exam-oriented approach to a Quality-oriented one, with a strong focus on fostering students' psychological health, emotional needs, and overall development. In response to social competition, academic pressure, and the increasing prevalence of psychological issues in Chinese society, many universities have established psychological health education systems, introduced comprehensive quality evaluation system to emphasizes their psychological qualities and personal emotional development (Zhao et al., 2021). The metaphor of CULTIVATION serves not only to shape educators' and learners' perceptions of the educational process, but it is also the cultural key that moves Chinese education to pay more attention to students' mental health and their emotional support.

The findings showed that gender differences were more pronounced in the CULTIVATION frame. Female participants consistently prioritized psychological support while males showed more tendency toward practical solutions and emphasize the concrete implementation on teaching approaches and financial aid.

This can be linked to socialization processes and cultural context, where females are often encouraged to value empathy, communal goals, group harmony and welfare (Rutherford, 2004) and also work as the mediators and supporters (Holmes, 2006). Women, often linked to caregiving roles, tend to propose broad-impact solutions, emphasizing psychological support, emotional well-being, and community harmony. In educational settings, this means advocating for inclusive policies that ensure equal access to resources and support for marginalized groups. In return, society provides for men to take responsibility and assume authority roles, and therefore, men demand result-based educational approaches and system-wide reforms in Chinese higher education (Du, Xiao & Zhao, 2020). This difference also is consistent with research by Holmes (2006) who found that men often use directive language and take on leadership and decision-making roles due to societal expectations of assertiveness and leadership. Such findings also resonate with the studies by Holman (2006) and Das et al. (2024) which suggested that women tend to connect more deeply emotional level, associating metaphors with themes like education, freedom, and opportunity to societal demand for change, while men may use directive language and take on leadership and decision-making roles to interpret the themes with more practical way. Both studies highlight a similar pattern in which women focus on broader, more empathetic themes, while men approach these themes from a more practical or strategic perspective.

The CULTIVATION metaphor incorporates gender bias concentrating on women socially and psychologically as caregivers and educators or teachers in contemporary China. Women's focus on psychological care and emotional guidance reinforces their role as caregivers nurturing students academically as well as emotionally. In comparison, men's focus on practical help reinforces the sociocultural expectation for men to exert authority and be decisive around clear cut outcomes. These differences are shaped by

the Chinese culture characterized as collectivistic, where stereotypical women's roles are defined as oriented towards fulfilling societal needs, while men's roles are associated with personal success and achievement (Zhang, Mandl, and Wang, 2011). The educational system in China which is based on meritocratic principles accentuates this polarization further because it is usually men who are expected to facilitate changes and developments within the educational system (Cunningham, Hill, and Zhang, 2022).

Educational level difference also can be found significantly in CULTIVATION frame. Freshmen prioritize evaluation methods and educational resource sharing while seniors on Learning Methods and psychological support. Such result may be attributed to the fact that freshmen are still at their early stages of university life where they try to understand understanding how the higher education system works for adaptation, how their performance will be assessed and how to improve accordingly. On the other hand, senior participants who aim to refine and deepen their academic skills to tackle more advanced coursework and research. Also, As placing greater importance on graduation, job hunting, and future career planning, they face much higher academic stress and psychological burden. Therefore, they focus on individual learning strategies and mental resilience to successfully complete the studies and transition into the workforce. Such finding may resonate with the previous researches (Wegner et al. ,2020; Jimenez-Munoz & Lahuerta-Martínez,2022) and hypothesis that freshmen express metaphors in a more concrete and direct, simple and functionally-driven manner while seniors shift towards more exploratory, critical, and creative thinking, reflecting the characteristics of deep learning.

CONSTRUCTION Metaphorical Framing

In the CONSTRUCTION model, education is treated as a constructive process, so students pay more attention to the general design and long-term planning of the education system, and it also leads students to reveal a strong structured thinking in solving educational problems. This is supported by the experiment results which show that the high frequency of educational methods and sharing of educational resources in

the CONSTRUCTION frame, suggesting that students have high expectations for the systematic and long-term nature of the education system. Students viewed school education as one project in which continuous optimization or improvement is called for; they advocated solving this problem with system design on educational methods and resource integration. Moreover, the metaphor of CONSTRUCTION influenced the students to develop an understanding of the practical application of educational theory, where many students proposed promoting educational goals through designing diversified teaching methods like *“the curriculum content can be arranged more logically, ensuring a progressive knowledge structure.”* and *“by building platform online and offline, teaching methods can become more flexible”*. For optimizing learning resources. Inspired by the metaphor, students recognized that the rational allocation and sharing of educational resources like regional collaboration is crucial for optimizing the education system. This would imply that the CONSTRUCTION metaphor enables students to look at the problems in education from a higher-level social and organizational perspective beyond the individual learning process.

In the CONSTRUCTION frame, gender and education level differences are minimized, which both males and females, freshmen and seniors focused on the same issues in both questions, namely Educational Approaches and Educational Resource Sharing. The results showed no gender-based or grade-based distinction within this frame, which completely contradicted the initial hypothesis that expected differences existed. One possible explanation for this result is that the CONSTRUCTION frame may inherently promote a more logical and process-oriented approach to decision-making. Under the organized decision-making environments (such as policy-making or educational reforms), the problem-solving paths are often predefined or logically clear, or complex decision tasks increase cognitive load (Eagly & Johnson, 1990), meaning individuals must follow established standards and logical processes rather than relying on personal preferences or communication styles. As a result, the participants may consider resource distribution, curriculum planning, and policy implementation. This fixed may limit the influence of social differences in decision-making styles, as both

genders and grades would be guided by the same logical structure rather than individual preferences for cooperation.

The lack of gender distinctions under the CONSTRUCTION metaphor frame in which both male and female students attend to educational strategies and resource allocation might be a result of China's collectivist culture and education system (Liu, 2012). Within Chinese culture, education serves as a collective social activity pursued for national development, thereby reducing the impact of traditional gender stereotypes that tend to shape perceptions. This provides reasoning for why both men and women would resonate positively with the CONSTRUCTION metaphor, which in itself entails focus on systematic arrangements (Fang, 2021). Also, there is little gender difference in the education tasks in a study conducted by Belarmino and Roberts (2019), observing an Chinese people's tendency towards collectivism. The strategic, logical, and procedural nature of the metaphor also reduces personal bias, considering that the students are assumed to share the same approach to system design.

WAR Metaphorical Framing

This strategic mindset reflected in participants' responses in the experiment, where they showed a strong preference for Learning Strategies in Question 1 (solving educational problems) and Policy Support in Question 2 (addressing educational fairness). This frame was based on struggle and competition; hence, students were called upon to use an offensive, goal-directed mode of reasoning. Furthermore, the WAR metaphor also influenced students' linguistic expressions, as was reflected in the instances of overuse of some words such as "*attack, overcome, and breakthrough*". At the individual learning level for gathering theory and practical usage, the students influenced by the frame were more likely to suggest solutions such as '*clarifying goals*', '*strategic adjustment*', and '*enhancing competitiveness*'.

However, the dominant use of WAR metaphors in the educational context tends to obscure the non-confrontational aspects of education, leading to various negative effects. Firstly, the war metaphor, which demands teachers and students to constantly

exhibit a “*fighting*” stance and attitude, causes the public to focus only on the outcome of the “*education war*”. Too much emphasis on education war in China may result in an overly tense and increase students' psychological pressure, making them feel that learning is a battle that must be won rather than a process of exploring knowledge and developing the mind. Such metaphors tend to overlook the joy and creativity of learning, instead emphasizing competition and victory, which can lead to student anxiety and aversion to learning (Song,2003). Furthermore, WAR metaphors tend to ignore the importance of cooperation and inclusiveness in the educational process. While it emphasizes individual heroism and confrontation, education requires teamwork and collective progress. Education is not just about individual effort; it is also about collective effort and social support. Therefore, this metaphor should be used cautiously in the educational context to reduce the aggressiveness in metaphorical language and avoid the negative impacts they bring.

As for the gender difference in WAR frame, the result compared that the primary focus on Psychological Support suggested by males and Policy Support by females. This result further supported the hypothesis that gender differences affect students' reasoning and decision-making strategies. Contrasted here was a rather more interesting approach exhibited by males suggested psychological support in response to Question 1 in WAR, females proposed the same approach for Question 2 in CULTIVATION. The deeper reason why such strategy appeared in WAR may stem from frame responds to conflicts, challenges, and pressures, typically focusing on how individuals adjust and survive in competitive or adverse situations, helping students maintain psychological stability in competitive or adverse situations. Recent shifts in China's educational policies emphasize mental health and emotional well-being, moving beyond exam-focused education to support students in coping with academic and personal challenges (Zhao et al., 2021). This explains why male participants in the WAR frame prioritize emotional regulation and resilience over confrontational or high-risk strategies, reflecting broader cultural and educational trends in China.

Within the bounds of China's framework, resilient leadership is expected of men, which may account for the focus male participants placed on psychological support as a means to reinforce emotive stability within the competitive and conflict-ridden WAR frame. This corresponds with cultural burdens placed on men to describe endurance when confronting difficulties, particularly in midachievement high-stakes academic settings such as the Gaokao (Hird, 2019). On the contrary, women are socialized as nurturers—helpers of the society—who tend to emphasize systemic fairness, which explains why females focused on advocating for educational policies to remedy issues of inequality. This demonstrates women's contribution towards improving collective welfare, which has been fostered by increased attention towards gender equality in education policies in China (Salmi, 2018). Compared to those researches related to the Western world, men usually adopt aggressive behaviors in competition, while women try to work collectively (Eagly, Woo, & Diekmann, 2012). In China settings, however, collectivism softens these differences as men demonstrate surprising sensitivity to psychological needs—even within the WAR framework—that may stem from acute awareness of mental health concerns (Chen et al., 2015).

Freshmen participants are primarily concerned with how to learn effectively in a competitive academic environment and by the time students reach their senior years, their focus shifts to more holistic academic strategies from teachers' perspectives. Such result further supports the hypothesis that different grades may lead to different approaches. Also, it is interesting to figure out that seniors are more focused on Learning Methods under CULTIVATION frame while under the WAR frame, freshmen are more concerned with Learning Methods. This may be related to the influence of the metaphorical frames: CULTIVATION frame encourages students to view themselves as *"individuals with potential to be nurtured,"* leading them to focus more on how to use Learning Methods to enhance their abilities on long-term progress. In contrast, the WAR frame is associated with competition, pressure, and tackling challenges. This metaphor may lead freshmen to view themselves as *"new recruits in a battle,"* needing to quickly adapt and enhance their learning abilities.

In the conclusion of this study, we did examine the relationship between the experimental findings and the hypotheses proposed in Chapter 1, and we found that metaphorical frames (CULTIVATION, CONSTRUCTION, WAR) significantly influenced students' reasoning of educational issues and their choice of strategies.

5.3 Implications of the study

The findings of this study have profound theoretical and practical implications for the field of Chinese education, as they provide insight into how education is perceived and communicated through metaphors, how these metaphors convey educational concepts and values across universities, and how they influence students' understanding and problem-solving in education. Understanding the conceptual frames of educational metaphors and their framing effects help educators and policymakers better promote a balanced application of metaphors, and then comprehend students' thought processes, emotions, and decision-making, finally incorporate cultural awareness of metaphor in education reform. Furthermore, the results are also beneficial to cross-cultural education research, particularly for scholars studying the expression and application of metaphors in different cultural contexts.

The findings also contribute Chinese educational reform and policymakers, students, educators as well as the researchers, more specifically:

For the implications for Chinese education reform and policymakers, by appropriately applying different educational metaphors in Chinese education discourse, policymakers can incorporate suitable metaphorical frames to inspire students' competitiveness, collaboration, and personal growth, thus laying the foundation for achieving future educational goals. For example, the CULTIVATION metaphor emphasizes individualized development and emotional support, while the CONSTRUCTION metaphor highlights the systematic and structural planning of education. The WAR metaphor stimulates students' competitive awareness and fighting spirit. Chinese education systems and reforms should integrate multiple metaphorical frames, leveraging their strengths from different dimensions to promote holistic student development. By incorporating the values of different metaphors into educational

policies and practices, the Chinese education system can achieve continuous innovation and optimization of educational concepts, thereby promoting the all-around development of students.

Regarding the implications for educators and students, understanding the role of educational metaphors in shaping thinking may help teachers optimize educational strategies and teaching methods, and engage students' motivation and creativity more effectively in the classroom. Moreover, it helps educators identify how different metaphors impact diverse student groups (such as gender, grade level, and background), providing theoretical support for personalized teaching.

In terms of the implications for researchers, the findings also provide inspiration for scholars in the field of educational research, particularly those focusing on educational metaphors and metaphorical framing effects in education. By analyzing the interaction of metaphors between students and teachers, scholars can explore ways to optimize educational metaphorical frames to better serve educational practice. Additionally, this provides new perspectives and directions for educational theory research, helping to advance the development of educational metaphor theory.

5.4 Limitation and Recommendation for Future Study

Regarding the limitation in the experiments, the design and presentation of education metaphors was restricted and limited, which students were exposed to metaphors solely through written text, whereas graduation speeches typically involve a combination of auditory and visual elements, including tone of voice, body language, and visual aids. The absence of these elements in the experimental setup could result in a less immersive experience for participants, potentially leading to different responses compared to those elicited in a more dynamic, real-world context. Future research could consider incorporating more realistic and multimodal presentations of education metaphors to enhance the impact of metaphors on students' cognition and emotional engagement.

Another limitation of the present study is that the prior exposure and pre-activation of metaphorical frames in experiment may consciously or unconsciously

encourage the participants to engage with and explore metaphors prior to answering the questions. Future research should consider employing control procedures to minimize such priming effects, such as embedding metaphorical language in more naturalistic or implicit contexts. Additionally, the current study measured the immediate cognitive impact of metaphorical input, without assessing any delayed or long-term effects. It remains unclear whether the same degree of cognitive engagement and creative thinking would persist after a temporal gap between metaphor exposure and task performance. Therefore, future studies are encouraged to investigate the delayed effects of metaphorical framing by introducing varying intervals between input and response, to examine whether metaphorical language has sustained influence on students' reasoning and problem-solving processes over time.

It may be beneficial for a later study to investigate the gap in time between exposure to metaphors and task performance to see if that influences cognitive engagement in performing the tasks. A growing body of empirical studies could attempt to add increasing delays between inputting metaphorical language and responding to it, checking if the initial stimulus response involved with metaphors mentally persists over time. Exploring whether students' reasoning, problem-solving, and creative thinking is influenced after some time due to the metaphorical framing constructs would significantly deepen the understanding of the impact metaphor use in education has on the students, ultimately contributing to the application of metaphors within teaching methodologies.

REFERENCES

- Ahmady, S., Yaghmaei, M., Arab, M., & Monajemi, A. (2016). Metaphor in education; hidden but effective. *Journal of Medical Education*, 15(1).
- Baxter Magolda, M. B. (2003). Identity and learning: Student affairs' role in transforming higher education. *Journal of College Student Development*, 44(2), 231-247.
- Bhatia, V. K. (1993). Analysing genre: Language use in professional settings. *Applied Linguistics and Language Studies*.
- Black, M. (1963). *Models and metaphors: Studies in language and philosophy*. Cornell University Press.
- Boeynaems, A., Burgers, C., Konijn, E. A., & Steen, G. J. (2017). The Effects of Metaphorical Framing on Political Persuasion: A Systematic Literature Review. *Metaphor and Symbol*, 32(2), 118-134. <https://doi.org/10.1080/10926488.2017.1297623>
- Bordelon, S. (2010). Composing Women's Civic Identities during the Progressive Era: College Commencement Addresses as Overlooked Rhetorical Sites. *College Composition & Communication*, 61(3), 510-533. <https://doi.org/10.58680/ccc20109958>
- Botha, N. (2006). Leadership in school-based management: a case study in selected schools. *South African journal of education*, 26(3), 341-353.
- Burgers, C., & Ahrens, K. (2020). Change in metaphorical framing: Metaphors of trade in 225 years of State of the Union addresses (1790–2014). *Applied Linguistics*, 41(2), 260-279.
- Cameron, L. (2003). *Metaphor in educational discourse*. A & C Black.
- Candy, P. C. (1986). The eye of the beholder: metaphor in adult education research. *International Journal of Lifelong Education*, 5(2), 87-111. <https://doi.org/10.1080/0260137860050202>
- Charteris-Black, J. (2004). Critical metaphor analysis. In *Corpus approaches to critical metaphor analysis* (pp. 243-253). Palgrave-MacMillan.
- Chen, X. (2018). *The pragmatic functions of gender metaphor*
- Cheng, J. (2006). Thinking triggered by Metaphor: What is School. *Education Guide*(11), 57-58.
- Cohen, T. (1978). Metaphor and the Cultivation of Intimacy. *Critical inquiry*, 5(1), 3-12.
- Da-zhi, R. (2002). A Brief History of Journal of Wuhan University (Natural Science Edition) in 1930-2000. *Wuhan University Journal*.
- Das, P., Basak, A., Vaidya, G., Singh, G., Banik, G., & Majhi, M. (2024). Unveiling Gender Differences in Visual Metaphor Interpretation in Indian Banking Print Advertising. *Archives of Design Research*, 37(4), 99-116.
- Davis, R. A., Conroy, J. C., & Clague, J. (2020). Schools as Factories: The Limits of a Metaphor. *Journal of Philosophy of Education*, 54(5), 1471-1488. <https://doi.org/10.1111/1467-9752.12525>
- Deignan, A. (2005). *Metaphor and corpus linguistics*. John Benjamins Publishing.
- Derek, & Bok. (2001). *Beyond the ivory tower: Social responsibilities of the modern university*. Hangzhou: Zhejiang Education Publishing House.
- Dong, Y., Xie, L., & Liu, G. (2018). Construction and Thinking of Safety Engineering Talent Training

- under the Concept of “big E” Engineering. 2018 3rd International Conference on Humanities Science, Management and Education Technology (HSMET 2018),
- Eagly, A. H., & Johnson, B. T. (1990). Gender and leadership style: A meta-analysis. *Psychological Bulletin*, 108(2), 233.
- Elmore, K. C., & Luna-Lucero, M. (2016). Light bulbs or seeds? How metaphors for ideas influence judgments about genius. *Social Psychological and Personality Science*, 8(2), 200-208. <https://doi.org/10.1177/1948550616667611>
- Entman, R. M. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of communication*, 43(4), 51-58.
- Ervas, F., Rossi, M. G., Ojha, A., & Indurkha, B. (2021). The double framing effect of emotive metaphors in argumentation. *Frontiers in Psychology*, 12, 628460.
- Fang, M. (2005). *Famous Works on Education by Tao Xingzhi*. Educational Science Press.
- Farrell, G. (1939). Observations from a Tower of IVORY. *Journal of Visual Impairment & Blindness*, 33(3), 68-74.
- Flusberg, S. J., Matlock, T., & Thibodeau, P. H. (2017). Metaphors for the war (or race) against climate change. *Environmental communication*, 11(6), 769-783.
- Gao, W. (2011). Teaching Metaphor and Curriculum Reform. *Shanghai Education and Research*(5), 22-24.
- Gao, Y. (2014). The concept of students in education metaphors: A historical review and contemporary implications. *Educational Academic Monthly*, 48(2), 36-39, 48.
- Gibbs Jr, R. W. (2006). Metaphor interpretation as embodied simulation. *Mind & Language*, 21(3), 434-458.
- Goatly, A. (1997). *The language of metaphors*. Routledge.
- Goodhew, L. M., Robertson, A. D., Heron, P. R. L., & Scherr, R. E. (2019). Student conceptual resources for understanding mechanical wave propagation. *Physical Review Physics Education Research*, 15(2), 020127. <https://doi.org/10.1103/PhysRevPhysEducRes.15.020127>
- Group, P. (2007). MIP: A method for identifying metaphorically used words in discourse. *Metaphor and Symbol*, 22(1), 1-39.
- Hauser, D. J., & Schwarz, N. (2014). The war on prevention: Bellicose cancer metaphors hurt (some) prevention intentions. *Personality and Social Psychology Bulletin*, 41(1), 66-77.
- Hendricks, R. K., Demjén, Z., Semino, E., & Boroditsky, L. (2018). Emotional implications of metaphor: Consequences of metaphor framing for mindset about cancer. *Metaphor and Symbol*, 33(4), 267-279.
- Higher Education Statistics: Enrollment and Graduation Rates*. (2020).
- Holman, M. R. (2016). Gender, political rhetoric, and moral metaphors in state of the city addresses. *Urban Affairs Review*, 52(4), 501-530.
- Holyoak, K. J., & Stamenković, D. (2018). Metaphor comprehension: A critical review of theories and evidence. *Psychological Bulletin*, 144(6), 641.
- Hua, W. (2010). An analysis of the differences between Chinese and American university graduation speeches. *Secretary*(2), 33-36.
- HUANG, X., & BISIADA, M. (2021). Is Obesity Just a Health Issue? Metaphorical Framings of Obesity

- in the People's Daily. *Critical Approaches to Discourse Analysis Across Disciplines*, 13(2).
- Humboldt, W. (1985). *On Language: The Diversity of Human Language-Structure and Its Influence on the Mental Development of Mankind*. Cambridge University Press.
- Hussey, K. A., & Katz, A. N. (2006). Metaphor production in online conversation: Gender and friendship status. *Discourse Processes*, 42(1), 75-98.
- Joshi, A. (2014). The dual positioning of commencement rhetoric: Discursive markers in speeches by Ratan Tata and Steve Jobs. *IUP Journal of Soft Skills*, 8(3), 37-49.
- Kai, Q., Wang Xiaoyan, & Nana, L. (2013). A Preliminary Exploration of the Basic Concepts and Effects of Nanjing University's "Three-Three System" Reform—Based on Data Analysis of Student Capability Development. *Journal of Yangzhou University (Higher Education Study Edition)*(06), 72-78.
- Konfrst, J. C. G. (2017). Messaging strategies in presidential commencement speeches 1980-2016: A content analysis. *Teaching Journalism & Mass Communication*, 7(2), 49-56.
- Kövecses, Z. (2010). *Metaphor: a practical introduction*. Oxford University Press.
- Kövecses, Z. (2020). *Extended conceptual metaphor theory*. Cambridge University Press.
- Laing, C. L., & Laing, G. (2016). The student-as-customer metaphor: A deconstruction using Foucauldian constructs. *Australasian Accounting, Business and Finance Journal*, 10(1), 40-54.
- Lakoff, G. (1990). The invariance hypothesis: Is abstract reason based on image-schemas? *Cognitive Semantics*, 1, 39-74. <https://doi.org/10.1515/cogl.1990.1.1.39>
- Lakoff, G., & Johnson, M. (1980). *Metaphors We Live By*. University of Chicago Press.
- Lakoff, G., & Johnson, M. (2008). *Metaphors we live by*. University of Chicago press.
- Leino, A.-L., & Drakenberg, M. (1993). *Metaphor: An Educational Perspective*. *Research Bulletin 84* [Research](9514564278). (RESEARCH BULLETIN, Issue 84). Helsinki. <https://eric.ed.gov/?id=ED364912>
- Li, X., & Liu, Y. (2020). The Transformation of Higher Education in China: Infrastructure and Policy Development. *Chinese Education Review*, 45(3), 125-139.
- Li, Y. (2007). The orientation of metaphorical meaning and cultural cognition. *Journal of Henan Normal University*(5), 180-182.
- Lin, B. (2012). *The Ideological Power of Metaphor*. Xiamen University Press.
- Liu, Z. (2014). *Research on the characteristics and Moral Education Functions of University Presidents' Graduation Speeches in the New period* [Doctoral Dissertation, Hangzhou Dianzi University]. Hangzhou.
- Locke, J. (1970). *Some thoughts concerning education, 1693*. Scholar Press.
- López, A. M. R., & Llopis, M. Á. O. (2010). Metaphorical pattern analysis in financial texts: Framing the crisis in positive or negative metaphorical terms. *Journal of pragmatics*, 42(12), 3300-3313.
- Low, G., Deignan, A., Cameron, L., & Todd, Z. (2010). *Researching and Applying Metaphor in the Real World*. John Benjamins Publishing Company.
- Marotta, S. A. (2017). *The Effect of Metaphoric Framing on Attitudes Toward Diversity Policies in the Face of Racial Shift*. Tufts University.
- Masson, P., & Raymond, N. (2018). Researcher Triangulation & Data Validity: Parallel Transcript

- Evaluation & Coding. NURSING RESEARCH,
- Murphy, G. L. (1996). On metaphoric representation. *Cognition*, 60(2), 173-204. [https://doi.org/10.1016/0010-0277\(96\)00711-1](https://doi.org/10.1016/0010-0277(96)00711-1)
- Murphy, G. L. (1997). Reasons to doubt the present evidence for metaphoric representation. *Cognition*, 62(1), 99-108. [https://doi.org/10.1016/S0010-0277\(96\)00725-1](https://doi.org/10.1016/S0010-0277(96)00725-1)
- Musolff, A. (2019). Metaphor framing in political discourse. *Mythos-Magazin: Politisches Framing*, 1(1), 1-10.
- Musolff, A., & Zinken, J. (2009). *Metaphor and Discourse* Palgrave Macmillan.
- Ortony, A., Reynolds, R. E., & Arter, J. A. (1978). Metaphor: Theoretical and empirical research. *Psychological Bulletin*, 85(5), 919-943. <https://doi.org/10.1037/0033-2909.85.5.919>
- Özdemir, Y. (2013). Parental behavioral and psychological control relationships to self-esteem, life satisfaction, depression, and antisocial behaviors. *Journal of Human Sciences*, 9(2), 1581-1590. <https://www.j-humansciences.com/ojs/index.php/IJHS/article/view/2280>
- Panther, K.-U. (2009). Finding metaphor in grammar and usage: A methodological analysis of theory and research: Gerard J. Steen, John Benjamins, Amsterdam/Philadelphia, 2007, 430 pp., EUR 110.00/USD 165.00. *Journal of Pragmatics*, 41(7), 1455-1458. <https://doi.org/10.1016/j.pragma.2009.01.005>
- Partch, J. J., & Kinnier, R. T. (2011). Values and Messages Conveyed in College Commencement Speeches. *Current Psychology*, 30(1), 81-92. <https://doi.org/10.1007/s12144-011-9101-6>
- Pavlikova, Ž. (2021). The Concept of Metaphor in Political Speeches (Metaphors in the Electoral Speeches of Donald Trump and Joe Biden in the 2020 Presidential Elections).
- Pinker, S. (2007). The stuff of thought: Language as a window into human nature. *New York: Viking*, 118-134. <https://doi.org/10.1080/10926488.2017.1297623>
- Qiu, Y. (2023). In-depth development of thematic education to vigorously explore new aspects of high-quality development for a world-class university with Chinese characteristics. *Party Class Reference*(20), 49-58.
- Reddy, M. (1979). The conduit metaphor: a case of frame conflict in our language about language. In A. Ortony (Ed.), *Metaphor and Thought* (2nd ed., pp. 164-201). Cambridge University Press.
- Reinhardt, T., & Winterbottom, M. (2006). *Quintilian Institutio Oratoria Book 2*. OUP Oxford.
- Richards, I. A. (1936). *The Philosophy of Rhetoric*. Clarendon Press.
- Roberts, J. O. (1987). A Principal's Commencement Address: Break the Habit of Avoiding Real Issues. *NASSP Bulletin*, 71(499), 99-101. <https://doi.org/10.1177/019263658707149920>
- Ru, C. (2014). On the Cultivation Mechanism of Top-notch Innovative Talents in Science and Engineering—Take Honors School in Harbin Institute of Technology as an Example. *Higher Education of Sciences*.
- Rutherford, M. B. (2004). Authority, Autonomy, and Ambivalence: Moral Choice in Twentieth-Century Commencement Speeches. *Sociological Forum*, 19(4), 583-609. <https://doi.org/10.1007/s11206-004-0697-2>
- Scherer, A. M., Scherer, L. D., & Fagerlin, A. (2015). Getting ahead of illness: using metaphors to

- influence medical decision making. *Medical Decision Making*, 35(1), 37-45.
- Semino, E., Demjén, Z., Demmen, J., Koller, V., Payne, S., Hardie, A., & Rayson, P. (2017). The online use of Violence and Journey metaphors by patients with cancer, as compared with health professionals: a mixed methods study. *BMJ supportive & palliative care*, 7(1), 60-66.
- Shabelnyk, K., & Torhovets, Y. (2021). Структурні особливості сучасної англомовної випускної промови. *Studia Philologica*(1), 35-41. <https://doi.org/10.28925/2311-2425.2021.165>
- Shu, D. (1996). Aristotle and metaphor Studies. *Foreign Language Research*(1), 13-17.
- Shu, D. (2000). *A Study on Metaphor*. Shanghai Foreign Language Education Press.
- Solly, M. (2014). 'Giving the Graduates an Earful': Identity and Interaction in Commencement Speeches. In *Identities in and across cultures* (Vol. 189, pp. 165-184). Peter Lang.
- Song, Y. (2003). Metaphorical language: A neglected educational category. *Tsinghua Journal of Education*, 24(5), 25.
- Sopory, P., & Dillard, J. P. (2002). The Persuasive Effects of Metaphor: A Meta-Analysis. *Human Communication Research*, 28(3), 382-419. <https://doi.org/10.1111/j.1468-2958.2002.tb00813.x>
- Steen, G. J., Reijnierse, W. G., & Burgers, C. (2014). When do natural language metaphors influence reasoning? A follow-up study to Thibodeau and Boroditsky (2013). *PloS one*, 9(12), e113536.
- Stevenson, A. (2010). *Oxford dictionary of English*. Oxford University Press.
- Strauss, A., & Corbin, J. (1998). Basics of qualitative research techniques.
- Tao, M. (2017). A study on cultural cognition of English and Chinese educational metaphors. *Journal of Foreign Language Studies*, 34(4), 31-35.
- Thibodeau, P. H., & Boroditsky, L. (2011). Metaphors we think with: The role of metaphor in reasoning. *PloS one*, 6(2), e16782.
- Thomas, B. A. (2010). *Complicating metaphor: Exploring Writing about Artistic Practice through Lacanian Psychoanalytic Theory and Conceptual Metaphor Theory* [Doctoral dissertation, The Ohio State University]. Columbus, OH.
- Treena, G. F., & Zachary, F. R. (2010). Are students their universities' customers? An exploratory study. *Education+ Training*, 52(4), 276-291. <https://doi.org/10.1108/00400911011050954>
- Wang, L., & Jiang, L. (2013). President's graduation Speech: from "Telling jokes" To "Speaking useful words to graduates". *Chengdu Business Daily*.
- Wegner, E., Burkhart, C., Weinhuber, M., & Nückles, M. (2020). What metaphors of learning can (and cannot) tell us about students' learning. *Learning and Individual Differences*, 80, 101884.
- Winter, B., Duffy, S. E., & Littlemore, J. (2020). Power, gender, and individual differences in spatial metaphor: The role of perceptual stereotypes and language statistics. *Metaphor and Symbol*, 35(3), 188-205.
- Wongthai, N. (2022). Metaphorical concepts of the current education system in Thailand. *LEARN Journal: Language Education and Acquisition Research Network*, 15(1), 383-408.
- Xiao, C. (2004). Metaphors of Education. People's Education. 2004(12).
- Xiong, L. (2006). On Stylistic Features and Functions of Chinese and Western Graduation Speeches. *Journal of Changsha Railway University (Social Sciences)*(2), 211-213.

- Zhang, Y. (2016). Positive Discourse Analysis of 2016 Chinese University commencement speeches -- from the perspective of evaluation theory. *Journal of Hubei University of Science and Technology*, 11, 47-50.
- Zhao, P., & Shang, C. (2020). Partial equivalence in power: A Critical Discourse analysis of University Presidents' graduation Speeches. *Journal of Tianjin Foreign Studies University*, 27(6), 79-85.
- Zhao, S., Zhang, J., Peng, L., & Yang, W. (2021). Mental health outcomes among Chinese college students over a decade. *International journal of environmental research and public health*, 18(23), 12742.
- Zhao, Y. (2015). The Bauhinia and the Spirit of Tsinghua University. *Tsinghua Journal of Education*.
- Zhou, Y. (2017). Cultural Gender Metaphors in Modern Chinese Fiction. *Language and Cognitive Science*, 3(1), 1-40.
- Zhu, W., Du, J., Qiu, Z., Feng, G., & Li, X. (2018). Mechanics of Materials Course Reform Exploration of Civil Engineering in Kunming University. *DEStech Transactions on Economics, Business and Management*(icssed).
- Zhu, Y. (2018). An intercultural analysis of personal metadiscourse in English and Chinese commencement speeches. *Advances in Language and Literary Studies*, 9(5), 100-110.

APPENDIX

Appendix 1 Informed Consent Form

NAME OF PARTICIPANT: _____

Yunshu Zhao, a PhD student at the Srinakharinwirot University, is inviting you to participate in research. You have been invited to participate in this study because of your selection based on an assessment of your replies to the Recruitment Letter (Email) given to you. The goal of this study is to investigate the research objectives:

- Examine effects of the education metaphors on university student's mindset

This research study requires me to schedule a time and date with you for independent experiment (read the passage and answer the questions) utilizing WeChat/Tencent Meeting/Aishiyuan platform, and your voice or video or your answer will be recorded. You may request that the interview be terminated at any moment for any reason.

- You will receive a link to fill into your personal information firstly.
- You will be invited to read a passage and then answer the questions related your personal understanding of the issues.
- You will take part in individual audio or video interview sessions to answer the questions OR record your response/ type it into the link (you can choose which method to use), which may take you about 15–20 minute to finish.

- Your information will be kept totally anonymous and secret. The informed consent forms and other personally identifiable information will be stored separate from the data. All materials will be kept strictly secret.
- Any quotes that may be used in the final research report will be given a different name. The findings of this investigation will be included in my dissertation, as well as maybe in journals or publications.
- As a consequence of your involvement in this study, you may obtain a stronger personal knowledge of your personal usage of metaphors and personal transformation.
- You are free to withdraw from this study at any time, whether during or after your participation. If you withdraw, your data will be removed from the study and deleted.
- There will be reasonable monetary remuneration for participation.

You can get a copy of the study's final findings summary by declaring your interest at the bottom of this form.

Please let me know if you have any questions regarding this study or your participation before signing this form. Please contact me by E-mail if you have any questions or concerns concerning your involvement in this study.

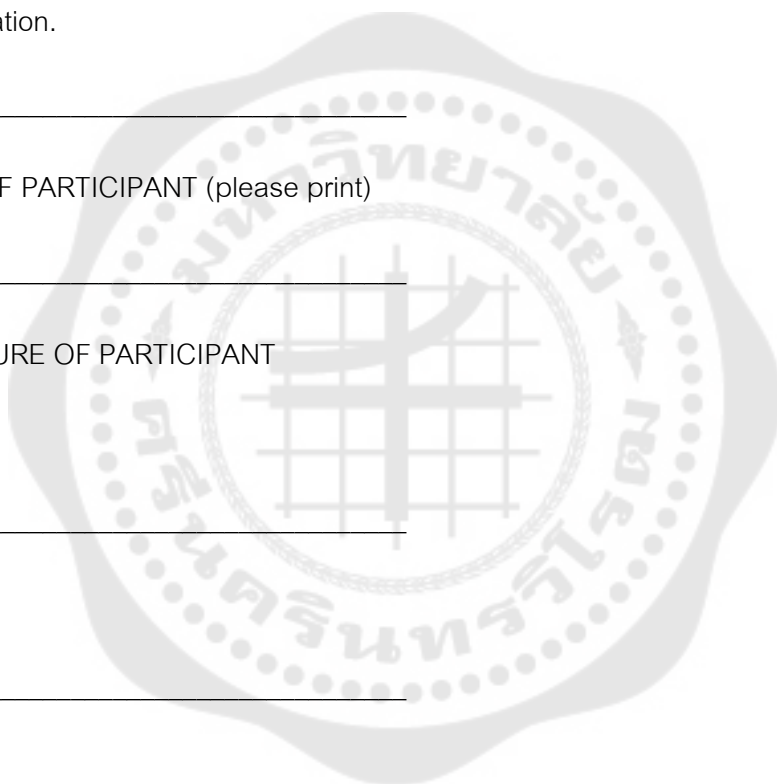
This informed consent form has been submitted in its whole. You may email the signed consent form back to me. This informed consent form has been completed and sign in its entirety. You may return the signed permission form to me through email.

I read the above-mentioned informed consent document and had the opportunity to ask questions regarding this study. I have been informed of my rights as a research participant and willingly agree to participate in this study. I accept to participate in this research study by signing this form. I will keep a signed and dated copy of this authorization.

NAME OF PARTICIPANT (please print)

SIGNATURE OF PARTICIPANT

DATE



Appendix 2: Questionnaire for Experiments (Example contains all frames)

Thank you for sparing your time and sharing your experiences during participating this online study. This study will try to understand your opinion on higher education; therefore, some questions will be asked. On completing the answers, it will take about 15 minutes.

All personal information provided through this survey will be kept strictly anonymous and confidential. Your participation in this research is voluntary. This means that you can withdraw your participation and consent at any time while completing the survey, without giving a reason.

For questions about the study, feel free to contact Adeline Zhao at 331833616@qq.com.

I appreciate your time, efforts, and consideration for this activity. Please do not hesitate to contact me if you have any further thoughts, suggestions, or comments.

Please select your choice.

First, here are some questions about yourself.

1. What is your age?

2.What is your gender?

() Male

☐ Female

3. Is Chinese your first language?

☐ Yes,

☐ No,

4. What is your city of residence? _____

5. What is the name of your university?

6. What is your grade?

☐ Freshmen

☐ Senior

In this study, I invite you to carefully read passage relating to a student's university experience. After finishing your reading, there are some questions about your opinion. Please know that there are no right or wrong answers because I am interested in your opinion. Please complete your answer at least 2-3 sentences.

Passage with Non-Metaphorical Frame

Student A, a student from a Top 10 university in China, views the university as a place of learning and personal development. The classroom is where students receive academic instruction and gain knowledge, where students are learners, acquired the necessary information and skills. With the guidance of their professors, who act as educators and mentors, students are prepared to achieve academic success and develop a better

learning experience for their future, ultimately reaching their academic and professional goals as they advance in their education. With ambitious goals, Student A is determined to achieve academic success, secure a promising future, and perform well in their work, believing that the university is a environment where students work towards and achieve their goals.

Passage with WAR frames

Student A, a student from a Top 10 university in China, views the university as a **battlefield**. The classroom serves as **the front-line of academic battles**, where students are **warriors**, equipped with **knowledge and skills as their weapon**. With the guidance of their professors, who act as **commanders on the battlefield**, students are prepared to **win their academic battles** , ultimately achieving **victory** as they progress through their educational life. With ambitious goals, Student A is determined to **fight for success** , believing that the university is the **battleground** where dreams are realized.

Passage with CONSTRUCTION frames

Student A, a student from a Top 10 university in China, views the university as a **construction site**. The classroom serves as **the foundation of future structures**, where

students are **builders**, equipped with **knowledge and skills as their building materials** . With the guidance of their professors, who act as **architects on the construction site**, , students are prepared to **construct a strong foundation**, ultimately achieving a **well-built future** as they progress through their educational life. With ambitious goals, Student A is determined to **build a lasting structure**, believing that the university is the **construction site** where dreams are realized.

Passage with CULTIVATION frames

Student A, a student from a Top 10 university in China, views the university as a **garden**. The classroom serves as **the fertile soil for personal growth**., where students are **seeds**., equipped with **knowledge and skills as their nourishment**. With the guidance of their professors, who act as **gardeners in the garden**, students are prepared to **grow and flourish**, ultimately achieving **blooming into vibrant flowers** as they progress through their educational life. With ambitious goals, Student A is determined to **fcultivate a bright future**, believing that the university is the **garden** where dreams are realized.

Here are the target questions:

1. In light of concerns about the lack of practical platforms in universities, students

often find it difficult to apply theoretical knowledge from the classroom to real-world situations.

How do you think universities could help students' better universities should adopt to better integrate theory with practice? Please share any ideas or strategies you think would work.

2. It recognized that **not all students have equal access to resources and opportunities**, especially those from rural or less affluent areas. In order to promote educational equity, what suggestions or ideas do you have to help ensure that all students, regardless of their geographic background, can **receive equal and high-quality educational opportunities**? Please share your insights and potential strategies for implementation.

Should you have any questions or suggestions about the study, feel free to leave them in

the box below.

Thank you very much for participating in this study.



Appendix: Sample Questionnaire (Non-metaphorical Frame)

首先，请回答一些关于您个人情况的问题。

1. 您的年龄是？ __19__

2. 您的性别是？

() 男

(√) 女

3. 汉语是您的母语吗？

(√) 是

() 否

4. 您目前居住的城市是？ _____

5. 您的大学名称是？ _____

6. 您的年级是？

(√) 大一

() 大四

—

在本研究中，我邀请您仔细阅读一段关于大学生学习经历的描述。阅读完后，将有一些问题需要您表达自己的观点。请注意，这些问题没有对错之分，因为我关心的是您的个人看法。请至少用 2-3 句话完成您的回答。

A 同学是中国一所排名前十的大学的学生，他将大学视为学习和个人发展的场所。课堂是学生接受学术指导和获取知识的地方，在这里学生是学习者，掌握必要的信息和技能。在教授们的指导下，他们既是教育者也是导师，帮助学生为学术成功做好准备，并提升他们未来的学习体验，最终在教育过程中实现学术和职业目标。怀着雄心壮志，A 同学坚定地追求学术成功，确保一个充满希望的未来，并在工作中表现出色，坚信大学是一个学生为实现目标而努力并最终达成目标的环境。

请回答下面问题：

1. 由于许多大学缺乏实践平台，学生常常发现将课堂上的理论知识应用到现实世界的情况中是非常困难的。你认为大学应该采取什么措施，帮助学生更好地将理论与实践结合？请分享你认为有效的想法或策略。

为了更好地将理论与实践结合，我认为大学应该加强与企业和社会组织的合作，提供更多的实习和实践机会。通过实习，学生可以将课堂所学应用到实际工作中，从而加深对理论的理解。此外，学校可以组织课外活动和项目，让学生参与到实际问题的解决中，提升他们的实践能力。

2. 目前普遍意识到，并非所有学生都能平等地获得资源和机会，尤其是来自农村或经济较为贫困地区的学生。

为了促进教育公平，您有哪些建议或想法，可以帮助确保所有学生，无论其地理背景如何，都能获得平等和高质量的教育机会？请分享您的见解以及可能的实施策略。

我认为为了确保所有学生都能获得平等的教育机会，大学可以设立更多的支持项目，尤其是针对来自农村或贫困地区的学生。例如，学校可以提供免费辅导、学习资源和职业规划服务，帮助这些学生适应大学生活，并提高他们的学术表现。同时，也可以增加社会实践和志愿者机会，鼓励学生为社区贡献，帮助他们更好地融入社会。

非常感谢您参与本次研究。



Appendix Sample Questionnaire (CULTIVATION Frame)

首先，请回答一些关于您个人情况的问题。

1. 您的年龄是？ 23

2. 您的性别是？

☒ 男

☐ 女

3. 汉语是您的母语吗？

☒ 是

☐ 否

4. 您目前居住的城市是？ _____

5. 您的大学名称是？ _____

6. 您的年级是？

☐ 大一

☒ 大四

—

在本研究中，我邀请您仔细阅读一段关于大学生学习经历的描述。阅读完后，将有一些问题需要您表达自己的观点。请注意，这些问题没有对错之分，因为我关心的是您的个人看法。请至少用 2-3 句话完成您的回答。

A 同学是中国一所排名前十的大学的学生，他将大学视为孕育梦想的花园。课堂是学术个人成长的沃土，学生在这里是种子，以知识和技能为养分。在花园里的园丁-老师和教授的引导下，帮助学生赢得茁壮成长，最终随着他们的教育生涯的推进，实现开放成绚丽的花朵。怀揣雄心壮志，A 同学决心培育光明的未来，相信大学是花园，在这里，

梦想都能得以实现。

请回答下面问题：

2. 由于许多大学缺乏实践平台，学生常常发现将课堂上的理论知识应用到现实世界的情况中是非常困难的。你认为大学应该采取什么措施，帮助学生更好地将理论与实践结合？请分享你认为有效的想法或策略。

实践是让理论开花结果的关键，没有实践，理论就像未曾生长的幼苗。老师可以采取培养个性化教学策略，了解并发挥学生个人优势，同时设置明确的学习目标，提供丰富的学习资源，鼓励团队合作与互助，以促进高水平的学术表现。

3. 目前普遍意识到，并非所有学生都能平等地获得资源和机会，尤其是来自农村或经济较为贫困地区的学生。

为了促进教育公平，您有哪些建议或想法，可以帮助确保所有学生，无论其地理背景如何，都能获得平等和高质量的教育机会？请分享您的见解以及可能的实施策略。

有时因为教育中的不公平，学生会失去学习的兴趣和动力。教师可以用耐心的教学方式和温和的支持；一方面通过视频网上等手段给不发达地区带来尽可能多的教育资源，同时是否在不发达地区可尝试按名次或比率录取的照顾政策；学校提供一些优惠，提供一些服务，让学生们拥有温暖的校园，让孩子们开心，愉快。

非常感谢您参与本次研究。

Appendix Sample Questionnaire (CONSTRUCTION Frame)

首先，请回答一些关于您个人情况的问题。

1. 您的年龄是? 20

2. 您的性别是?

☒ 男

☐ 女

3. 汉语是您的母语吗?

☒ 是

☐ 否

4. 您目前居住的城市是?

5. 您的大学名称是?

6. 您的年级是?

☒ 大一

☐ 大四

在本研究中，我邀请您仔细阅读一段关于大学生学习经历的描述。阅读完后，将有一些问题需要您表达自己的观点。请注意，这些问题没有对错之分，因为我关心的是您的个人看法。请至少用 2-3 句话完成您的回答。

(A 同学是中国一所排名前十的大学的学生，他将大学视为建筑工地。课堂是学术战斗的未来结构的基石，学生在这里是建筑者，以知识和技能为建筑材料。在工地上的建筑师-老师和教授的引导下，帮助学生建立坚实的基础，最终随着他们的教育生涯的推进，实现一个坚固的未来。怀揣雄心壮志，A 同学决心构建持久坚实的知识框架，相信大

学是建设工地，在这里，梦想都能得以实现。)

请回答下面问题：

3. 由于许多大学缺乏实践平台，学生常常发现将课堂上的理论知识应用到现实世界的情况中是非常困难的。你认为大学应该采取什么措施，帮助学生更好地将理论与实践结合？请分享你认为有效的想法或策略。

教师 and 大学应该更关注如何为学生搭建更多的平台，为我们提供构建自我创造力和兴趣的机会。除了传统的课堂教学，学校可以通过提供更多的创新项目或自由研究的机会来设立一个让学生探索和实践的基础设施。大学还应开设更多的社会实践或志愿者活动，通过与各行业专家的合作，帮助学生扩展视野，了解行业需求，从而构筑他们的实际操作能力。

4. 目前普遍意识到，并非所有学生都能平等地获得资源和机会，尤其是来自农村或经济较为贫困地区的学生。

为了促进教育公平，您有哪些建议或想法，可以帮助确保所有学生，无论其地理背景如何，都能获得平等和高质量的教育机会？请分享您的见解以及可能的实施策略。

为了解决教育资源的不平等问题，政府和学校应加大政策支持力度，积极构建适合农村学生的教育环境，优化课程设置和教学方法。具体来说，可以通过引入更多与农村实际相结合的课程内容，例如农业科技、农村经济发展等专业课程，帮助学生在课堂内外都能构建与他们生活和未来发展相关的知识基础。在优化课程设置时，学校可以设置灵活的课程模块和实践机会，让农村学生不仅能够打好学术基础，还能建设与乡村振兴相关的技能。

非常感谢您参与本次研究。

Appendix Sample Questionnaire (WAR Frame)

首先，请回答一些关于您个人情况的问题。

1. 您的年龄是？ __20__

2. 您的性别是？

☒ 男

☐ 女

3. 汉语是您的母语吗？

☒ 是

☐ 否

4. 您目前居住的城市是？ _____

5. 您的大学名称是？ _____

6. 您的年级是？

☒ 大一

☐ 大四

在本研究中，我邀请您仔细阅读一段关于大学生学习经历的描述。阅读完后，将有一些问题需要您表达自己的观点。请注意，这些问题没有对错之分，因为我关心的是您的个人看法。请至少用 2-3 句话完成您的回答。

A 同学是中国一所排名前十的大学的学生，他将大学视为战场。课堂是学术战斗的前线，

学生在这里是战士，以知识和技能为武器。在战场上的指挥官- 老师的引导下，帮助学

生赢得学术战斗，最终随着他们的教育生涯的推进，实现斗争的胜利。怀揣雄心壮志，

A 同学决心为成功而战，相信大学是一场战役，在这里，梦想都能实现。

请回答下面问题：

4. 由于许多大学缺乏实践平台，学生常常发现将课堂上的理论知识应用到现实世界的情况中是非常困难的。你认为大学应该采取什么措施，帮助学生更好地将理论与实践结合？请分享你认为有效的想法或策略。

大学如战场,大学生当以坚定信念为铠甲,用知识武装自己。制定合理计划,勇敢挑战困难。积极参与社团活动拓展人脉,培养综合素质。保持乐观心态,在挫折中成长。以奋斗之姿迎接这场战争,为未来奠定坚实基础。

5. 目前普遍意识到，并非所有学生都能平等地获得资源和机会，尤其是来自农村或经济较为贫困地区的学生。

为了促进教育公平，您有哪些建议或想法，可以帮助确保所有学生，无论其地理背景如何，都能获得平等和高质量的教育机会？请分享您的见解以及可能的实施策略。

为了吸引更多优秀的人才进入农村教育领域，必须提高他们的待遇和福利，就像在战场上给予指挥官更多的资源和奖励，让他们有足够的动力和支持带领学生取得胜利。通过这种方式，可以增强农村教育的战斗力，为学生提供更优质的教育。

非常感谢您参与本次研究。

VITA

