



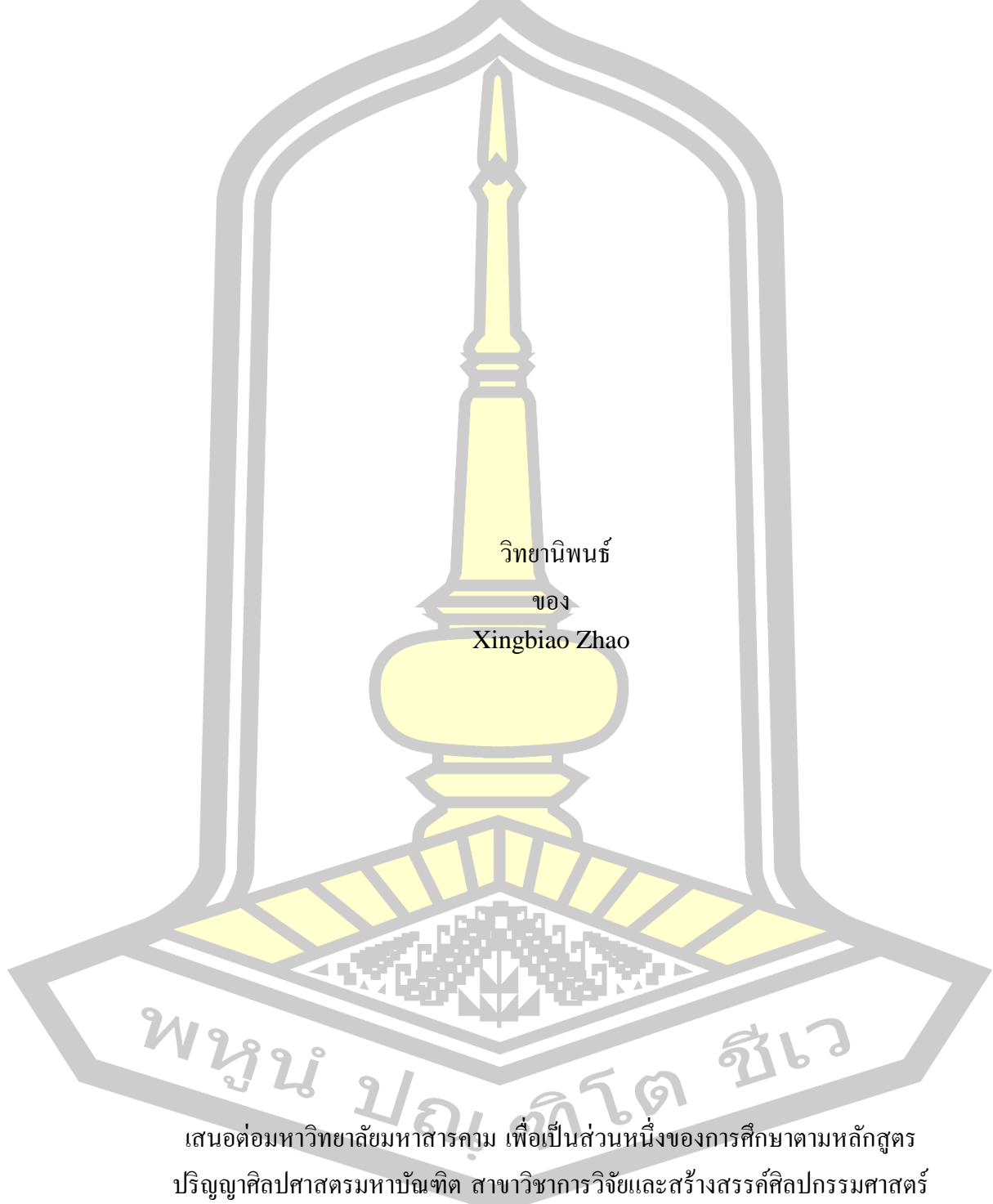
Zhengding Ancient Pagoda in Hebei Province: The symbol of Chinese Buddhist
pagodas and their symbolic meanings in video games

Xingbiao Zhao

A Thesis Submitted in Partial Fulfillment of Requirements for
degree of Master of Arts in Fine and Applied Arts Research and Creation
June 2024

Copyright of Mahasarakham University

เจดีย์โบราณในมณฑลเหอเป่ย์ ZhengDing: สัญลักษณ์ของเจดีย์จีนและการแสดงออกเชิง
สัญลักษณ์ในวิดีโอเกม



เสนอต่อมหาวิทยาลัยมหาสารคาม เพื่อเป็นส่วนหนึ่งของการศึกษาตามหลักสูตร
ปริญญาศิลปศาสตรมหาบัณฑิต สาขาวิชาการวิจัยและสร้างสรรค์ศิลปกรรมศาสตร์

มิถุนายน 2567

ลิขสิทธิ์เป็นของมหาวิทยาลัยมหาสารคาม

Zhengding Ancient Pagoda in Hebei Province: The symbol of Chinese Buddhist
pagodas and their symbolic meanings in video games

Xingbiao Zhao

พหุบัณฑิต

A Thesis Submitted in Partial Fulfillment of Requirements
for Master of Arts (Fine and Applied Arts Research and Creation)

June 2024

Copyright of Mahasarakham University



The examining committee has unanimously approved this Thesis, submitted by Mr. Xingbiao Zhao , as a partial fulfillment of the requirements for the Master of Arts Fine and Applied Arts Research and Creation at Mahasarakham University

Examining Committee

Chairman

(Asst. Prof. Songwit Pimpakun ,
Ph.D.)

Advisor

(Asst. Prof. Suchat Sukna , Ph.D.)

Co-advisor

(Li Yingfeng , Ph.D.)

Committee

(Asst. Prof. Vuthipong
Roadkasamsri , Ph.D.)

Committee

(Asst. Prof. Kanokwan Nithirattapat
, Ph.D.)

Mahasarakham University has granted approval to accept this Thesis as a partial fulfillment of the requirements for the Master of Arts Fine and Applied Arts Research and Creation

(Asst. Prof. Peera Phanlukthao , Ph.D.)

Dean of Faculty of Fine - Applied Arts
and Cultural Science

(Assoc. Prof. Krit Chaimoon , Ph.D.)

Dean of Graduate School

TITLE	Zhengding Ancient Pagoda in Hebei Province: The symbol of Chinese Buddhist pagodas and their symbolic meanings in video games		
AUTHOR	Xingbiao Zhao		
ADVISORS	Assistant Professor Suchat Sukna , Ph.D. Li Yingfeng , Ph.D.		
DEGREE	Master of Arts	MAJOR	Fine and Applied Arts Research and Creation
UNIVERSITY	Maharakham University	YEAR	2024

ABSTRACT

In traditional Chinese culture, pagoda is a special existence, which is not only an entity but also a cultural symbol with unique symbolic meaning. As a typical landmark, the Chinese pagoda is both a religious belief and a social and cultural symbol, as well as a historical relic itself. In video games, the pagoda is given a special meaning. In today's video game design, its image can be expressed through images, graphics, animation, text and other ways. This paper analyzes the expression of Hebei Zhengding Ancient Pagoda in video games through external form, cultural connotation and symbolism in many aspects. Based on the cultural research of the game, taking the ancient pagoda in Zhengding, Hebei as an example, the symbolism of the pagoda in ancient Chinese society and its performance in video games are first analyzed. Through the analysis of textual materials and video data, it can be seen that the symbolism of Chinese pagodas not only has religious, artistic and historical values, but also has important cultural values, and also plays the role of "cultural card" through the medium of games. On this basis, we further discuss how to symbolize and artistically design pagodas in modern society. Zhengding stupa is closely related to the pagoda, an architectural form in traditional Chinese culture, and is a Chinese architectural symbol with special meaning. Through the analysis of its unique symbolism, the Zhengding Pagoda is studied in comparison with other pagodas to further recognize the important role of the Zhengding Pagoda in the game. In addition, this paper also comprehends the connection between video games and traditional Chinese culture, in order to deepen people's impression of the cultural connotation represented by this architectural symbol being recreated in the game field.

Keyword : Zhengding Ancient Pagoda, Chinese pagoda culture, video games cultural communication

ACKNOWLEDGEMENTS

At the end of my master's degree, I feel the need to express my heartfelt thanks to those who have accompanied me through this difficult and fulfilling time. First of all, I would like to thank my mentor, Professor Li Yingfeng, whose careful guidance and professional advice made this study possible. His intellectual inspiration and rigorous academic attitude have exerted a profound influence on me.

At the same time, I would like to thank the faculty and students of the university. During my study abroad, you gave me a lot of help and support, so that I can successfully complete my study. Professor Mateta Sirisuk and Dr. Ke Yihan, in particular, gave me a lot of help in the thesis, which made my research more in-depth and complete. My classmates, we worked together, supported each other, and spent an unforgettable time together. Thank you for your company on the journey of study.

Secondly, I would like to thank my family, whose understanding, support and encouragement are the source of motivation for me to complete my study. When I encountered setbacks and confusion, you always gave me comfort and help in the first place. Your selfless dedication and love made me feel warm and firm.

In addition, I would like to thank all the partners who participated in my research work, the enterprises that provided me with technical support, and the teachers, friends and classmates who gave me help and support on my way to study.

Finally, I want to thank the beautiful land of Thailand and its people. During my study in Thailand, I deeply felt the charm of Thai culture and the warmth and friendliness of its people. This experience will become a valuable treasure in my life and I will always remember it.

Xingbiao Zhao

TABLE OF CONTENTS

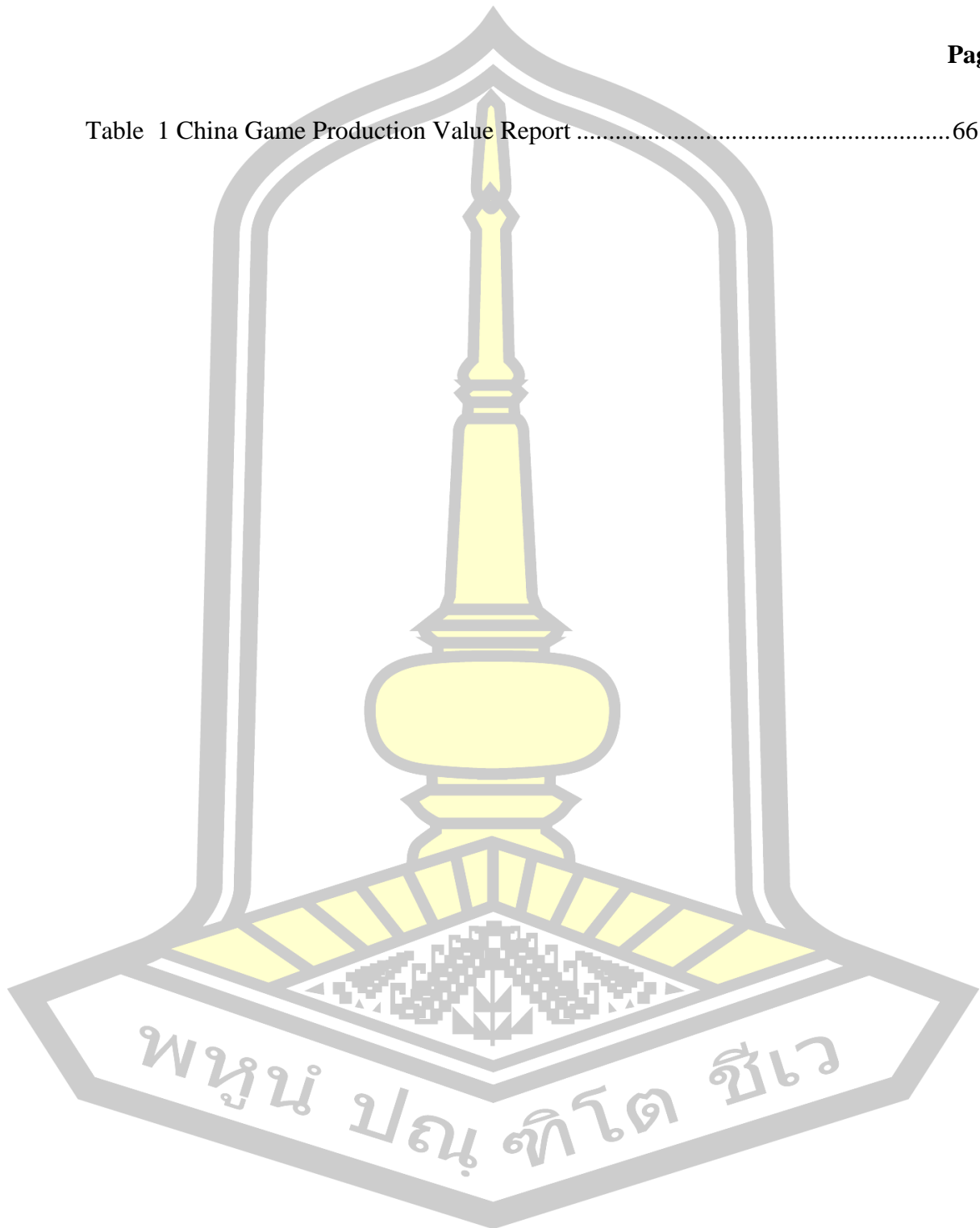
	Page
ABSTRACT.....	D
ACKNOWLEDGEMENTS.....	E
TABLE OF CONTENTS.....	F
LIST OF TABLES	H
LIST OF FIGURES	I
Chapter I : Introduction.....	12
1.1 Background, purpose and significance of the research.....	12
1.1.2The purpose and significance of the study	13
1.2 Research status and level at home and abroad.....	13
1.3 Research ideas and methods	16
1.4 Research emphases, difficulties and innovations	16
1.5The main research content and organizational framework.....	17
Chapter II :	21
Overview of the architectural features and cultural value of the stupa.....	21
2.1The origin and development of world pagodas and the localization of Chinese pagodas	21
2.2Spiritual connotation and significance of stupa.....	26
2.3Architectural features of Chinese pagodas	28
2.4The symbolic meaning and cultural value of Chinese pagodas.....	34
2.5The unique features of Zhengding Stupa in Hebei Province.....	43
Chapter III : Analysis and research on the integration of Chinese traditional culture and electronic game culture	49
3.1Analysis of the origin and development of electronic games	49
3.2National strategy in the development of online games in China	62
3.3 Analysis on the application and integration of Chinese traditional culture in electronic games	69

3.4 Strategies for presenting regional culture in the development of electronic games.....	76
3.5 The role of traditional Chinese culture in video games.....	82
Chapter IV : The application and performance of pagoda elements in video games ..	85
4.1 The image of the pagoda in video games	85
4.2 Integration of Chinese architectural culture into video games	87
4.3 Application of stupa in video games	89
4.4 Problems existing in the application of stupa in video game design.....	90
Chapter V : The re-creation design practice of Zhengding pagoda culture in the field of video games	92
5.1 Principles that should be followed in recreating Zhengding Stupa in video games.....	92
5.2The matter that the pagoda should be paid attention to in the creation of electronic games	94
5.3The value of the pagoda in the field of video games	96
5.4 Zhengding pagoda in video game field to create user research.....	98
5.5 Zhengding Stupa re-creates design positioning and ideas in the field of video games.....	108
5.6 Zhengding Stupa is re-conceived and developed in the field of video games.....	112
Chapter VI Conclusion	137
REFERENCES	2
REFERENCES	3
APPENDIX.....	6
QuestionnaireII	8
QuestionnaireIII.....	10
QuestionnaireIV.....	12
BIOGRAPHY	15

LIST OF TABLES

Page

Table 1 China Game Production Value Report	66
--------------------------------------------------	----



LIST OF FIGURES

	Page
Figure 1 Paper structure framework Image source: author design frame diagram	20
Figure 2 Conceptual frame drawing	21
Figure 3 The tower is a pavilion	24
Figure 4 Dense eaves tower	24
Figure 5 Pavilion tower.....	25
Figure 6 Sanchi Stupa, India.....	26
Figure 7 Barhoute Tower east tower door and part of the marble relief image.....	28
Figure 8 Thirteen-story pagoda with colored glaze in the middle of Ming Dynasty..	30
Figure 9 Shaanxi Chongwen Tower (Brick tower).....	31
Figure 10 Shandong Ancient architecture Four Men Tower (stone tower)	31
Figure 11 A bowl tower	33
Figure 12 Detail of Zhengding ancient pagoda body.....	34
Figure 13 Detail of Zhengding ancient pagoda body.....	35
Figure 14 Vajra Throne Tower - Cleansing City Tower.....	42
Figure 15 Center tower of Cave 39 Yungang Grottoes, Datong, Shanxi Province	43
Figure 16 Positive definite four towers.....	44
Figure 17Tianning Temple Lingxiao Tower.....	45
Figure 18 Linji Temple Chengling Pagoda.....	46
Figure 19 Many pagodas in Guanghui Temple.....	47
Figure 20 Xumi Pagoda of Kaiyuan Temple	48
Figure 21 The world's first video game, TennisforTwo, was played on DuMontLab's Model 304-A oscilloscope	51
Figure 22 Screenshot of Super Mario game	53
Figure 23 Game 《Starbound》	54
Figure 24 The game 《Aalto's Odyssey》	54
Figure 25 A screenshot of the game Cuphead	55

Figure 26 Screenshot of the Super Guild Dreams game.....	56
Figure 27 The Legend of Zelda	57
Figure 28 Part of the exhibition hall of the 19th ChinaJoy	58
Figure 29 24 China (Shenzhen) International E-Sports Exhibition site	59
Figure 30 24 China (Shenzhen) International E-Sports Exhibition site	60
Figure 31 World of Warcraft	62
Figure 32 Player using Switch、	63
Figure 33 History of Chinese video games	64
Figure 34 Forever Without a Trace.....	74
Figure 35 A Thousand Mountains of Good Writing"	75
Figure 36 Screenshot of the Honor of Kings game.....	76
Figure 37 The game Never to Be Broken	78
Figure 38 Screen shot of the game Jade Dynasty	78
Figure 39 Character costumes in the game Tianxia 3.....	79
Figure 40 Easy Life game interface	88
Figure 41 Screenshot of Call Me Viva	89
Figure 42 Is the details of the ancient tower	96
Figure 43 Ratio of male to female respondents	100
Figure 44 Knowledge of the stupa	101
Figure 45 The author enters the enterprise research	102
Figure 46 Views on the importance of cultural communication in games	103
Figure 47 What practitioners consider to be the ways in which cultural identity is reflected in games	103
Figure 48 The author enters the enterprise research	105
Figure 49 The author enters the enterprise research	106
Figure 50 Gamer expectations for Stupa games	107
Figure 51 Player demand and desired direction.....	108
Figure 52 Advantages and disadvantages of similar games	109
Figure 53 Silhouette design	114

Figure 54 Draw a silhouette based on the Huata image.....	116
Figure 55 Condensed optimized silhouette.....	117
Figure 56 Drawing the internal structure.....	118
Figure 57 Splitting a module.....	119
Figure 58 Element reference diagram.....	120
Figure 59 Module modeling design.....	121
Figure 60 Modular design modeling combination.....	122
Figure 61 Detail description of internal structure.....	123
Figure 62 Detail description of internal structure Image source: Author drawing..	124
Figure 63 The final image.....	125
Figure 64 Design flow layout	125
Figure 65 Lingxiao Pagoda (left) and Chengling Pagoda (right)	126
Figure 66 Xuni Pagoda	127
Figure 67 Lingxiao Pagoda (left) and Sumiling Pagoda (center) Sumi Pagoda (right)	127
Figure 68 Linxiao Tower line draft.....	128
Figure 69 Chengling Tower line draft	128
Figure 70 Sumita wire draft.....	129
Figure 71 Effect of Lingxiao Tower.....	129
Figure 72 Effect of Chengling Tower.....	130
Figure 73 Effect of Sumita.....	130
Figure 74 The application of Chengling Tower in the horizontal plate map.....	131
Figure 75 Application of the Lingxiao Tower in the horizontal plate map	131
Figure 76 Application of Sumita in the horizontal plate map.....	132
Figure 77 Application of Zhengding Stupa in clothing.....	133
Figure 78 Application of the Positive Dinning pagoda to work supplies.....	134
Figure 79 The application of pagoda elements in home decoration	135
Figure 80 Application of pagoda elements in packaging design	136
Figure 81 Application of pagoda elements in cultural and creative products.....	136

Chapter I : Introduction

1.1 Background, purpose and significance of the research

1.1.1 Research background

Although the existence of electronic games, known as the "ninth art", has only been a few decades, whether electronic games are a real art form, whether electronic games can represent the ninth art, and even whether electronic games are artistic is still a core issue of many disputes, but no one can deny the positive significance and advantages of electronic games in the field of cultural communication. With the rapid development of digital technology and the upgrading of electronic equipment, electronic games have been integrated into People's Daily life with the help of Internet platforms and mobile terminal devices, becoming an important way of daily entertainment for people, and even changing people's lifestyle and cognitive mode imperceptibly. The stories and Settings of video games are often based on the history, myth, legend, or geography of a particular place. In the game, scene is an important part of the game art, and the game scene can best reflect the environment, landform, regional characteristics, era background, regional characteristics and so on in a game. The game scene can be a large number of Buddhist pagoda elements, Buddhist pagoda as a religious building, but also cultural heritage and artistic masterpiece, leaving a strong historical and cultural traces around the world. The pagodas in different periods and regions represent the regional culture of an era. Chinese pagodas have experienced thousands of years of historical accumulation, precipitation, inheritance and innovation, and their forms reflect distinct regional characteristics. The combination of Chinese ancient pagoda culture and game industry not only helps Chinese soft power culture go abroad, but also enables foreign people to understand Chinese architecture and Chinese culture through the new medium of games.

The pagoda culture in our country has a long history and is also an indispensable part of our architectural culture. Stupa is the most iconic building in ancient Buddhist architecture, it is a symbol of religious belief and social culture, but also the historical relic itself, with high artistic value. There are thousands of existing Buddhist pagodas in China, and the ancient Buddhist pagodas in Zhengding, Hebei Province, have a long history. Taking Longxing Temple as an example, it was built in the sixth year of Sui Kai Emperor (586). It is one of the oldest, largest-scale and well-preserved Buddhist temples in China. Zhengding ancient Pagoda adopts the "dougong" shape commonly used in traditional Chinese architecture, which not only reflects the unique aesthetic concept of ancient Chinese people, but also shows the ancient people's superb building technology level.

As a cultural heritage, Zhengding ancient Buddhist Pagoda has also become a "cultural business card" through the medium of games. At present, there are many Chinese Buddhist pagoda elements in video games, most of which are expressed in the form of images and graphics. Therefore, from the perspective of game text and game images, the analysis of Buddhist pagodas can understand the symbolic significance of Buddhist pagodas in ancient Chinese society and how they are represented in video games. Through the analysis of the text and images, we can know what the meaning of the pagoda image in the game represents. This not only helps to understand the meaning of game graphics, but also allows designers to better

integrate games with culture. This paper discusses the architectural features and symbolic meanings of Chinese pagodas, the combination of video games and Chinese traditional culture, and the application of pagodas in video games.

1.1.2 The purpose and significance of the study

In ancient Chinese society, the stupa was regarded as an important cultural symbol. People believe that it has mysterious power, so in the pagoda sustains people's yearning and pursuit of a better life and a happy life. With the development and advancement of video game technology, players can experience games in a variety of ways. In today's video game design, towers are given special meaning. People can use images, animation, text and other forms to express the architectural image of the tower. The shapes and materials of Zhengding Pagoda are rich. It has a long history and precious value. Zhengding Ancient Pagoda is not only an important symbol of Zhengding City, but also the most striking building in Zhengding Ancient City. It not only has a high status in history, but is still respected by people today. With the development of Chinese society and economy, people pay more and more attention to the inheritance of traditional culture and historical culture. Therefore, it is of great significance to integrate Zhengding Stupa and the history and culture behind it into video games.

The stupa is closely associated with religious beliefs, so it has great symbolic significance. Zhengding Ancient Pagoda is also a typical and perfect representative of ancient Chinese architectural art. Although many researchers have studied and investigated the tower, there has been no in-depth analysis of the role that the tower has played in history. In addition, in today's society, with the continuous development of science and technology and information technology, people pay more and more attention to the role of information technology in modern life.

As electronic games have gradually become an indispensable and indispensable part of people's life, how to combine them with traditional culture is the topic of this paper. This paper aims to analyze and study the expression form of Zhengding stupa in games, and explore new ways to combine video games with traditional Chinese architectural culture and show it to players in modern society. Meanwhile, Chinese stupa, as an architectural form with symbolic and special significance, also plays a very important role in modern society. Therefore, the main purpose of this project is to make the pagoda, an architectural symbol with symbolic and special significance, an artistic treatment.

1.2 Research status and level at home and abroad

1.2.1 Research status of Chinese pagodas

The emergence and development of pagodas are closely related to ancient Indian Buddhism and pagodas, and the development and evolution history of ancient Indian Buddhism and pagodas must be studied in order to study the pagodas (Sonam Tserang, 2005). Stupa, derived from the Rustling Tubo in India, is used in Buddhism to hide serahs and sutras, with high historical and cultural value. Stupas have changed and developed with the spread of Buddhism, taking on many forms and styles. In view of the evolution process of pagodas, especially the process of Sinicization, the author consulted the following documents:

In *The Evolution of the Stupa: The History and Development of Buddhist Religious Architecture* (1989), American scholar Robert Flafani explores in detail the history and evolution of the stupa in India, focusing on the development of Buddhist

religious architecture and providing a rich historical and cultural background. In *The Art of Ancient Southeast Asian Architecture* (1987), Singaporean scholar Jon Knox focuses on the stupas of Borobudur, Indonesia, and analyzes their historical, structural and cultural significance, as well as the spread and evolution of stupas in Southeast Asia. The book *Buddhist Architecture: Stupas, Temples and Caves* (2012) by Australian scholar Paul Gutman examines in detail the history, architectural features and cultural context of the Great stupa of Amaravati, India, and how it reflects the development of Buddhist art and architecture.

In China, the development of the pagoda can be traced back to the Han Dynasty. The earliest stupas were built on Indian prototypes, but over time, the Chinese stupas have gradually changed. In the process of Sinicization, pagodas can not only reflect religion and belief, but also reflect regional characteristics and changes of The Times.

In *A Study of Buddhist Art in China*, author Nguyen Yinghua delves into the cultural characteristics of Chinese pagodas, covering Buddhist beliefs, religious rituals, and the role of pagodas as religious and cultural centers. Through the perspective of in-depth understanding of Chinese pagodas, the article emphasizes the important position of these sacred buildings in the inheritance of Chinese culture.

In the book *"Chinese Buddhist Architecture"*, China Architecture Industry Press (2017), the author Sun Dazhang gives a detailed introduction to the development history of Chinese Buddhist architecture, the architectural characteristics of Chinese Buddhist temples, the layout of Chinese Buddhist temples, the Buddhist halls of Chinese Buddhist architecture, the Buddhist pagodas of Chinese Buddhist architecture, the technical performance of Chinese Buddhist architecture, the artistic performance of Chinese Buddhist architecture, and the development of Chinese Buddhist architecture. Carry on the past through innovation and open up the future.

In his article *On the Formation of Stupa Architecture and its Sinicization* (2002, National Art), Chong Xiuquan discusses the formation of stupa architecture and its development and change in China from three aspects: the origin, dissemination and evolution of stupa architecture. The article holds that the stupa originally appeared as a symbol of Buddhism and an important religious place, with a specific religious significance and function. This paper analyzes the spread and evolution of pagodas in China, and believes that the Chinese-style pagodas have incorporated traditional Chinese architecture and cultural elements on the basis of retaining the Indian prototype, forming a pagodas architecture system with Chinese characteristics.

In the article *"Development History and Prospects of Chinese Pagodas"* (2018), author: Jia Beining; Par Amour; By analyzing the development process of Chinese Buddhist pagodas, Du Yan summarized the development trend of Chinese Buddhist architecture, and tried to explore the new situation of the development of Chinese Buddhist architecture through the analysis of the characteristics and development trend of Chinese Buddhist architecture.

Gu Xuan's thesis *"The Evolution of Tower Architecture in China"* (2006) mainly introduces and analyzes Chinese tower architecture from the aspects of its origin, historical development, types, architectural techniques and cultural connotation. The development and changes of Chinese towers in different historical periods are introduced in detail.

These documents provide important information on the evolution of pagodas, covering studies of different regions and periods, contributing to an in-depth understanding of the important role of pagodas in Buddhist culture and their architectural and religious changes.

1.2.2 Application research status of Chinese stupa in electronic games

As of the completion of this paper, there is no detailed literature research on the application of ancient architecture in electronic games, including the pagoda, in the field of Chinese ancient architecture. Therefore, the author analyzes the current situation of the application of ancient architecture and even Chinese elements in electronic games.

The author Lin Hengfeng wrote in the article "Research on the Application of Chinese Ancient Architectural Culture in Game Design" that the architectural scene, as the background atmosphere and experience in the game, can give players a better experience and experience, understand the characteristics of The Times, functions and regional characteristics, so as to better disseminate the knowledge and culture of ancient architecture to the public. China has a long history, profound cultural heritage and vast land area, which brings different architectural styles in different regions, and gradually forms seven traditional schools: Jin School, Beijing School, Guangdong school, Fujian School, Anhui school, Suzhou School and Sichuan School. However, the reproduction of ancient buildings in the digital game scene will still encounter problems such as a large number of imitators, mixing and matching dynasties, and lack of innovation, which requires relevant game practitioners to make greater efforts in the authenticity of cultural colors, the rationality of spatial proportion, and the openness of innovative design, to break stereotypes on the basis of culture, and to make bold ideas and innovations on the original basis.

In the book *Analysis on the Cross-cultural Communication of Chinese Elements in Games*, the authors Zheng Shanshan and Cao Yue scientifically comb out the application of traditional Chinese elements in Di Renjie's *Roses*. First, they depict the game scene by using pixels to fully show the face of Chang'an City in the flourishing Tang Dynasty. The second is to use local publishers to carefully sinicize the game, optimize it according to the context of classical Chinese and the traditional drafting format of ancient official documents, and contact calligraphy practitioners to distinguish different epistolaries; The third is through the promotion of the plot and the portrayal of characters, rich in the great national spirit. Through the above production methods to show the rich art design and game plot structure, so that most players at home and abroad fully feel the charm of the traditional culture of the Tang Dynasty. It gives the game full of vitality and cultural connotation, and becomes one of the excellent ways of cross-cultural communication.

1.3 Research ideas and methods

This study adopts qualitative method to study the history and spiritual connotation of Zhengding ancient pagoda; Through the method of creative research, the paper studies how to express regional culture and spiritual connotation through the pagoda in the game. Specific methods are as follows

Field visit: Observe the characteristics of Zhengding Ancient Pagoda on the spot, and interview the community, the local people have a unique understanding of the local culture.

Game player research: The direct audience of video games is the game player, and the game player feels the information in the game more directly.

Interview with the game company and game development team: From the beginning of game design, the game type, style, gameplay, game background and world view are all set by the game developer. For game art, the designer should not only design elements that reflect the background of the era, but also conform to the requirements of the game world view and game style. This includes the attribute of regional culture. Research on companies and designers helps to understand how to design and design steps.

Field research: Research the social groups in Zhengding area to understand the characteristics, beliefs and legends of Zhengding ancient pagodas.

Conduct research on game players: investigate players' identification with game culture, how the game reflects regional culture, and what symbolic meaning and connotation the pagoda in the game has.

Literature collection: Collect literature materials, refer to textbooks, book libraries, electronic libraries, personal research, etc., and collect articles related to game culture and pagoda art. To study the culture in the game and the historical background and architectural features of the Zhengding ancient pagoda.

In combination with the above research, the game art creation is carried out, and the final results are verified by social research, mainly through game players to verify the effectiveness of cultural communication, and to investigate the rationality of design to game practitioners.

1.4 Research emphases, difficulties and innovations

This paper mainly focuses on the following aspects:

The historical and cultural background of ancient pagodas in Zhengding, Hebei Province: An in-depth study of the construction time, religious significance and architectural style of ancient pagodas is aimed at understanding their important position in Chinese Buddhist culture.

The symbolic meaning of stupas: An analysis of the symbolic meaning of stupas in Buddhism, such as the Dharma of the Buddha, the embodiment of Buddhist teachings, and how these symbolic meanings have been passed down and evolved in different cultural and historical contexts.

The representation of pagodas in video games: Study the depiction and presentation of ancient pagodas in Zhengding, Hebei Province in video games, including game scenes, character design, storyline, etc., and explore how game developers use pagodas to convey the themes and emotions of games.

Players' understanding and experience of stupa symbols: Through survey and interview methods, we will understand players' cognition and feelings of stupa symbols in games, and the impact of these symbols on players' game experience.

In the study of the above key issues, the multi-dimensional analysis of symbolic meaning, the interpretation of Buddhist pagoda elements in video games and the selection and implementation of research methods are the main difficulties encountered by the author. The symbolic meaning of stupas may vary in different cultures and historical periods, so it is necessary to comprehensively consider the viewpoints of religion, philosophy, art and other fields for in-depth analysis. As a fictional medium, the representation of the pagoda may be influenced by the personal understanding and creativity of the game designer, and the game elements need to be carefully interpreted to avoid over-interpretation or misunderstanding. As it involves the subjective experience and feelings of players, it is necessary to select appropriate research methods in the research process, such as questionnaires, in-depth interviews, etc., and ensure the effectiveness and reliability of the research.

In the actual research process, the first innovation involved in this topic is to combine Buddhist culture, architectural art and video games, and explore the expression and significance of pagoda symbols in games from an interdisciplinary perspective. The second is to pay attention to cultural inheritance and innovative development, through the study of the application of Buddhist pagoda elements in video games, to provide new ideas and methods for the inheritance and innovation of traditional culture. Thirdly, in-depth consideration of players' experience and cultural cognition, focusing on players' understanding and experience of the symbol of the pagoda, is helpful to further understand the role and influence of electronic games as a cultural communication medium.

1.5 The main research content and organizational framework

1.5.1 main research content

Based on the field research of Zhengding Ancient Pagoda, this paper firstly analyzes the expression form of Zhengding ancient pagoda in electronic games from the perspective of game design. Through the study of Zhengding ancient pagoda, it is found that Zhengding ancient pagoda has distinct characteristics of Chinese traditional culture. Therefore, in the game, it can be used as a game background and add some traditional cultural elements. Secondly, the relationship between Zhengding ancient pagoda and other pagodas is analyzed. Through the study of Zhengding ancient pagoda, it is found that the relationship between Zhengding ancient pagoda and Buddhism is very close in history. Therefore, having it as a backdrop allows the player to better understand and experience the game.

In terms of game text, the positive Ding ancient tower can be used as the background for game design. For example, in the "Honor of Kings" there is a very classic scene "heaven fell gold Wu", the player can place a huge Buddhist pagoda as the background in this scene to design the game.

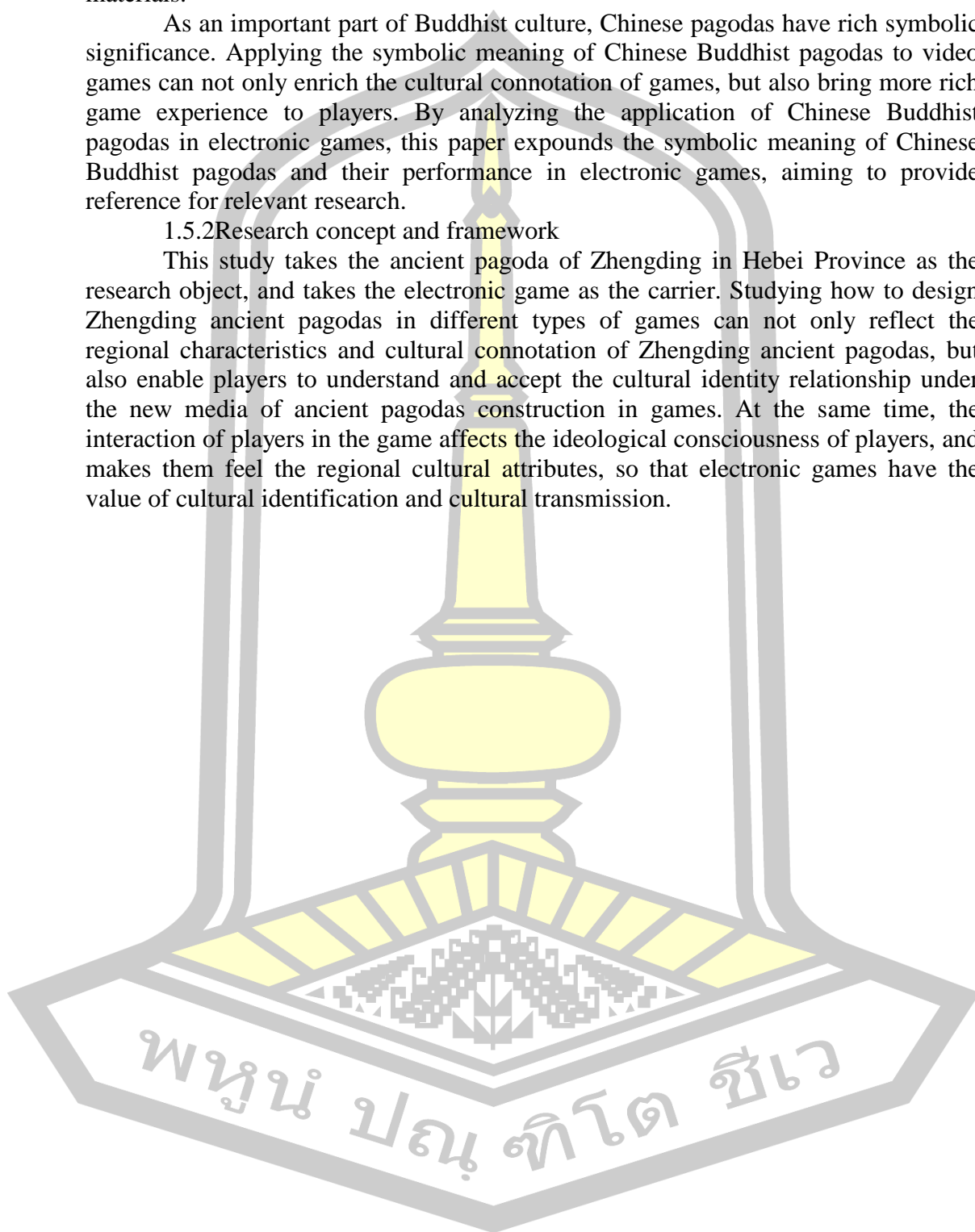
The main research area of this paper: Zhengding County, Hebei Province. Zhengding is a famous historical and cultural city in China with a history of more than 1600 years. This paper studies the regional culture and spiritual culture of the four ancient pagodas in Zhengding by means of field investigation, literature and library. Culture and symbolism in Chinese video games. Through the collection of

video game designers, researchers, literature and game players related to the field of materials.

As an important part of Buddhist culture, Chinese pagodas have rich symbolic significance. Applying the symbolic meaning of Chinese Buddhist pagodas to video games can not only enrich the cultural connotation of games, but also bring more rich game experience to players. By analyzing the application of Chinese Buddhist pagodas in electronic games, this paper expounds the symbolic meaning of Chinese Buddhist pagodas and their performance in electronic games, aiming to provide reference for relevant research.

1.5.2 Research concept and framework

This study takes the ancient pagoda of Zhengding in Hebei Province as the research object, and takes the electronic game as the carrier. Studying how to design Zhengding ancient pagodas in different types of games can not only reflect the regional characteristics and cultural connotation of Zhengding ancient pagodas, but also enable players to understand and accept the cultural identity relationship under the new media of ancient pagodas construction in games. At the same time, the interaction of players in the game affects the ideological consciousness of players, and makes them feel the regional cultural attributes, so that electronic games have the value of cultural identification and cultural transmission.



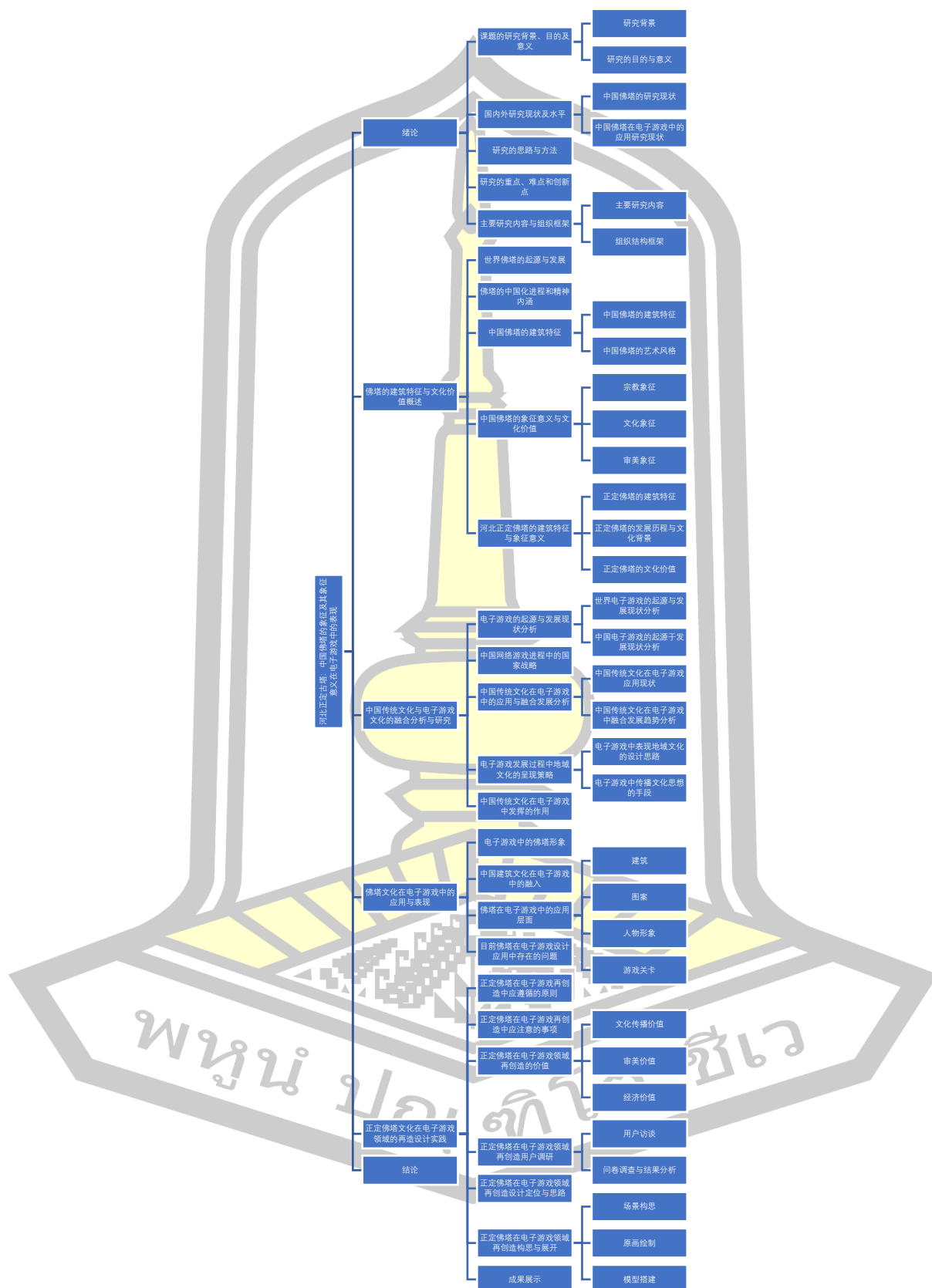


Figure 1 Paper structure framework **Image source:** author design frame diagram

This research takes the year 2003 as the time line. Before 2003, Chinese electronic games were mainly for entertainment. After 2003, a large number of online games appeared and game culture began to be paid attention to.

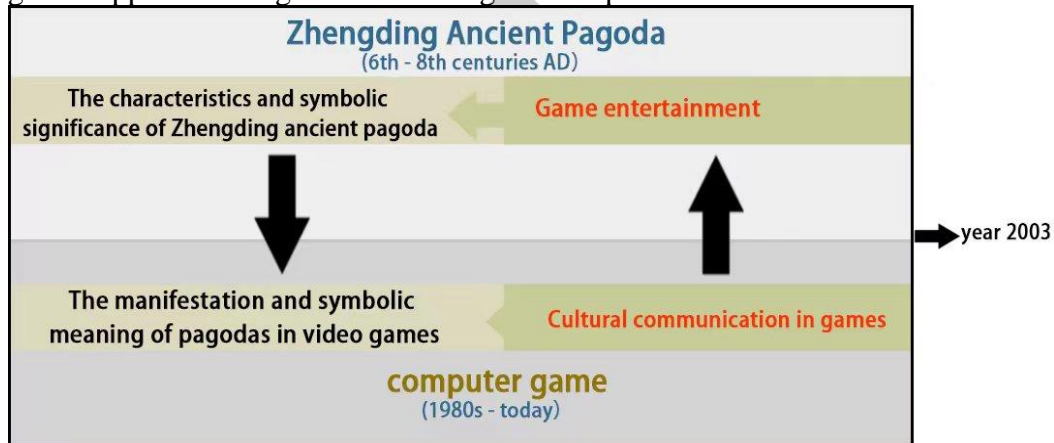
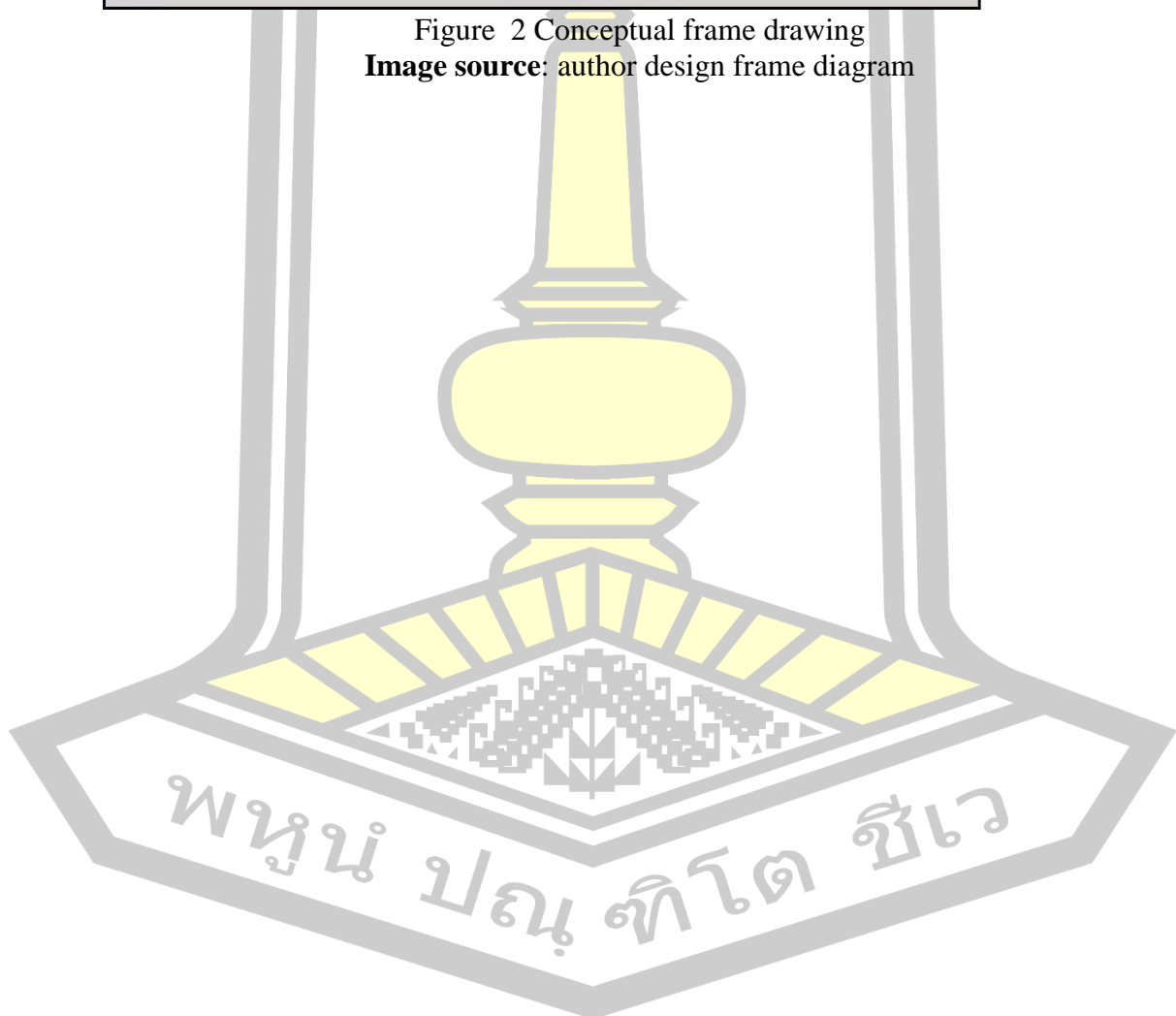


Figure 2 Conceptual frame drawing
Image source: author design frame diagram



Chapter II :

Overview of the architectural features and cultural value of the

stupa

2.1 The origin and development of world pagodas and the localization of Chinese pagodas

The pagoda is a kind of Buddhist building, so it is also called stupa. The pagoda was originally produced in India, he is a memorial building for burying the Buddha's relics, burying the Buddha's relics in the ground, piling a semicircle mound on top of it, with stone wrapped outside and carved decoration, named "Stupa", translated as "tower wave" or "floating picture", referred to as the tower.

The stupa, also known as the stupa, is a symbol of Buddhism and plays a role in promoting Buddhism. Every Buddhist, the stupa is more worshipped than the idol in his mind - the Buddha (that is, Sakyamuni). In order to respect these buildings, Buddhist countries often hold ritual ceremonies. Stupas have an important place in Buddhism. The shape of tombs around the ancient world, from the primitive simple mound of slow head shape, gradually developed to vary from place to place shape. For example, the so-called "giant's tomb trench" in northern Europe, the pyramids in Egypt, and the tomb carving of ancient India with a balanced hemispherical mound. Since then, the architectural form has gradually developed. As one of the more unique and symbolic buildings in traditional Buddhist culture, stupa originated in India, and with the east spread of Buddhism, stupa architecture also spread east to Middle Earth. The early Indian Buddha's stupa is semicircular in shape and consists of five parts, namely the base, the tower body, the tower roof, the bar and the tower door. After the introduction of Buddhism into China, this semicircle pagoda combined with the original pavilions in China to produce a Chinese-style pagoda, its image is a multi-storey pavilion with Chinese wooden structure below, and a "pagoda" is placed on the top of the pavilion as the top of the attic, so it is called a pavilion stupa. The wooden structure of the pavilion tower because of the high, easy to be struck by lightning and caused fire, many famous wooden towers in ancient times were burned down, so gradually brick instead of wood and build tall towers. This brick pavilion tower has developed a dense eaves tower in practice, which is characterized by lowering the floors above the bottom of the tower to form multi-storey eaves overlapping, and dividing the tower into three parts: the tower body, dense eaves and the tower brake (that is, the top of the tower), of which the dense eaves part accounts for the largest proportion, so it is called dense eaves tower. Later, several forms of Buddhist lamas and Vajra throne towers were introduced from India and other places, forming a situation in which various forms of Buddhist pagodas in China coexisted and developed together. (2006)

In the 1st century AD, the shape of the Indian stupa developed from the early bowl to the multi-storey platform, the stupa was no longer set up bar lintel and tower door, the base was raised to the Greek style waist circle, the top of the tower was covered with a bowl, and the stupa followed the layout form of the early rustling wave square niche, cone table and phase wheel. In the 2nd century AD, the pagoda tower evolved into a square, such as the British Museum of Pakistan's 2-3 century tower

vessel, 12.9 cm high, the tower stands on a square base, the base is surrounded by a bar, and the front of the bar has a Buddha plate sign; At this time, the dedication tower was also used as a square tower, and the tower was decorated with columns, Buddhist niches, statues of Buddha, warriors, elephants, lions and other statues, with the existing Lorian Tangay Dedication Tower in Kolkata the most wonderful. From the 4th to the 5th century AD, the Gandhara Buddha pagoda body was in the form of a pile, the lower width and the upper narrow structure, no phase wheel, such as the Jawlian temple site dedication tower in Sirsuk, Mr. Lai Chuanjian's book "Oriental Thought and Shape of Buddha Art" included the Gandhara four-stage stupa, which was widely used by the Northern Dynasty in Gansu, Shanxi generation of folk pagoda construction.

In Buddhism, the pagoda is not only a place to commemorate the Buddha, but also an important place for Buddhist belief and practice. The reliefs and sculptures outside the pagoda depict the life story, Buddhist teachings and practice path of the Buddha. Influenced by the Buddhist art of India and Central Asia, Chinese pagodas exhibit a distinctive style, often square or polygonal, multi-story, pavilion-like structures. The basic shape of the stupa is composed of the base, the tower body and the stupa, and the Indian elements are mostly retained in the shape of the stupa, which is also composed of the stupa, the stupa body and the stupa top. The stupa is the Xumui seat or the rosette in India, and the phase wheel of the stupa body is transformed into an odd number. The universe view of the Buddha culture is symbolized by the round light, the moon, the canopy and the beads.

Since the introduction of Buddhism into China in the tenth year of Yongping (67) of Emperor Ming of Han Dynasty, the teachings of Buddhism have been in conflict with the traditional Chinese imperial thought and Confucianism, which occupies the main body of Chinese culture. In order to have a foothold, Buddhism has to reconcile its position and cater to the habits and familiar ways of thinking of Chinese people in order to expand its influence. Buddhism began to be Sinicized, and pagodas began to combine with traditional Chinese architectural forms, which was a stage of continuous run-in. The Southern and Northern Dynasties (420-589) was one of the important periods when Buddhist culture entered China, and wooden pagodas dominated this period. Brick and stone towers are few in number. Then, because the wood is flammable, easy to decay, easy to decay, many brick towers, stone towers or masonry mixed structure of the pagoda began to appear in large numbers, from the wooden tower to the final stage of the main to the brick tower, due to the change of materials, so that the tower architectural shape and technology have changed accordingly, the most important change is that the tower plane gradually evolved from square to hexagonal and octagonal. The interior of the tower is also gradually transitioned from empty cylinder type to corridor type and folding inside the wall type. The shape of the tower column is gradually stratified to stratification. In terms of the shape of the tower, it can be roughly divided into three types: pavilion tower, dense eaves tower and pavilion tower. In the Ming and Qing dynasties, the ancient pagodas completely inherited the shape of the ancient pagodas in the Song, Liao, Jin and Yuan dynasties. On this basis, a large number of garret and pot pagodas were built. Generally speaking, the materials of Chinese pagodas were mostly wood, brick or stone, which were mainly built on hillsides or highlands. Its type from the style of

the main pavilion type, dense eaves type, king Kong throne type, covered bowl tower, bell tower and so on.



Figure 3 The tower is a pavilion
source of the picture : network



Figure 4 Dense eaves tower
source of the picture : network

With the Sinicization of Buddhism, the style of the pagoda has gradually changed from the pot tower to the pavilion tower and the pavilion tower, and from the pavilion tower to the dense eaves tower, forming a variety of Chinese style pagodas. These historic pagodas not only carry the culture and history of Buddhism, but also reflect the economic and cultural conditions of the society at that time. And show the

craftsmen in the construction, carving, carpentry and other aspects of superb skills. The pagoda has also undergone a process of Sinicization.



Figure 5 Pavilion tower

source of the picture : network

Chinese Buddha pagoda, the world called "Futu" (Sanskrit transliteration word). The development of Chinese pagodas mainly went through the following stages:

Origin: According to legend, a disciple of the Buddha asked his master, "What can I do to show you my respect?" Without saying a word, the Buddha spread his robe on the ground, inverted the alms bowl, and placed a tin scepter on it. It was not until the day of Buddha's nirvana that the disciples suddenly realized, just like the appearance of the bowl and tin staff, they built eight rustling slopes (namely towers) to worship the relics left by the Buddha after his death. This is the origin of the stupa in India.

Spread: India's Sanchi Stupa, the oldest surviving stupa in the world, is quite different from the common Chinese stupas. With the spread of Buddhism to the east, this symbolic religious building combined with traditional Chinese architecture and gradually changed its appearance.



Rise: Hundreds of years after the death of the Buddha, during the Yongping period of the Eastern Han Dynasty, Emperor Ming dreamed of a golden person flying around in front of the temple. The minister told him that there were similar legends in the far West. Therefore, Emperor Ming sent his mediators CAI Yin and Dr. Qin Jing to the west. In the Western Regions, CAI Yin and his party met the Buddhist monks Kasai Moten and Zhu Fang, copied the 42 chapters of the Buddhist Sutras, and invited the two monks to Luoyang, the capital of the Han Dynasty, to teach the Dharma. Yongping ten years (67), CAI Yin accompanied Kashe Moteng, Zhu Faran, with a white horse carrying Buddhist sutras back to Luoyang. Emperor Ming built the White Horse Temple, the first Buddhist temple in China, in Luoyang. There is no temple without a pagoda, and Emperor Ming of Han built Qiyun Pagoda in White Horse Temple at the same time, and the pagoda took root in the Central Plains.

pagodas in China, but the local mighty reign of the late Eastern Han Dynasty. She was a subordinate of Tao Qian, the governor of Xuzhou. Since its construction at the end of the Eastern Han Dynasty, Chinese Buddhist pagodas have experienced many important stages of development such as Wei, Jin, Sui and Tang, Song and Yuan, Ming and Qing dynasties.

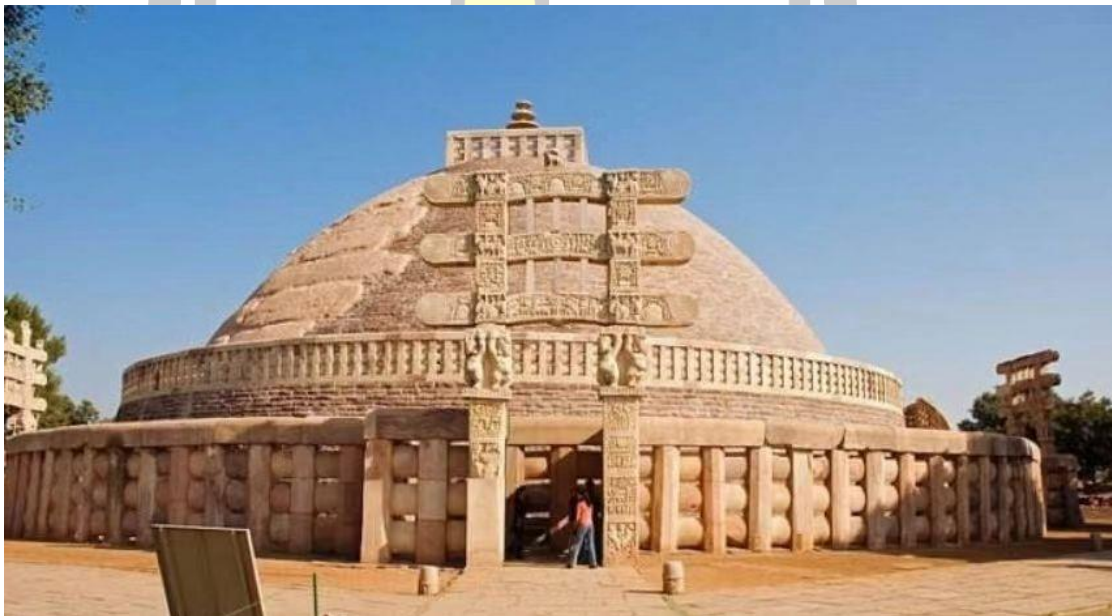


Figure 6 Sanchi Stupa, India

source of the picture :

<https://baike.baidu.com/item/%E6%A1%91%E5%A5%87%E5%A4%A7%E5%A1%94/1644765>

Development: However, it was not Emperor Ming who first set off the trend of building

In the early days, in order to maintain the mystique of rule, China built many pavilion-like pagodas. During the Wei and Jin Dynasties (220-420), dense eaves pagodas appeared instead of the original pavilion-style pagodas. In Sui and Tang dynasties, the single pagoda tended to be combined with multiple pagodas, and the twin pagodas in Taiyuan were built to support the Buddha and the multi-treasure Buddha. The pagodas of this period were the heyday of the development of Chinese pagodas.

In the Song Dynasty (960-1279), the form of building the pagoda after the Buddha hall began to appear. During the Ming and Qing Dynasties (1368-1912), the technology and artistic level of stupa construction reached a new height, and many exquisite stupa buildings appeared, such as the Biyun Temple pagoda in Beijing and the Ying County wooden Pagoda in Shanxi.

After the introduction of Buddhist culture into China, after a long period of dissemination and development, the Chinese Buddhist culture with Chinese national characteristics has been formed. As a Buddhist building, the pagoda was also integrated with the Chinese regional culture after it was introduced into China, forming a unique plastic art belonging to Chinese culture. Taking Huangze Temple Grottoes in Sichuan area as an example, its tower columns are in the form of pavilions and towers, and at the same time, it has similar structures of imitation wood balustrades, supporting columns, eaves and pavilions carved in stone. The pagoda has been transformed from the original bowl tower into a pavilion tower, pavilion tower, and derived from the pavilion tower into a dense eaves tower and other types of stupas.

At the same time of the localization of the form of the pavilion, the presentation of the Buddhist niche has also undergone Chinese localization, such as the depiction of the tent in the background of the main niche of the tower column. As a kind of bedroom furnishings widely appeared in ancient China, it appeared on the tower columns of such grottoes as Xumu Mountain Grottoes, Gongxian and Xiangtangshan Grottoes, among which some tower columns in the eye mouth of Xumu Mountain were curtain curtains of the Northern Zhou Dynasty, and Gongxian and Xiangtangshan Grottoes were greatly influenced by the Dunhuang model, showing the form of quadriboid central tower columns with main niches of Buddha statues on all sides.

2.2Spiritual connotation and significance of stupa

Due to the worship and belief of national heroes, Kings, and meritmen, the people carefully built tombs after their death to honor and commemorate their achievements, which is the formation process of the earliest sitta Nathu slope in India. However, this kind of tomb marker was originally only a place to bury the sacred relics of the Buddha, and Buddhism only inherited the tradition of ancient sitas and religious burial places. (Xu Qiheng, 1986) In the early days, the tower was equipped with a relief chlum outside the body, and the Chlum was surrounded by a central tower door, which was decorated with images of Mother Earth, sacred trees, umbrellas, lions, Buddhist stories and so on. During the Kushan period (1st - 3rd century AD), the shape of the Indian stupa developed from a cupola like a multi-storey tower, and no longer set up a bar and a tower door.



Figure 7 Barhoute Tower east tower door and part of the marble relief image

source of the picture :

<https://www.weibo.com/ttarticle/p/show?id=2309404921474841444562>

Stupa, as an important building in Buddhism, is usually regarded as a symbol of Buddhist teachings, representing the teachings and wisdom of Buddha, symbolizing the existence of Buddha and the spread of Buddha's teachings, and reminding people to pursue spiritual improvement.

With the development of Buddhist culture, stupas have developed from the original role of mausoleums or worship of Buddha images and Buddhist scriptures into faith and spiritual sustains, symbolizing spiritual cultures such as justice, exorcism, suppression of evil spirits, and feng shui. The shape, material and religious beliefs involved in the pagoda are all different from those in China. How to absorb, absorb and carry forward the pagoda with Chinese characteristics on the basis of retaining the local customs, architectural concepts and religious beliefs is the direction that the Chinese people explore in the inheritance year after year. The collision of Chinese and Western cultures in early Chinese Buddhist art is mainly reflected in the creation of foreign Buddhist culture, local Confucianism and Taoism culture, that is, Confucianism, Buddhism and Taoism. However, the biggest obstacle to the localization of Buddhism in China is the contradiction between the Buddhist idea of "coming out of the world" and the Confucian idea of "becoming official". The concept of equality and inclusiveness upheld by Mahayana Buddhism coincides with the "moderation" advocated by Confucian culture. In order to spread Buddhist teachings, monks and nuns actively cater to the local Chinese Confucianism and constantly integrate and improve the content of spreading Buddhist teachings. As the propagation of Buddhism, the creation art became the best carrier to promote the compatibility of Confucianism and Buddhism at this time.

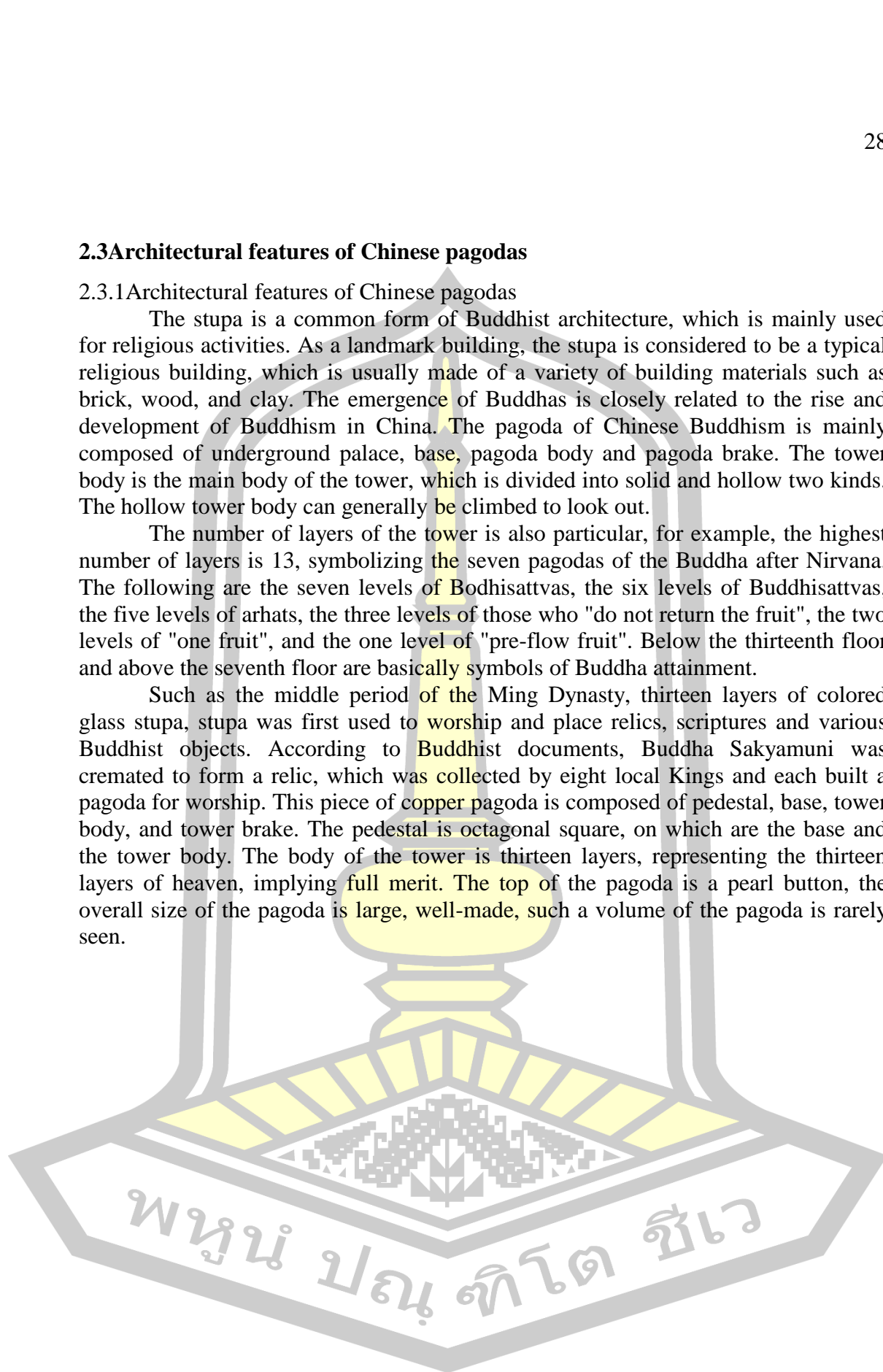
2.3 Architectural features of Chinese pagodas

2.3.1 Architectural features of Chinese pagodas

The stupa is a common form of Buddhist architecture, which is mainly used for religious activities. As a landmark building, the stupa is considered to be a typical religious building, which is usually made of a variety of building materials such as brick, wood, and clay. The emergence of Buddhas is closely related to the rise and development of Buddhism in China. The pagoda of Chinese Buddhism is mainly composed of underground palace, base, pagoda body and pagoda brake. The tower body is the main body of the tower, which is divided into solid and hollow two kinds. The hollow tower body can generally be climbed to look out.

The number of layers of the tower is also particular, for example, the highest number of layers is 13, symbolizing the seven pagodas of the Buddha after Nirvana. The following are the seven levels of Bodhisattvas, the six levels of Buddhisattvas, the five levels of arhats, the three levels of those who "do not return the fruit", the two levels of "one fruit", and the one level of "pre-flow fruit". Below the thirteenth floor and above the seventh floor are basically symbols of Buddha attainment.

Such as the middle period of the Ming Dynasty, thirteen layers of colored glass stupa, stupa was first used to worship and place relics, scriptures and various Buddhist objects. According to Buddhist documents, Buddha Sakyamuni was cremated to form a relic, which was collected by eight local Kings and each built a pagoda for worship. This piece of copper pagoda is composed of pedestal, base, tower body, and tower brake. The pedestal is octagonal square, on which are the base and the tower body. The body of the tower is thirteen layers, representing the thirteen layers of heaven, implying full merit. The top of the pagoda is a pearl button, the overall size of the pagoda is large, well-made, such a volume of the pagoda is rarely seen.



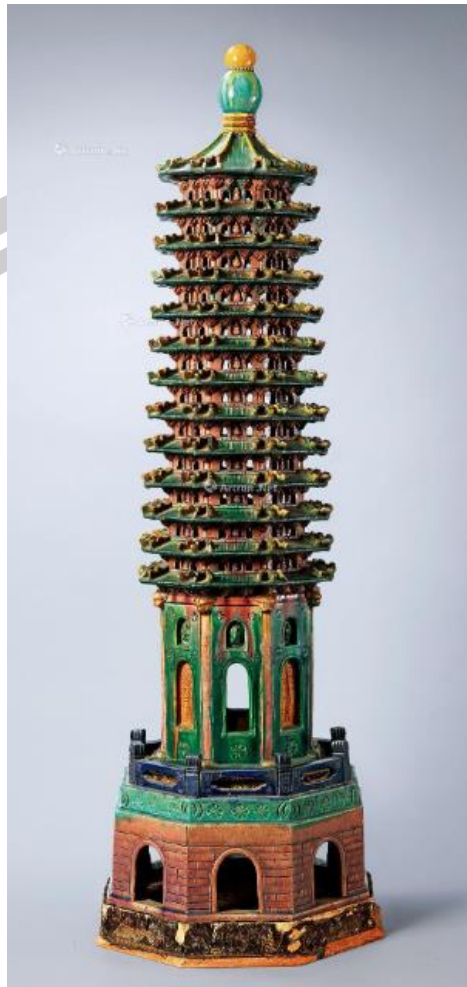


Figure 8 Thirteen-story pagoda with colored glaze in the middle of Ming Dynasty

source of the picture : <https://auction.artron.net/paimai-art5150590133/>

In addition to the pagoda body, many stupas have temples, phase wheels, round light, moon, treasure caps, bottles, beads and other architectural structures, respectively representing different auspicious meanings. In the early process of Buddhism being introduced into China, stupa, as a means of communication, became popular in China with the development of Buddhism in China.

2.3.2 The artistic style of Chinese stupa

The construction and decoration of Chinese pagodas are closely related to Chinese traditional culture and have distinct national characteristics. From the perspective of construction technology, the construction technology of Chinese pagodas is relatively complex. From the perspective of building materials, the construction materials of Chinese pagodas mainly include brick, wood and stone, and their decorative materials also have diversified characteristics. For example, the Chinese brick pagoda is obviously different from the Japanese Tang Pagoda, which uses more of a combination of "carving" and "painting".

Compared with Japanese pagodas, Chinese brick pagodas have unique aesthetic value and cultural value, which not only have artistic value, but also have historical value.



Figure 9 Shaanxi Chongwen Tower (Brick tower)
source of the picture : <https://history.ifeng.com/c/85cMrsgM15M>



Figure 10 Shandong Ancient architecture Four Men Tower (stone tower)
source of the picture :

https://k.sina.cn/article_6154232641_16ed2234100100rhrq.html?from=culture

From the architectural form, the pagoda is mainly divided into three types: dense eaves type, pavilion type and mantle type. From the perspective of spatial structure, pagodas are mainly divided into four types: plane shape, dougong structure, brick structure and wooden structure. From the perspective of the spatial structure of the pagoda, the pagoda can be divided into seven layers and eight faces and nine layers and ten faces.

Dense eaves stupa is the most common form of ancient stupa. It is characterized by the combination of the tower body and the eaves, and the whole building presents a dense eaves structure. The appearance of dense eaves pagoda is related to the development of ancient Chinese architectural technology, and it is also the product of the development of ancient Chinese architectural technology to a certain stage. According to the record of "Building French", the dense eaves type stupa belongs to the "wooden frame" type stupa, which is composed of three parts: the tower body, the tower top and the tower brake. Among them, the pagoda body is also called "false body", which refers to the construction of a smaller Buddhist niche under the base of a pagoda, generally about 1 meter high; The top of the tower is called "true body", which refers to a plane built with masonry between the tower body and the top of a tower, thus forming a three-dimensional space structure; The pagoda is called "treasure cover" or "covering bowl". Dense eaves pagodas are generally reduced in height from the bottom to the top, which can make the tower stronger. The dense eaves stupa is a hexagonal or octagonal form of architecture, which is different from the common pavilion and bowl stupa in ancient Chinese architecture. Dense eaves stupa was widely used in ancient Chinese architecture because of its strong structure, beautiful shape and rich spatial levels. In ancient Chinese architecture, Dense eaves pagodas are often important sites for Buddhist activities. It can be used not only as a place for Buddhist activities, but also as a symbol of temples or palaces. In addition, the dense eaves pagoda also has a high artistic value in ancient Chinese architecture. Due to the limited level of construction materials and technology in ancient China, dense eaves pagodas were mostly constructed with brick, stone and other materials.

The pavilion stupa is the oldest form of architecture in our country, which originated in India. Due to the close relationship between early Buddhism and India, the appearance of the stupa has obvious Indian characteristics. At that time, after the introduction of Buddhism into China, with the passage of time, the stupa in China has undergone great changes. There are two main types of Chinese loft-style pagodas: one is square or rectangular in plane shape, and the other is round or polygon in plane shape. Its building structure is generally divided into two parts: the first part is the tower, the second part is the tower body. On top of the pagoda is usually a central tower, a shrine and a caisson. In this form of stupa, its internal space can be divided into three parts: the first part is the Xumui seat, the second part is the Buddha niche, and the third part is the pagoda body. In addition, Buddha statues, wind chimes and other decorations can be hung above the shrine. This architectural form has certain decorative and ornamental value.

The pagoda is a stupa without a pagoda, consisting only of the pagoda body and the pagoda. This type of stupa originally existed as an annex to monasteries, and later gradually developed into the main building of Buddhist monasteries. In early Buddhism, such pagodas were generally referred to as "stupas" because of their

appearance and structure. In the Tang Dynasty, this type of stupa was widely used in Buddhist monasteries, and gradually became one of the main architectural forms of Tang monasteries. In a cupola tower, its biggest feature is that there is no tower brake, but it usually has a tower cover on the top. From the point of view of decorative effect, the covering pot pagoda usually adopts the form of caisson and dougong in decoration. From the point of view of architectural characteristics, the overlying pagoda has the characteristics of multi-level and multi-change, so it is also a unique building type.



Figure 11 A bowl tower

source of the picture : Photo source: baidu.com

From the point of view of decoration, Chinese pagodas have also carried out a lot of localization treatment in the use of patterns, choosing dragon patterns, seawater patterns, curly grass patterns and other ancient Chinese architectural decorative patterns. The dragon is a divine animal that sustains the belief of the Chinese people and enjoys a high status in China. The dragon pattern, as a pattern widely used in traditional Chinese artifacts and buildings, is a totemic belief rooted in the hearts of every Chinese, which has been inherited from ancient times to the present. The dragon pattern can be seen in small jade and beads carried by people and in large buildings. As shown in the figure below, on the body of the Zhengding stupa, there are also a large number of products after the integration of various dragon patterns and Buddhist culture.

Because of the important position of stupa in Chinese religious architecture, many literary works related to stupa appeared in ancient China. These works have rich cultural connotation and historical value, and have important academic research value. For example, in the Buddhist story, the Dharma Sutra, there are many references to pagodas and Buddha images. These records not only reflect the importance of

Buddhism and Buddhist architectural culture in ancient Chinese culture, but also reflect the understanding of pagodas and Buddha statues at that time.



Figure 12 Detail of Zhengding ancient pagoda body
 source of the picture : <https://zhuanlan.zhihu.com/p/642434924>

The wise ancient Chinese observed the sky and found that the sky was round and the earth was square, forming the primitive and simple concept of space rooted in the bones of the Chinese people. Yang Zimo wrote in "Research on the Design Culture of the Early Buddhist Stone Pagoda in China" : " Covering the sky 'is the first hypothesis of the ancients on the structure of the universe, which was first founded by the ancient Fuxi family, and later taught to Zhou Gong, Zhou people as volunteers, so it is called" Zhou Bu ", its cloud' heaven (circle) like a cover, the place like a chess game. The primitive ancestors regarded the sky as an umbrella covering the round arch on the flat earth, and this space concept of "round sky and place" became the traditional Chinese design concept of creation, which was widely used in architecture, sculpture and other sculptural objects, such as jade cong, plates, sundials, coins, yong, Ming hall, and bronze mirrors, palaces, mausoleum and stone tablets below the upper circle. The shapes of all kinds of objects transform each other between the square and the square, no matter what the mode of expression is, it follows the concept of "heaven round and place". However, the space concept of "round sky and place" is not unique to China. As a space concept that the early ancestors personally observed, many other human ancestors also applied this simple intuitive perception to their own mode of creation. The structure of the Indian rustling bowl is very similar to that of the local Aryan chief's house, Vedic religious shrine, and Jain religious architecture,

which are all semi-spherical bowl structures, shaped like grassland yurts. Primitive and simple grassland people seem to have a deeper understanding of this kind of 'round sky and place', which is described in the folk song of the Northern Dynasty, 'the sky is like a dome, enclosing the four fields'." It can be seen that in the process of Chinese localization of stupa, it is deeply influenced by the "round sky and place" of ancient Chinese



Figure 13 Detail of Zhengding ancient pagoda body

source of the picture : <https://zhuanlan.zhihu.com/p/642434924>

Therefore, the study of Buddhist cultural heritage can provide valuable research materials for ancient Chinese architectural culture, religious culture and literary works.

2.4 The symbolic meaning and cultural value of Chinese pagodas

Stupas have a special place in Buddhist architecture. Buddhism believes that the pagoda is the location of the Buddha's relics, so in the construction of the stupa, people will take a variety of ways to show respect for the Buddha. In ancient China, pagodas have always been regarded as sacred objects. "Heaven is Yang and earth is Yin; Yang cannot separate from Yin, and Yin cannot separate from Yang." This is the basic theory of Buddhism. Buddhism believes that if one wants to eliminate karma and achieve liberation, one must rely on the stupa. In addition, Buddhism also believes that only through pious prayer and sacrifice to the pagoda, one can achieve liberation. In ancient Indian mythology, Buddha Sakyamuni was born in a forest in northern India. After his death, his soul lingered in hell for nine hundred and ninety-eight days before reaching heaven. However, according to Buddhism, a person leaves a soul in the world after death. Therefore, in order for people to be reincarnated and liberated on earth, people must pray and offer sacrifices to the stupa.

2.4.1 Religious symbol

From the perspective of religious symbols, Chinese pagodas are the landmark buildings commemorating Buddha in the early period of Buddhism, a form of religious architecture, and a cultural expression and spiritual support. It is not only a place to commemorate the Buddha, but also an important place for Buddhist belief and practice, and the reliefs and sculptures outside the stupa depict the Buddha's life story, Buddhist teachings and practice path.

Sun Qian mentioned in the article "Investigation on the Sinicization of Buddhist Temple Architecture in Northern Wei Period Centered on the" ¹Luoyang Jialan Ji "that there were many Buddhist temples in Luoyang in Northern Wei period recorded in the" Luoyang Jialan Ji ". According to the construction sources and architectural characteristics, the Buddhist temples in Luoyang mainly included the types of royal construction, the construction of officials, and the "houses as temples". Among them, the most people "give up their houses as temples". The Buddhist temple built by the royal family, due to the sufficient manpower and material resources as the backing, the layout is orderly, large-scale, graceful. The most important and typical temple is Yongning Temple, which is the representative Buddhist temple in the period of the Northern Wei Dynasty's relocation to Luoyang. The description of Yongning Temple is also the most detailed in Luoyang Jialan Ji. Yongning Temple adopts a symmetrical layout on the central axis, and the main part is composed of towers, halls and corridors. The nine-story square pagoda on the three-story platform is in the center, and the temple is built in the north of the pagoda. The courtyard is surrounded by walls, and the auxiliary buildings are monks' dormitories. The east, west and south sides of the courtyard are open to the central door, and there are gatehouses on the doors. This "front tower and back hall" architectural layout can also be seen in other Buddhist temples built by the royal family. For example, Yaoguang Temple "has five floors and one floating map, going to the ground fifty feet." There are more than 500 rooms in the temple. Qi sparse and contiguous, every door and window connect "; Qin Taishangjun Temple "there are five layers of floating figure a Hutong temple" pagoda five heavy, gold temple towering ". On the one hand, the architectural layout of these Buddhist temples follows the shape of the "front tower and back hall" of the ancient Indian prominent Buddhist pagoda. The pagoda and the Buddhist hall are the main buildings of the courtyard, located in the center of the courtyard, and the monks' rooms around the courtyard are on both sides. On the other hand, the traditional Chinese central axis symmetrical arrangement is adopted, and the hall is also built in accordance with the traditional Chinese architecture. The Buddhist temple built by officials or "house as a temple", because it can not "exceed the system", and "house as a temple" Buddhist temple, the predecessor is the mansion, so in shape and structure is very different: there is no pagoda, only Buddhist hall or lecture hall; A Buddhist temple is centered on a Buddhist hall. This kind of situation is mainly recorded in "Luoyang Jialan Ji". Since the phenomenon of "giving up houses as temples" was more widespread in the late Northern Wei Dynasty, the layout and shape of Buddhist temples were mainly in the form of residential courtyards at that time. For example,

¹ Sun Qian. A study on the Sinicization of Buddhist Temple architecture in Northern Wei Dynasty centered on "Luoyang Jialan Ji" [J]. Chinese Religion, 2023(01):70-71.

Jianzhong Temple, that is, "in the first year of Jianyi, Shangshu made King Erzhu Shilong of Leping proud to pursue happiness, and named the temple." Zhumen yellow Pavilion, the so-called immortal also. The front hall is the Buddhist hall and the back hall is the lecture room. The golden flower covers it all." This layout gradually became the mainstream of later Buddhist temple architecture.

In Teng Xuehui's article "Northern Song Dynasty Buddhist Relics Discovered in Jinshan Pagoda in Linhai City, Zhejiang Province"², the two pottery pagodas found in Linhai Jinshan Pagoda imitate the shape and structure of the six-sided, seven-story pavilion-style pagodas that appeared in the Qianchu period of the Wuyue State and were popular in the Song Dynasty. The shape and structure of the engraved silver pagoda (28 cm high) in the 14th year of Shaoxing in Southern Song Dynasty (1144) unearthed in the underground palace of Tianfeng Pagoda in Ningbo in 1982 are roughly similar to the above two pottery pagodas. The monasteries of the Song Dynasty were made of various materials, such as the gilt-silver pagoda of the Northern Song Dynasty found in the Ruian Huiguang Pagoda of the third year of Qingli in the Northern Song Dynasty (1043). It is a square pavilion with seven floors and consists of three parts: the base, the tower body and the stupa, with a total height of 34.8 cm. The bronze square tower, 34.5 cm in height, was inscribed in the first year of Jiawu (1054) of the Northern Song Dynasty and found in the pagoda of Hu Town, Longyou County, Zhejiang Province. The model of the Song Dynasty pagoda is very rare, and the small hollow pottery pagoda found in Jinshanxi Pagoda adds a new type to the Song Dynasty pagoda.

The local government of Wuyue State (896-978), which established the two Zhejiang provinces, strongly believed in Buddhism. During the period of Wu Yue State, Buddhist statues were placed in the pagoda, of which the number of gold and copper statues was large. For example, at the end of the five dynasties and the beginning of the Northern Song Dynasty, King Qian Chu of Wuyue followed the example of King Ashoka of ancient India, casting 84,000 Ashoka Towers with copper and iron, and burying the "Treasure Suitcase Insinuating Mantra" engraved scriptures symbolizing "the whole body of the Tathagata" in the tower, praying for disaster, protecting the country, and spreading in the states within Wuyue.³ Clay statues and stone statues are also seen in the folk statues of Wu Yue, such as the clay Buddha statue found in the pagoda of Baosheng Temple in Pingyang⁴ Zhejiang, and the stone statue and clay statue found in the pagoda of Lingshi Temple in Huangyan.⁵ After Qian Chu, king of Wuyue, returned to the Song Dynasty in 978 in the third year of Taiping and Xingguo in the Northern Song Dynasty, the environment of the Qian royal family's protection of Buddhism and the strict copper prohibition law of the

² Teng Xuehui. Buddhist relics of the Northern Song Dynasty discovered at Jinshanxi Pagoda in Linhai, Zhejiang [J]. Sichuan Cultural Relics, 2024(01):84-90.

³ Hu Xiaohong, Li Yuxin. Qian (Hong), King of Wu Yue, Chu built 84,000 Ashoka Pagoda. Zhang Jianting, Ed. Hangzhou Wenbo, Vol. 7, pp. 53-56, Hangzhou Publishing House, 2008.

⁴ Chen Yuliang. Two pagodas and Unearthed Relics of Baosheng Temple in Pingyang, Zhejiang Province. Zhejiang Museum, Vol. 23, pp. 83. Zhejiang University Press, 2007.

⁵ Taizhou Regional Cultural Administration Association and Huangyan City Museum: Report on Cultural Relics Cleaning of Lingshi Temple Pagoda in Huangyan, Zhejiang Province, Southeast Culture, No.5, 1991.

Northern Song Dynasty stopped the casting of gold and copper statues in the ancient territory of Wuyue,⁶ but the folk monasteries and pagodas were still built, only the statues in the pagodas were changed into stone sculptures, lacquerwood, colored sculptures, ceramics, etc. It is an important example to reflect the content of Buddhist support of the people in the Northern Song Dynasty. In addition, these Buddhist relics of Shanxi Pagoda in Jinhai in Linhai also show a relatively significant secular and civilian characteristics. Pottery Buddha statues and Bodhisattva statues are dignified in appearance, with lowered eyebrows and gentle expressions, and their aesthetic style is secular. The two Buddha statues on the brick lines are thick and simple, and the expression is friendly and straightforward, which is very different from the Xiu bone clear phase of the Wei, Jin, Southern and Northern Dynasties, and the fullness and roundness of the Tang Dynasty. The figure looks natural and vivid, judging from the face and clothing, may be a boy figure, its fetal quality is coarse, the quality of the burnt is very different from that of Buddha, Bodhisattva, may be the image of monks or lay people, donors and other secular disciples, such image images "old or young, or good or evil, and abundant lonely, handsome and ugly, elegant and vulgar, fat and thin tall and short, dynamic and moody shapes." It's better to keep up with the differences between them."⁷The addition of secular figures shows that Buddhist believers had penetrated into all levels of society at that time. In addition, the inscription "Disciple Xu Tai made this Yongchong offering" on the two Buddha bricks is simple, small in size, and the donors may be civilians.

Chinese stupa, as a kind of Buddhist architecture, has religious symbolic significance. Stupas are often seen as the embodiment or spiritual symbol of the Buddha, representing his teachings and wisdom. The pagoda contains the Buddha's relics, or images of Buddha, for devotees to worship and make offerings. For believers, climbing the stupa symbolizes the process of practice, with each level representing a different stage of practice.

2.4.2cultural symbol

From the perspective of cultural symbols, Chinese pagodas are the products of the combination of Buddhist culture and Chinese traditional culture, which carry rich religious, artistic, cultural and social significance. It has rich historical and cultural connotation.

As a representative of Buddhist culture, stupas symbolize the sublime and sacred. In the Buddhist belief, the Buddha is the supreme being, and the stupa is the symbol of the Buddha, representing his wisdom and compassion. Therefore, the stupa

⁶ In the Song Hui Collection of Manuscripts, Goods, and Prohibition of Copper, Taizong Taiping Xingguo Second year (977) article, "A minister said: 'The southern states have no prohibition law on copper, please promulgate it. I will obey his request.'" It can be seen that at that time, the law of copper prohibition was generally implemented outside the Jiangnan. There are also many records in the "Song Hui Jihua · Punishment Law" on the punishment of private copper casting provisions, such as in April of the fourth year of Chongning (1105), "If there is a person in the neighborhood who makes treasure or copper privately, if he knows it, he will not report it, and he will not correct the law according to the knowledge of the five guarantees." See Liu Lin et al., *The Collection of Manuscripts of the Song Society*, pp. 6748, 8308, Shanghai Ancient Books Publishing House, 2014.

⁷ Translated by Gongbu Chabu, "Measuring Sutra of Statues (with Supplementary Supplement)", No. 8, Jinling Sutra Division, 1874.

has a supreme position in the hearts of believers and is the object of their worship. From the perspective of history and inheritance, Chinese stupa is an architectural form with a long history, which has experienced the evolution and development of several dynasties.

Chinese pagodas came into being when Buddhism was introduced into the Central Plains in the Han Dynasty. In the Han and Jin dynasties, people had a relatively shallow understanding of Buddhism. However, since Emperor Ming sent his emissaries to seek the Fa, Buddhism in China at one time numerous followers, pagoda and temple. The famous White Horse Temple in Luoyang is the first Buddhist temple built by Yongping, Emperor of the Ming Dynasty, after he sent his envoys back to China. The Han Fa Bennei Biography of Fayuan Zhulin records that in the fourteenth year (71) of Yongping, the capital of the Eastern Han Dynasty, there were seven Buddhist temples and three Ni temples in Luoyang.⁸ During the Han and Jin Dynasties, Buddhist culture began to enter, and the pagodas in various parts of the country were in the stage of imitation, followed by the war and strife of the Five random China and the Sixteen States, and the long-term war made the people very poor. Buddhism coincided with the needs of the people at this time, based on this, Buddhism developed rapidly during the Southern and Northern Dynasties. Almost all emperors practiced Buddhism. Fu Jian, the king of the former Qin Dynasty, built the Chang'an Translation Field, the earliest translation field in our country. Yao Xing, Emperor Wenhuan of the later Qin Dynasty, honored Kumarashi as a national teacher, built a garden of pleasure, and invited Luo Shi, Monk Zhao, Monk Shu, Monk Yan and other masters to translate the Sutras. Northern Liang low-lying canal Mengxun invited Tianzhu Tanwuquan to worship as a national teacher, translating scriptures, building statues, and teaching the people, which opened the Liangzhou model of Chinese Buddhist art; Tuoba Jun, Emperor Wencheng of Northern Wei, restored Buddhism and dug the Yuntong grottoes. Emperor Chen Baxian sacrificed his life to Jiankang Grand Temple and established four or five hundred Buddhist temples and so on. During the Southern and Northern Dynasties, although there were incidents of Tuoba Tao, Taiwu Emperor of Northern Wei, and Yuwen Yong, Emperor of Northern

⁸ On the first day of the first month of the fourteenth year of Yongping, the Taoist priest of the five mountains ordered himself to say: "The son of Heaven has abandoned my Tao and sought Hu religion far away. Today, because of the collection of the Dynasty, I can show resistance to it." His outline said: "Five Mountains 18 Mountains Guan Tai three holes disciple Chu Shanxin and other 690 people, as far as the magic, omnipotent." Would like to compare with the West monk, to argue the truth. If the comparison is worse, let it be decided. If he has victory, he will remove vanity." The imperial letter of Shang ordered Song Xiang to introduce the Changle Palace, and on the 15th of this month, the White Horse Temple can be gathered. The Taoist priest set up three altars and opened twenty-four doors. The last part describes the result of the fighting method, which is judged by the Taifu Zhang Yan that the Taoist priest "has tried nothing, that is, it is false". The Buddhist monks, Shi Moteng and Zhu Faran, said on the spot that many people had to be moved to convert to Buddhism: more than a thousand people, such as Liu Jun and all the officials and ordinary people in Yang City, 620 people, such as Lu Huitong and other Taoist monks in Siyue, 240 people, such as Lady Yin and Wang Jieyu. He set up ten temples, seven outside the city, three inside the city, Anni, since Si has been widely spread throughout the world. Written by Shi Daoshi, annotated by Zhou Shujia and Su Jinren. The law garden and the Pearl forest? Book 55? Debate on the authenticity of the holy first [M]. Beijing: Zhonghua Book Company, 2003:1649-1650.

Zhou, destroying Buddhas, they did not affect the overall development and spread of Buddhism. At this time, Buddhism not only won the support of the upper ruling class, but also gained widespread popularity among the people. In the northern and Southern Dynasties, the construction of pagodas has become a scene in urban and rural areas at that time, the so-called "Sherita in the outskirts of the Guo, the world beside the city", at this time, people gradually increased the construction of pagodas and tended to standardize.

According to rough statistics, there are a total of 63 Buddhist pagodas in the Southern and Northern Dynasties recorded in ancient stone literature, 60 of which have exact addresses, reaching Guazhou (today's Jiuquan) in the west, Pingcheng (today's Datong) in the north, Kuiji (today's Shaoxing) in the east, Hengyang in Nantong, concentrated in the Central Plains and the eastern coastal areas, and the most prosperous Buddhist pagodas built in Luoyang and Nanjing. Among them, about 11 Buddhist pagodas were built in Luoyang city, including Ashoka Temple pagoda, Taishanggong Temple pagoda, Wangdianyu Temple pagoda, Dajue Temple pagoda, Yaoguang Temple pagoda, Hutong Temple pagoda, Yongning Temple pagoda, Jingming Temple pagoda, Chongjue Temple pagoda, Hejian Temple pagoda, Rongjue Temple pagoda, etc.; There are 10 Buddhist pagodas near Nanjing, such as Ashoka Temple tower, Pinglu Temple tower, Dongqingyuan Temple tower, Qingyuan Temple tower, Chanling Temple tower, Pagoda, Pagoda, City Temple tower, Taihuang Temple tower, Chonghuang Temple tower, Zhiyuan Temple tower. Most of the Buddhist pagodas recorded in these documents are large pavilion-style stupas, the highest pagoda of Fadeng Temple is 19, and the literature clearly records three stone pagodas, namely, Tiangong Temple pagoda, Yongning Temple Pagoda and Emperor Uncle Temple Pagoda, which were built in Pingcheng, the capital of Northern Wei Dynasty. According to the author's collation of the existing 16 northern and southern dynasties stone towers are far abundant in the literature records, about 116, only the South Nieshui in Taiyuan a statue of stone towers as many as 344, these stone towers are used by folk believers, there are single stone towers, cliff tower grottoes, there are statue stele tower patterns. According to the current administrative divisions, it was distributed from Datong in Shanxi Province in the north, Qingzhou in Shandong province in the east, Chongqing in the south, and Turpan in Xinjiang Province in the west, including 54 provinces and municipalities directly under the central Government, mainly concentrated in the Yellow River basin during the Northern Dynasty, among which Gansu, Shanxi, Shaanxi, Hebei, Henan, Shandong and Northern Jiangsu are the most widely preserved. According to the comprehensive literature description and the existing stone pagoda remains, Gansu, Hebei and Henan have the most stone pagodas, accounting for 16% each, and the three places account for half of the total, followed by Shandong and Shanxi with many pagodas, Jiangsu, Shaanxi and Sichuan with a small number of pagodas, and Xinjiang, Anhui, Hubei, Hunan and Chongqing with only a few pagodas.

These ancient pagodas not only witness the development of Buddhism in China, but also carry the essence of ancient Chinese architectural art, so the pagodas are also a symbol of history and inheritance. At the same time, Chinese stupa has a high value in architectural aesthetics, and its unique shape and structure reflect the exquisite skills and aesthetic pursuit of ancient Chinese architecture. The architectural style of the pagoda varies in different historical periods, but they all reflect the

cultural and artistic level of the time. From the perspective of cultural exchange, Chinese pagodas are also the products of cultural exchange between China and foreign countries. With the spread of Buddhism, the pagoda architecture styles of India, Nepal, Myanmar and other countries have also had an impact on China, and the combination of traditional Chinese architectural art has formed a pagoda architecture style with Chinese characteristics. This cultural exchange is not only reflected in the architectural style, but also in the spread and integration of Buddhist teachings. Due to the vast territory of China, the pagodas in different parts of China have different regional characteristics, reflecting the local culture and customs. For example, the plateau pagoda in Tibet, the Dai Buddhist pagoda in Yunnan Province, and the Tulou pagoda in Fujian Province are all closely related to the local natural environment, national culture and historical background, and have strong regional characteristics.

To sum up, Chinese stupa is a cultural symbol with profound connotations, reflecting multiple meanings such as the sublime, sacred, historical, aesthetic, communication and regional characteristics. The architectural style, decorative art and sculpture of the pagoda all reflect the cultural and artistic level of ancient China. As a kind of cultural heritage, the pagoda carries the value of history, religion and art, and has become an important part of the Chinese culture.

2.4.3 Aesthetic symbol

artistic value. The shape, proportion, lines and decoration of the pagoda all reflect the aesthetic concept and artistic style of ancient Chinese architecture. The towering, majestic and solemn pagoda gives people a sense of beauty and spiritual shock, and has become a symbol of beauty in the hearts of many people. The aesthetic symbols of Chinese pagodas can be divided into the following points:

Beauty of shape: The shapes of Chinese pagodas are rich and varied, such as the pavilions, dense eaves and bowls mentioned above, each of which has its own unique aesthetic characteristics. For example, the layering of the loft-like pagoda symbolizes the layering and ascending artistic conception of Buddhism; Dense cornice style thick and solid, giving a sense of firmness and stability.

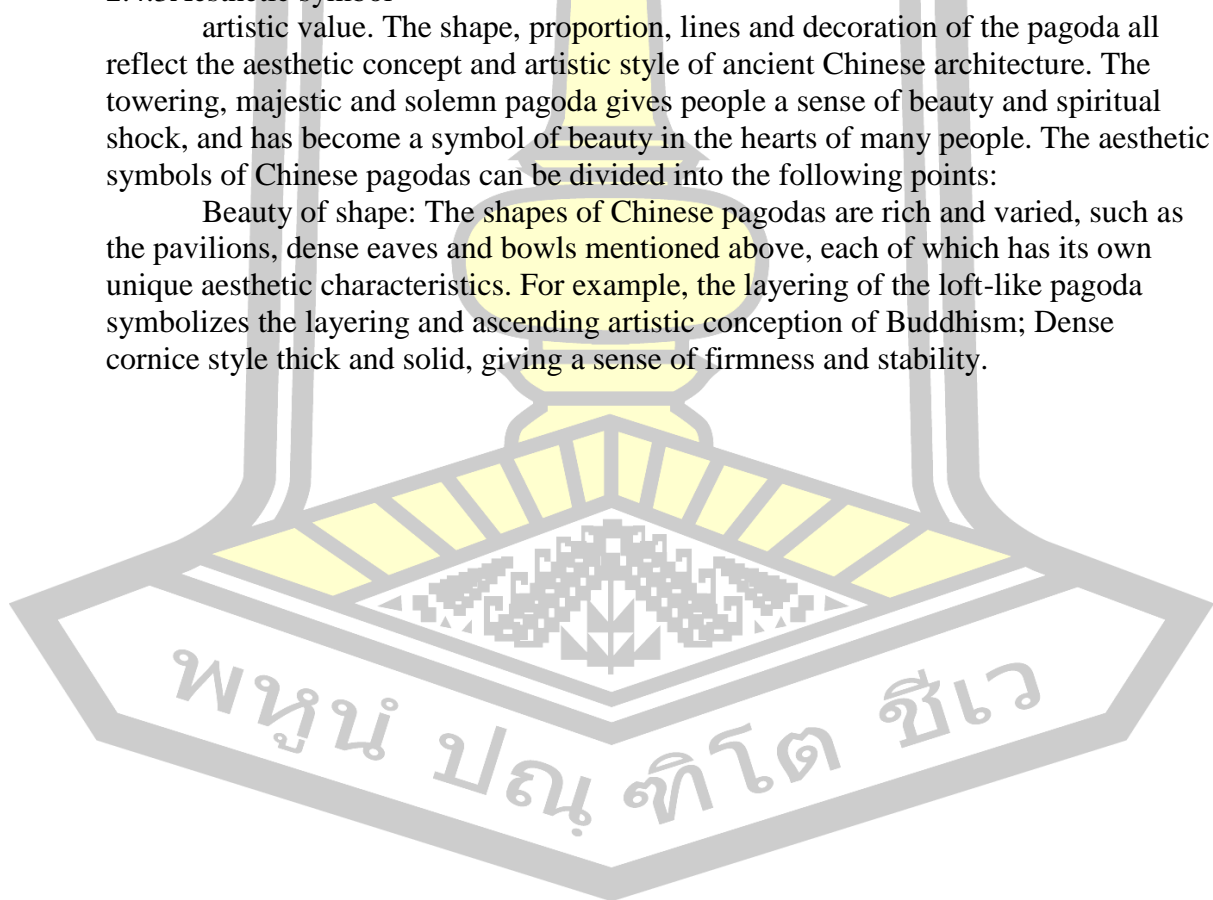




Figure 14 Vajra Throne Tower - Cleansing City Tower

source of the picture : King Kong Throne Tower - Qing Purification City Tower -
Search images (bing.com)

Curvaceous beauty: The curvaceous beauty of the pagoda is also one of its aesthetic symbols. The curve of the tower body is natural and smooth, giving people a soft and beautiful visual feeling. This curvaceous beauty echoes the curvaceous beauty in nature, such as the waves of the sea, rolling mountains and so on.

Beauty of color: The colors of Chinese pagodas also have rich aesthetic significance. The color styles of pagodas vary from region to region, but generally speaking, the colors of pagodas are in harmony with local culture and customs. Bright colors such as red, yellow, and blue are often used to decorate pagodas, giving people a strong visual impact.



Beauty of light and shadow: Under the sunlight, the shape and details of the pagoda will present different light and shadow effects, giving people a rich visual experience. The changes of light and shadow make the pagoda more three-dimensional and vivid, adding its aesthetic charm.

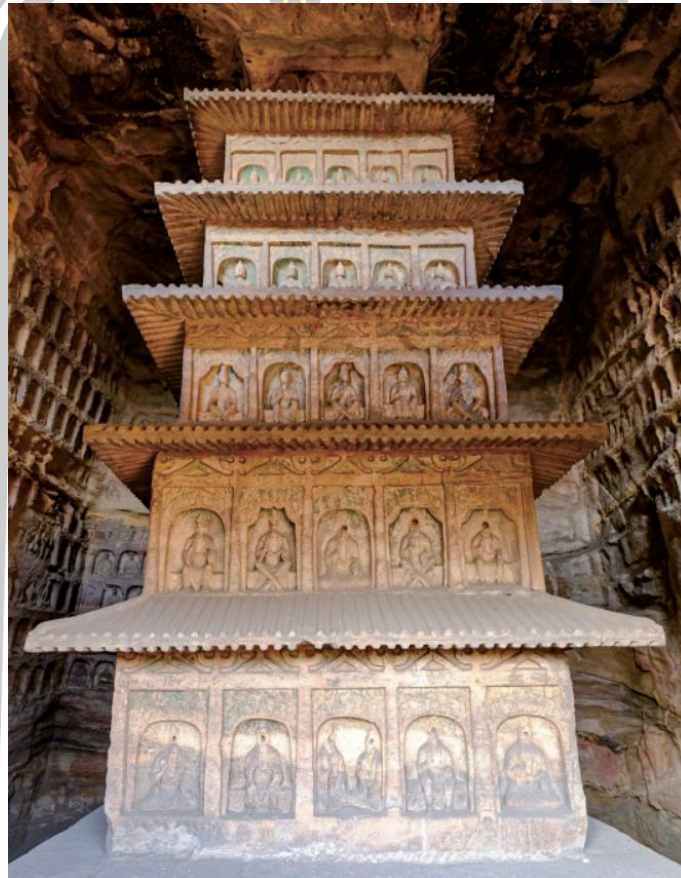


Figure 15 Center tower of Cave 39 Yungang Grottoes, Datong, Shanxi Province
source of the picture : South of the central Tower of Cave 39 - Yungang Grottoes -
 Photo (zsbeike.com)

Beautiful details: The details of Chinese pagodas are exquisitely handled, such as the cocking of the eaves and the carving of the tower body, which all reflect the exquisite skills and artistic pursuit of the craftsmen. These details not only make the pagoda more vivid, but also increase its aesthetic value.

To sum up, the aesthetic symbols of Chinese Buddhist pagodas are embodied in many aspects, such as beauty of shape, beauty of curves, beauty of colors, beauty of light and shadow and beauty of details. These aesthetic characteristics together constitute the unique artistic charm of Chinese Buddhist pagodas. It not only represents the Buddhist belief and religious culture, but also has rich cultural and aesthetic symbolic significance. They are not only religious buildings, but also cultural heritage and works of art, demonstrating the architectural skills and artistic

level of ancient China, which has had a profound impact on the development of Chinese culture and art.

2.5 The unique features of Zhengding Stupa in Hebei Province

There are four existing pagodas in Zhengding Ancient city, namely: Hua Pagoda of Guanghui Temple, Lingxiao Pagoda of Tianning Temple, Chengling Pagoda of Linji Temple and Xumi Pagoda of Kaiyuan Temple. As an outstanding representative of ancient Chinese Buddhist architecture, Zhengding Stupa has rich architectural artistic characteristics, symbolic significance and regional characteristics. It is famous for its unique architectural style and rich cultural connotation, and is the treasure of ancient Chinese Buddhist architecture.



Figure 16 Positive definite four towers

source of the picture : <https://travel.qunar.com/p-oi7527348-zhengdingsita>

Location: Zhengding Stupa is located in Zhengding County, Hebei Province. Zhengding County is a famous historical and cultural city in China with a long history and rich cultural heritage. As an important cultural heritage of Zhengding County, Zhengding Buddhist Pagoda has a unique value.



Figure 2-16: Positive definite geographical location

source of the picture: Baidu map - positive definite

In the urban planning, cultural squares and antique architectural blocks have been built around the temples, and Zhengding Ancient City has now formed a city image with "four towers" as a spatial symbol. Zhengding is a famous tourist and cultural city with a long history. In history, Zhengding was once known as "three male towns in the North" with Beijing and Baoding. The long history of the ancient city has left many cultural relics of different styles and splendid and pure local cultural relics. There are 12 national and provincial key cultural relic protection units such as Longxing Temple, Linji Temple, Zhao Yun Temple, Chengling Tower, Lingxiao Tower, Huata and Xumita Tower, and 24 municipal and county key cultural relic protection units. (Shao Chunai, 2013)

Architectural style: The architectural style of Zhengding Stupa combines the characteristics of traditional Chinese architecture and Buddhist architecture, forming a unique style. The architectural style of the pagoda reflects the regional characteristics and cultural traditions of Zhengding region. Tianning Temple Lingxiao Pagoda was built in Tang Dynasty, Song, Yuan, Ming and Qing dynasties were overhauled. Because the tower is mostly made of wood, it is commonly known as wooden tower. The nine-story Lingxiao Tower, 41 meters high, still retains the style of the Jin Dynasty. Can be boarded;

Figure 17 Tianning Temple Lingxiao Tower



Linji Temple Chengling Pagoda was built in the Tang Dynasty. Brick imitated wooden structure dense eaves tower. It is now Jin Dynasty architecture style. Ninth floor, 30.047 meters. Yuanwang appearance green, commonly known as green pagoda;



Figure 18 Linji Temple Chengling Pagoda
source of the picture : Author shot

Guanghui Temple pagoda is also known as Huata. Was built in the Tang Dynasty. Jin, Ming, Qing all have repairs. Tower 45 meters high, unique shape, visitors can climb the tower overlooking;

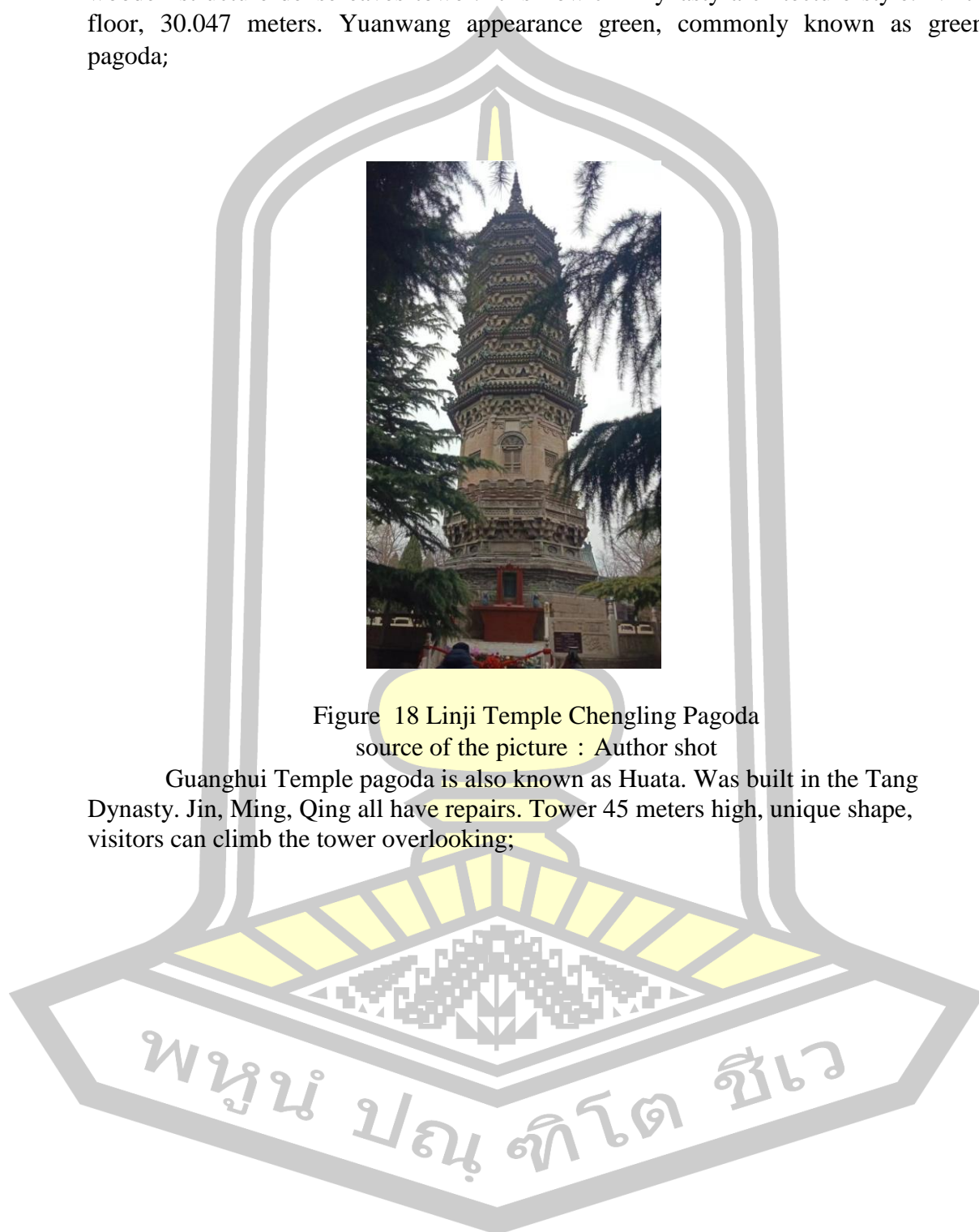




Figure 19 Many pagodas in Guanghui Temple
source of the picture : network

Xumi Pagoda of Kaiyuan Temple was built in the Eastern Wei Dynasty. A brick tower. Square, level nine. Forty-eight meters high. Rebuilt in Tang Dynasty, it still retains the characteristics of Tang Pagoda. Xumita was built in the 10th year of Tang Zhenguan (636), 42.5 meters high, nine-level dense eaves square tower, similar in appearance to the Big Wild Goose Pagoda in Xi 'an, but 16 years earlier than the Big Wild Goose Pagoda.

From the point of view of materials, the four pagodas are all nearby materials, the main body of Huata is made of black brick, the Xumi Pagoda and Chengling Pagoda are made of bricks fired by local clay, and the Lingxiao Pagoda is a mixed structure of brick and wood. The shapes of Zhengding ancient pagodas are different, such as the complex and exquisite Hua Pagoda, the fresh and beautiful Chengling Pagoda, and the tall and tall Lingxiao Pagoda of Tianning Temple, which show the architectural art and modeling style of different historical periods, and reflect the diversity and inheritance of Zhengding history and culture.

Cultural connotation: The cultural connotation of Zhengding Stupa is rich, which is not only a symbol of Buddhist belief, but also reflects the ancient Chinese philosophical thoughts and cultural traditions. The Buddha statues, murals and stone carvings on the pagoda are all important parts of the culture of Zhengding area. Zhengding was an ancient Buddhist town, there are a large number of Buddhist

temples built in the territory, one of the four pagodas Chengling Pagoda belongs to Linji Temple still retains its role.



Figure 20 Xumi Pagoda of Kaiyuan Temple
source of the picture : network

The ancient city of Zhengding in Hebei Province, where Zhengding Stupa is located, has a splendid history and culture, with relics and monuments of different times, most of which are Buddhist buildings, known as "nine floors, four pagodas and eight temples". But after many vicissitudes, most of the ancient buildings have long since disappeared. To this day, Longxing Temple is commonly known as the Big Buddha Temple, Hua Pagoda, Lingxiao Pagoda, Xumi Pagoda, Chengling Pagoda, etc., showing people the outstanding artistic achievements of our skilled craftsmen. Zhengding ancient pagodas, though of different ages, are the products of Buddhism, just like the ancient pagodas of the whole country. (Li Shilian, 1988) Zhengding is a national historical and cultural city with rich cultural relics. Within 6.6 square kilometers of the ancient city, there are 38 cultural relics and monuments such as Longxing Temple and Kaiyuan Temple distributed like pearls, of which there are 10 national cultural protection units and 5 provincial cultural protection units, known as "cultural relics treasure house and tourist resort". Restore the ancient city style, let cultural relics come to life. We should continue to do a good job and uphold the correct concept of protecting the ancient city, that is, effectively protecting its historical and cultural values." At the end of 2019, the Regulations on the Protection

of Zhengding Ancient City of Shijiazhuang was officially implemented, the protection of ancient city has laws to follow, and all 24 ancient city protection projects have been completed with high quality. The historical features of the thousand-year-old ancient county have been effectively restored, and the ancient buildings have achieved spatial perfection in the revitalization, presenting the beautiful scenery of "ancient city, free and positive" everywhere. Climbing the tower, looking at the ancient pagoda, remembering homesickness "has become a reality. Inherit the history and culture, let the culture stand up. The soul of Zhengding is in the ancient city monuments, and the core of the ancient city is in the historical and cultural remains. Relying on these rich historical and cultural resources, Zhengding deeply collates and excavates history and culture, vigorously develops leisure cultural Tours of the ancient city, and creates a core, ten streets, hundreds of homestays, and thousands of shops, so that the memory of the ancient city can be seen and touched, and the history and culture can be felt. In July 2019, Zhengding was selected as the first Top 100 counties of Chinese Culture. (Xue Huijuan, 2010)

The development and cultural background of Zhengding Pagoda can be traced back to the Tang Dynasty. In the long course of history, with the spread of Buddhism, Zhengding gradually formed a pattern of "monasteries and pagodas".

In the Tang Dynasty, Zhengding pagodas began to rise, the most famous of which were the Xumita and Huata of Kaiyuan Temple. Xumi Pagoda, known as Yanta in ancient times, is the earliest of the four towers. It is a nine-storey dense eaves square tower with unique shape. Huata, built in the Tang Dynasty, consists of the main tower and four small hexagonal towers. The top layer of the main tower is the essence of the pagoda. The sculptures have Bodhisattvas, heroes, lions, elephants and other artistic shapes. The fine production and orderly arrangement look like a huge bouquet from a distance, so it is also called "flower tower".

In Song, Liao and Jin dynasties, the flower tower type was really formed. After Yuan Dynasty, the flower tower was on the verge of extinction. There are few existing flower towers in the country, Zhengding flower tower is the most beautifully decorated, the shape is very unique, the famous ancient construction master Mr. Liang Sicheng called it "the only example in the sea", ancient architecture historian Zhang Zhihuan believes that Zhengding Hua Tower is the earliest existing King Kong throne tower in China.

Zhengding Ancient Pagoda has been listed as a national key cultural relic protection unit, the ancient pagoda not only reflects the history of Zhengding ancient City for many years before, but also shows that the country also attaches more and more importance to historical relics and cultural heritage, which is history, but also a symbol of local culture and Chinese culture. The development process and cultural background of Zhengding Pagoda is the product of the exchange and integration of Chinese culture and Buddhist culture, which has profound historical and cultural.

Chapter III : Analysis and research on the integration of Chinese traditional culture and electronic game culture

3.1 Analysis of the origin and development of electronic games

As a global characteristic cultural language and a new cultural carrier, game art has the internal driving force of shared development, and shoulders the mission and responsibility of "deepening exchanges and mutual learning between Chinese and foreign civilizations and building a cultural community".

The development of electronic games is closely related to the progress of computer technology. In the second half of the 20th century, the rapid development of computer technology provided the basis for the rise of video games. At the same time, with the progress of technology and the popularization of the Internet, the globalization of human beings has been promoted, and the exchanges between different countries and cultures have become increasingly frequent. As a universal form of entertainment, electronic games transcend national borders and cultural differences and become people's common cultural entertainment experience. In this context, the world of video games has gone through three key periods: origin and early development (1950s to 1970s); The Golden Age (1980s-1990s); The Internet era (about the 21st century to the present). Video games have evolved from 2D games to 2.5 D and 3D games.

3.1.1 Analysis of the origin and development status of world electronic games

In 1904, the British physicist Fleming invented the first electron tube, which opened the prelude to the electronic age. Video games began to appear in the 1950s. 1958 The world's first video game, TennisforTwo, was created by physicist Dr. WilliamHiginbotham, who helped develop the world's first atomic bomb. It was a game that allowed people to play tennis on an oscilloscope. For the entertainment of visitors to Brookhaven National Laboratory⁹ in New York.It is also the world's first interactive game. Due to technical limitations, game development is mainly conducted by academics and researchers, and these games are also more experimental in nature and not intended for commercial purposes.

⁹ Brookhaven National Laboratory (BNL) is located in central Suffolk County, Long Island, New York, United States, under the United States Department of Energy, by the State University of New York at Stony Brook and BATTELLE established the company Brookhaven Science Society is responsible for management .



Figure 21 The world's first video game, TennisforTwo, was played on DuMontLab's Model 304-A oscilloscope

source of the picture : <https://www.bilibili.com/read/cv16168833>

In 1972, the American gaming company Atari introduced the first home video game console, AtariPong, a game that simulated table tennis matches and achieved great success. The success of AtariPong triggered a boom in the video game market, various home game consoles came out one after another, video games began to enter the public vision, and video games began to develop.

The Golden Age of video games in the world (1980s - early 2000s)

Video games really took off in the 1980s, with the rise of video game consoles. There are a lot of classic games, but also the achievement of a lot of game companies, the most epoch-making work is, Namgong Dream company (Atari) launched the first arcade game "Pac-Man", which is a maze game, arcade began to appear in the public vision. Subsequently, in 1985, Nintendo launched the home game console FC (FamilyComputer), and launched a series of classic games such as Super Mario Brothers, making video games popular.

In the 1990s, with the continuous advancement of computer technology, 3D graphics technology began to be applied to the field of video games. In 1993, idSoftware released the landmark first 3D first-person shooter, Doom, which set the stage for subsequent 3D games. In addition, a role-playing game (RPG) is a type of game in which the player takes on the Role of a character. The player usually has to take on the role of one or more characters and explore, interact, complete tasks, and achieve goals¹⁰ in a virtual world. Also began to rise.

Online game era (early 21st century to present)

The 2000s is the Internet era of the development of electronic games, and the popularity of the Internet makes online games begin to rise. In 2001, NCSoft, Korea's first multiplayer online game, Paradise, created a new cultural phenomenon and attracted the world's attention.

¹⁰ A role-playing game (RPG) is a type of game in which the player plays a Role. Players typically take on one or more roles and explore, interact, complete quests and achieve goals in a virtual world.

The era of online games has opened a new cultural phenomenon of games. Players can engage in virtual social interaction and social interaction through online games, which can be said to be a virtual world, through which players can experience the regional culture in the game and can include the customs, traditional celebrations and rituals of a specific region. At the same time, the game may reflect that one or even some games may contain elements of a particular region's religion and beliefs, including myths and legends, gods, shrines, and religious rituals. Regional food and gastronomic culture, including cooking methods, specialty dishes and eating habits. The era of online gaming has changed the status of gaming, not just as an entertainment activity, but as a cultural phenomenon, affecting society, the media, the arts and the entertainment industry. These new cultural phenomena have also led to profound discussions about game culture, addiction and education.

At the same time with the development of virtual reality technology, electronic games will also enter a new era. Video games in general have evolved over the past few decades from simple lines of graphics to stunning, realistic 3D graphics that continue to give us new gameplay and experiences. World culture is also spread through games.

3.1.2 The change of video games from two to three dimensions

In video games, 2D games, 2.5D games and 3D games are three kinds of games with different dimensions. Below I will explain the features and differences of these three games in more detail.

2D games, also known as two-dimensional games or flat games, are one of the earliest forms of video games. In such games, all graphics and animation are made up of pixels or two-dimensional images, which are usually static or simply dynamic through animation techniques. They are displayed on a flat surface. Players can only move and operate on the plane, and the perspective is fixed, unable to observe and explore the full range. 2D games often have simple graphics, but can be highly expressive in terms of art and story. For example, classic games such as Super Mario and Tetris are examples of 2D games.

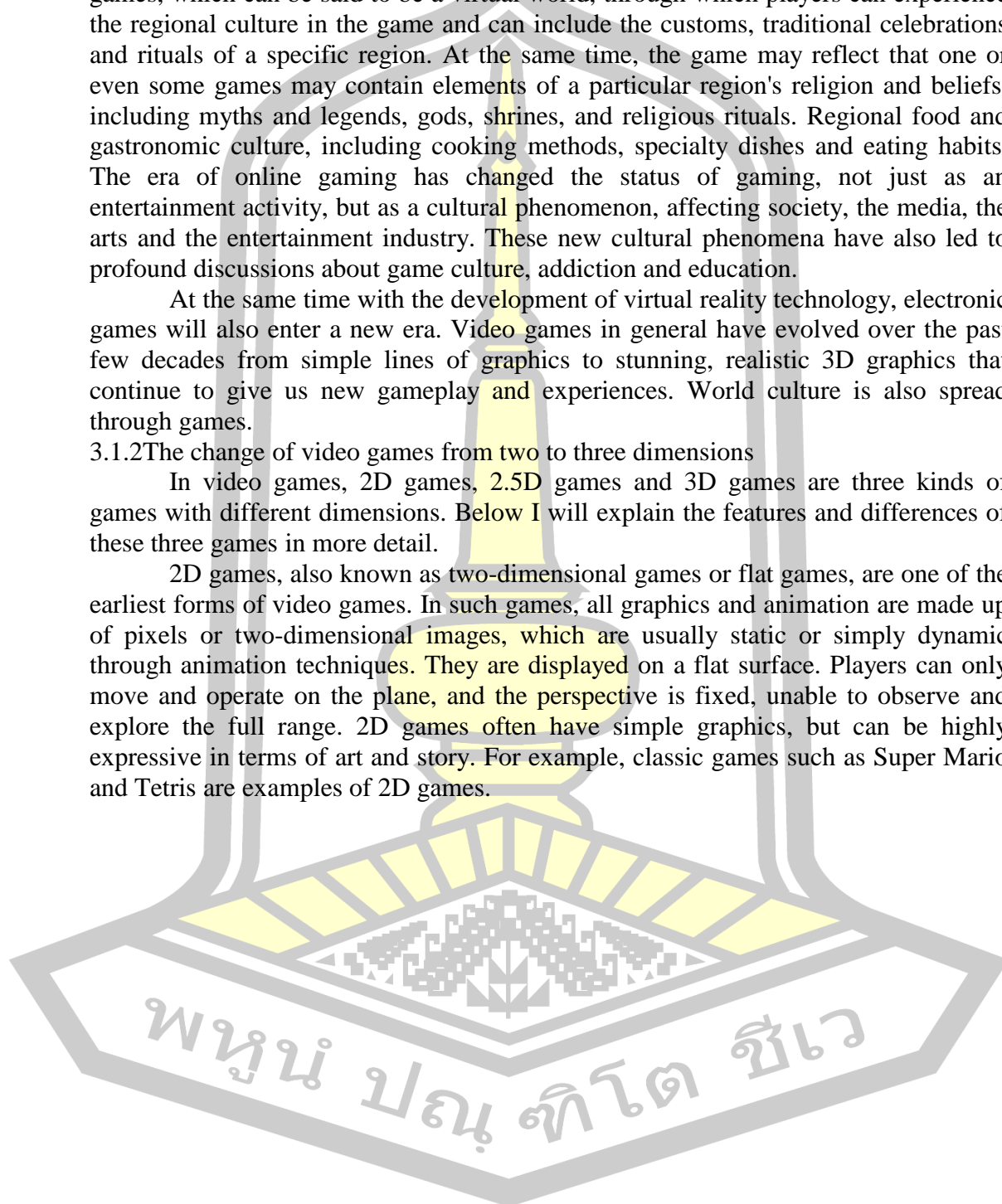




Figure 23 Game 《Starbound》

source of the picture : Game screenshot

Graphic art style: refers to the lack of depth and volume, ignoring physical correctness, and creating a visual sense of volume through layer stacking. Games such as Picnic Adventure and Aalto's Odyssey are in this style. This style can compress the information of the pagoda in the three-dimensional Angle, and for the players who come into contact with the pagoda elements for the first time, it can allow the players to absorb the information of the pagoda in a streamlined and efficient manner.



Figure 24 The game 《Aalto's Odyssey》

source of the picture : Game screenshot

Freehand style: pay more attention to detail presentation, as the name suggests, by computer freehand drawing or artist freehand after scanning, it is different from other drawing styles, with more realism and temperature. Games such as Cuphead and Hollow Rider use this style.



Figure 25 A screenshot of the game Cuphead
source of the picture : Game screenshot

2.5D games, also known as semi-3D games or fake 3D games, are a type of game that falls between 2D and 3D. It uses 2D graphics, but uses a few techniques to create a sense of depth and depth. It's a transitional phase in the evolution of video games. In this game, although the player can move and manipulate in three-dimensional space, the game's graphics and animations are still based on two-dimensional images. In other words, the perspective of the game can be rotated and moved, but the player can only observe one face or Angle of the object, and cannot observe and explore in all directions. Such games are technically more advanced than 2D games, but still lack true three-dimensional effects. This approach can increase the visual effects and realism of the game to a certain extent, while still keeping development costs relatively low. Some famous 2.5D games include Super Metroid, Super Guild Dreams, etc.

Compared with 3D games, 2.5D games have lower development costs and can be launched to the market faster. At the same time, in terms of screen performance, the structure and details of the pagoda may be more concise and clear, and it is easier for players to accept. However, in terms of three-dimensional and realistic sense, it may not be as immersive as three-dimensional games, and it can not fully show the full picture and complex structure of the pagoda.



Figure 26 Screenshot of the Super Guild Dreams game
source of the picture : Game screenshot

3D games, also known as 3D games or stereoscopic games, are one of the newest forms of video games. In this kind of game, all graphics and animations are composed of three-dimensional models, players can freely move and operate in three-dimensional space, and observe and explore the game world in an all-round way. 3D games are often more realistic, allowing for complex light and shadow effects and physics simulations. Players can experience a more immersive feeling in 3D games. Many famous 3D games include Grand Theft Auto, The Legend of Zelda and others.

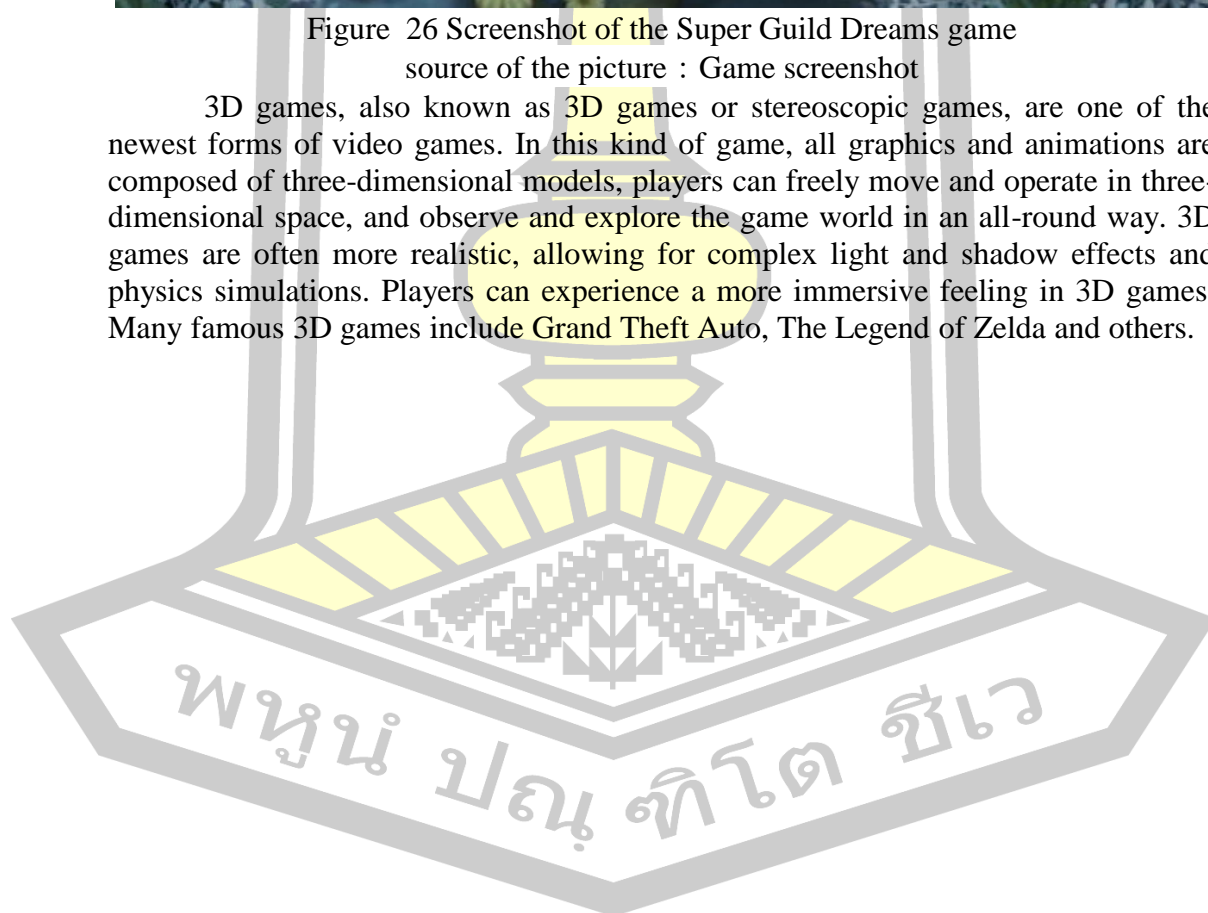




Figure 27 The Legend of Zelda
source of the picture : The Legend of Zelda: Breath of the Wild

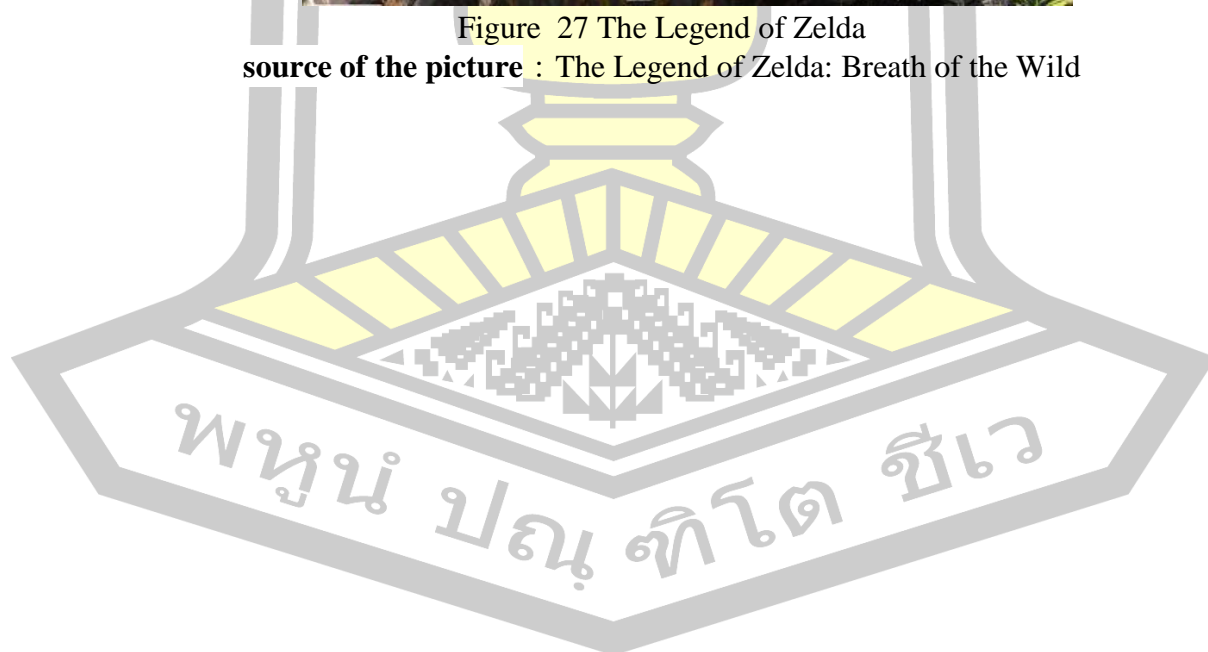




Figure 28 Part of the exhibition hall of the 19th ChinaJoy¹¹

source of the picture : <https://www.chinajoy.net/>

In terms of spreading elements of the stupa and the related culture behind it, 3D games have more freedom, and there are fewer restrictions on the graphic styles and types of games that can be used. There are several ways to set up the game:

Scene design: Carefully design the game scene to show the appearance, internal structure and surrounding environment of the pagoda, so that players can feel the majesty and beauty of the pagoda in the game. **Plot:** Write a plot related to the pagoda culture to convey the history, significance and value of the pagoda through missions and plots. **Character interaction:** Design characters that relate to stupa culture

¹¹ China International Digital Interactive Entertainment Exhibition (ChinaJoy) is a comprehensive international digital entertainment industry event co-directed by the National Press and Publication Administration and Shanghai Municipal People's Government, sponsored by China Audiovisual and Digital Publishing Association and Shanghai Hanwei Xinheng Exhibition Co., LTD., and co-organized by Shanghai Municipal Press and Publication Administration and Pudong New Area People's Government. As one of the most well-known and influential annual events in the field of global digital entertainment, ChinaJoy covers many fields of digital entertainment such as games, animation, Internet film and television, Internet music, Internet literature, e-sports, fashion toys, intelligent entertainment software and hardware, presenting a panoramic view of the development of digital entertainment industry driven by new technology. A comprehensive presentation of the latest developments in the global digital entertainment industry. The 21st ChinaJoy 2024 will be held at the Shanghai New International Expo Center from July 26 to July 29. The exhibition organizer will continue to strengthen the positioning of the exhibition with games as the core, further upgrade the functions of the exhibition, and attract more core users of the game to visit the exhibition through a series of measures. 2024 ChinaJoy has officially announced the main vision of the exhibition and the new exhibition slogan: The original heart "tour" in, wonderful! (English translation: Stay True, Game On.)

and allow players to interact with them and learn about different aspects of stupa culture. Puzzle elements: Add puzzle elements, such as interpreting Buddhist scriptures, searching for treasures in the pagoda, etc., so that players can learn and understand the pagoda culture during the puzzle process. Educational content: Set up informative content in the game, introduce the construction process of the pagoda, Buddhist teachings, etc., and spread the pagoda culture in an educational way. Social interaction: Build a game community where players can communicate and share their understanding and experience of stupa culture. Cooperation and authorization: Cooperate with relevant Buddhist institutions and stupa management departments to obtain authorization and professional guidance to ensure the accuracy of cultural dissemination.



Figure 29 24 China (Shenzhen) International E-Sports Exhibition site

source of the picture : <https://www.chinajoy.net/>

พหุ มั ญ ทั ต ชี เ ว



Figure 30 24 China (Shenzhen) International E-Sports Exhibition site

source of the picture : <https://www.chinajoy.net/>

2D games, 2.5D games and 3D games are three different dimensions of video games. They are different in graphical performance, operation mode and game experience, each with its own unique charm and fun. As technology continues to evolve, the lines between 2D, 2.5D and 3D games are becoming increasingly blurred. Some games may combine different technologies to create a unique gaming experience.

3.1.3 Analysis of the origin and development status of Chinese electronic games

The beginning of gaming in China can be traced back to the late 1980s, when Nintendo launched the first generation of home consoles. However, at that time, China was in a period of prosperity, people's living standards were low, and everyone's energy was focused on solving life problems and finding economic opportunities, so the game did not arouse much reaction in China. But a few clever businessmen grasped the moment and hacked game cartridges and consoles to create inexpensive compatible machines. In the early 90s, a large number of red and white machines entered the market, which allowed the game to spread and become popular more widely. Most of these compatible machines are hand-assembled in small workshops, although the performance is not as good as the original, but the price is cheap, so that more players can touch and experience the game. During this period, Chinese games were mainly introduced and imitated, and most of the games were 2D plane games.

During this period, China's electronic games have been developed, in addition to the breakthrough of electronic game consoles, there is also a fundamental reason for the popularity of television and the emergence of a large number of arcade games, providing the necessary platform for the development of games, the formation of single-player games based on home TV games or arcade games. At the same time, at the Third Plenary Session of the 11th Central Committee in December 1978, China began to implement the policy of internal reform and opening up to the outside world. People's living standards have also been significantly improved, and the improvement

of living standards has also provided the necessary conditions for the development of electronic games, and these early game consoles and arcades have laid the foundation for the development of China's game industry in the future.

In 1996, China's first computer room "Weigate" was born in Shanghai, since then the Internet cafe industry began to rise rapidly, more and more Internet cafes mushroomed. In 2000,¹²In the flourishing period of Internet cafes, with the gradual popularization of the Internet, more and more games were online. In 2001, Shanda Company achieved great success with the "Legend" public test, and China's online games really kicked off. Legend pioneered multiplayer online role-playing games (MMORPGs) and quickly swept the country. The success of this game not only promoted the development of China's online game industry, but also influenced the development of many later games. Many later games borrowed features and gameplay from Legend, such as massively multiplayer online role-playing games (MMORPGs), leveling systems, combat mechanics, and more. The emergence of Legend in Chinese video games has influenced the development direction and future prospects of the entire game industry. Then in 2003, NetEase launched the self-developed role-playing game "Fantasy Westward Journey", which also achieved good results. Games in this period were dominated by 2.5D games.

In 2005, Blizzard's¹³ "World of Warcraft" was launched in the Chinese market, and quickly won the love of the vast number of players. This game not only has a very high quality in terms of screen performance and game content, but also its unique game world view and rich character Settings have attracted many players. In addition, the PVP mechanism and teamwork in the game also became a new trend in the Chinese online game market at that time, which had a profound impact on the development of 3D online games later.

¹² Internet Cafe (standard English name: Internet Cafe or Internet Bar) is a for-profit place that is open to the public and provides Internet access services

¹³ Blizzard: Blizzard Entertainment is an independent division and brand of Activision Blizzard Inc., an American video game developer, publisher and distributor, founded on February 8, 1991. Founded by three UCLA graduates Michael Morhaime, Allen Adham, and Frank Pearce under the name Silicon&Synapse, Has launched the Warcraft series, Starcraft series, Diablo series, World of Warcraft, Hearthstone, Heroes of the Storm and Overwatch and other game series, these games are included in several esports competitions



Figure 31 World of Warcraft
source of the picture : freep.cn

As a renowned game development company, Blizzard has always been a benchmark in the industry for the quality of its products and innovative thinking. Blizzard's success lies not only in the excellent quality of its products, but also in its keen insight and accurate grasp of the game market. As an epoch-making online game, the success of World of Warcraft has not only promoted the development of China's online game market, but also affected the global online game market. The game reconstructs the game worldview and gameplay mechanics, and is considered to be a revolution in online gaming. At the same time, it also opened the prelude of 3D online games in China. China is one of the world's largest gaming markets. China's gaming market is huge and covers a wide range of game genres, from mobile games to PC games to console games. This huge market has attracted domestic and foreign game developers and investors.

The release of the iPhone in 2007 not only brought innovation to the mobile phone market, but also opened the curtain of smart phones. With the popularity of smart phones and the emergence of tablet computers, mobile games have entered a new stage, and players can play games anytime and anywhere. At the same time, with the continuous improvement of hardware, these mobile devices have larger screens, higher resolutions, more powerful processors and more memory, can run more complex and diverse games, mobile games have become a major part of the mobile application market, attracting a large number of developers and investors.



Figure 32 Player using Switch,
source of the picture : network

To sum up, the development of electronic games is the result of the progress of electronic technology, the progress of computer hardware provides the foundation for the development of electronic games, the progress of software technology also provides support for the development of electronic games, and the progress of network communication technology has also brought changes to the development of electronic games.

3.2 National strategy in the development of online games in China

3.2.1 The development of Chinese video games

Compared with the development process of the world's electronic games, China's game industry started relatively late, which has technical problems and economic development reasons. In the whole development process, Chinese electronic games have experienced the exploration process from early introduction, to imitation learning, and then to independent research and development. At the same time, with the continuous update of technology and the progress of The Times, the carrier of video games has also undergone a lot of changes, and more possibilities have emerged in video games.



Figure 33 History of Chinese video games

source of the picture : Author design

Introduction of the game stage (1980s-1990s)

In the late 1980s, Nintendo launched the first generation of home game consoles into China, and in the 1990s, arcade games also became another main body of video games. During this period, with the development of China's economy and the popularity of television, the formation of single-player games dominated by family video games and arcade games. The game style is dominated by 2D games, and the game types are relatively simple. Due to the economic and technical limitations, this is the period of Chinese video games are mainly introduced, the original game is almost zero. During this period, China's electronic game industry was in its infancy with relatively low technical level and market scale, but it also laid the foundation for the development of China's electronic game industry and laid a certain foundation for its later development.

Video Game Learning Stage (2001-2007)

In 2001, Shanda Company achieved great success with the "Legend" public test, and China's online games really kicked off. Then in 2003, NetEase launched the self-developed role-playing game "Fantasy Westward Journey", which also achieved good results. Chinese electronic games have also shifted from the introduction to the stage of learning and self-research. The rise of domestic online games has not only enriched the Chinese game market, but also promoted the development of China's game industry. Most of the online games in this period are based on 2.5D style, and 2.5D games have also become the mainstream games in this period. At the same time, the game mode began to diversify away from the traditional role-playing games. Different types of games such as competitive games, casual games, and simulated business games began to emerge to meet the needs of different players. But in 2005, World of Warcraft redefined the standard for massively multiplayer online role-playing games and became the leader of its kind. Its 3D game production, engaging gaming experience, vast game world, rich content, and highly social interaction have attracted a large number of players. "World of Warcraft" is an innovation in online games, but also opened the prelude to 3D online games in China.

Stage of Diversified development of Chinese video Games (2007-present)

In 2007, the release of the iPhone not only brought innovation to the mobile phone market, but also opened the curtain of smart phones. With the popularity of smart phones, time fragmentation, people sit in front of the computer to play games gradually less, and the emergence of mobile games to solve this problem, you can play games anytime and anywhere. Market resources are gradually tilted to the mobile game industry. With the rapid improvement of mobile phone hardware, more

possibilities are provided for different types of games, and mobile games usher in an era of vigorous development. Chinese game enterprises have made great progress in technology research and development and innovation capabilities, and continue to launch games with independent intellectual property rights. Some Chinese game companies are starting to make their mark on a global scale, and their titles are also gaining influence in the international market.

At the same time, in order to meet the diversified game needs of players, more and more games began to support cross-platform, including PC, console and mobile platforms. This trend facilitates communication and interaction between different platforms and enriches the gaming experience for players. At the same time, with the development of virtual reality technology, VR/HR games have become a new trend, and the shadow of video games can be seen under any technology, and all Chinese video games have developed. The game is also based on different types, style is no longer limited, each type of style has a different group of players, video games appear 2D, 2.5D, 3D coexist situation.

Now, China has become the world's largest game market, China's game industry in the past decades of development has experienced from imitation to original, from PC to mobile, from domestic to global transformation, has become an important force in the global game industry.

3.2.2 National strategy in the development of Chinese electronic games

As one of the important carriers of cultural dissemination, electronic games have unique advantages in the process of spreading traditional Chinese culture due to their entertainment, penetration, socialization, and immersive experience. (Xiong Meifang, June 2021)

According to the game output report released by the Game Working Committee of the China Music and Digital Association and the China Game Industry Research Institute, the 2003 China Game Industry Report was the first Chinese game industry report in history. It was jointly produced by the Game Working Committee and IDC, and after more than two months of information collection, 180000 valid samples were compiled. According to the report, China's online game market grew by 45.8% in 2003, reaching 1.32 billion yuan, and is expected to reach 6.7 billion yuan by 2007. In 2004, the market size was 2.47 billion yuan. In this report, the market analysis section of China's online game publishing market predicted that the sales revenue of China's online game publishing market would reach 10.96 billion yuan in 2009, but in reality, the sales revenue of China's online game market had reached 25.62 billion yuan in 2009, more than twice the forecast of that year; 2005 -- market size 3.77 billion yuan; In 2006, the market size was 6.54 billion yuan; 2007 - The market size of 10.57 billion yuan, the original national online game market actual sales revenue of 6.88 billion yuan. 2008 -- The market size of 18.38 billion yuan, China Mobile accepted the first batch of mobile online game network operation application, 2009 -- the market size of 25.62 billion yuan, "Fantasy Westward Journey" the highest number of simultaneous online 2.56 million; In 2010, the market size was 32.37 billion yuan, and the General Administration of Press and Publication issued the Notice on Promoting the Healthy Development of Online Publication Distribution. 2011 -- The market size of 44.61 billion yuan, China's first FPS military game "Glorious Mission" successfully developed; 2012 -- The market size of 60.28 billion yuan, China's software copyright registration exceeded 100,000 for the first

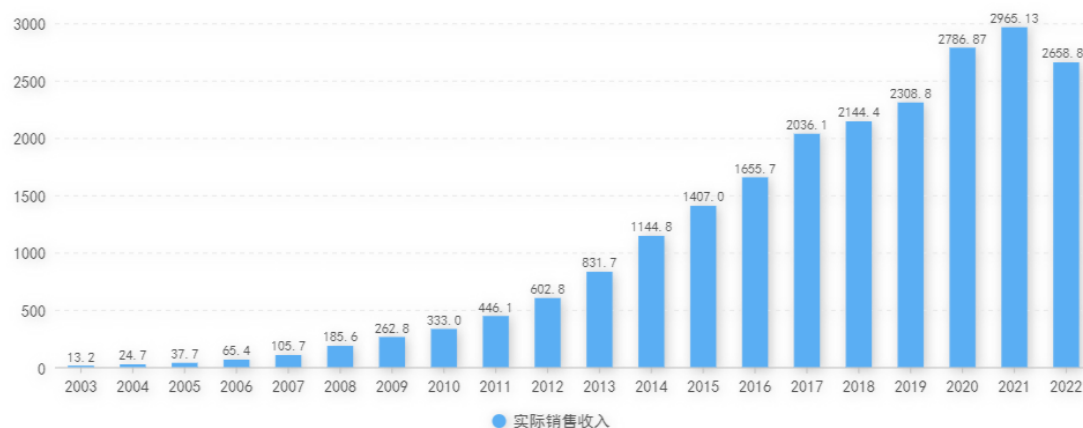
time; In 2013, the market size was 83.17 billion yuan; 2014 -- The market size of 114.48 billion yuan, the Ministry of Finance introduced a new policy, animation software exports exempt from value-added tax; 2015 - The market size of 140.7 billion yuan, "Dream Westward Journey" mobile version officially launched; Tencent Games launched "Moonlight Knife"; NetEase game launched "Oracle"; The founding meeting of the Game Working Committee of China Audio and Digital Association was held in Beijing International Convention Center; 2016 - The market size of 165.57 billion yuan, the "Online Publishing Service Management Regulations" was officially released; The General Office of the State Administration of Press, Publication, Radio, Film and Television issued the Notice on the Management of Mobile Game Publishing Services; E-sports and management are among the 13 new majors announced by the Ministry of Education. In 2017, the market size was 203.61 billion yuan, in 2018, the market size was 214.44 billion yuan, the Notice of Important Matters of Game Application and Approval was released, and the approval of game plate number was suspended; Games such as "League of Legends" and "King of Glory" have been selected as performance events of the 18th Asian Games. In 2019, the market size was 230.88 billion yuan; 2020 - The market size of 278.687 billion yuan; 2021 -- the market size of 278.687 billion yuan; In 2022, the market size is 265.884 billion yuan. Affected by the epidemic, the actual sales revenue of China's online game market in 2022 is 265.884 billion yuan, down 10.33% year-on-year, including 61.373 billion yuan of client online games, 5.288 billion yuan of web games, and 34.438 billion yuan of casual mobile games. In addition, the mobile game market sales revenue of 193.058 billion yuan, down 14.40% year-on-year, which is the first decline in China's mobile game market since 2014. In the first half of 2023, the scale of game users in China was 668 million, an increase of 0.35% over the same period last year, reaching a record high, and the actual sales revenue of the market was 144.263 billion yuan.

After 20 years, from console games to Internet games to mobile Internet games, Chinese games have achieved rapid development, and the market revenue scale has expanded from 1.32 billion in that year to 265.884 billion in 2022. Today, digital technology represented by artificial intelligence, cloud computing and virtual reality technology has ushered in a period of rapid development, announcing the arrival of new changes, the game or will usher in another revolution, and the game, the closest product to the user, will also promote the iterative upgrade of technology. With the increasing market value of the digital game industry, people have objectively re-examined the meaning and value of video games. While paying attention to the entertainment value of games, they also pay more and more attention to the cultural attributes of games, so the game industry has also received attention and support from all levels.

Table 1 China Game Production Value Report

2003–2022年中国游戏行业产值

单位：亿元



source of the picture : China Audio and Digital Association Game Working Committee, China Game Industry Research Institute

According to the official website of the Ministry of Culture and Tourism of the People's Republic of China,¹⁴ there are 12,346 articles and documents related to games, including 215 policy documents. Before July 2005, the documents mainly focused on the management and monitoring of electronic games. There are illegal and unhealthy contents in online game products such as obscenity, pornography, gambling, violence, superstition, illegal trading for money and endangering national security. Infringement of intellectual property rights and disruption of market order; Protection of minors, etc.

However, from July 12, 2005, the Ministry of Culture and the Ministry of Information Industry on the development and management of online games, the document mentioned for the first time: building an industrial support system. As an important part of the software industry, the electronic information industry development fund should increase its support, and as the guiding fund of the game industry, focus on the development of the core technology of the R & D and production of online games. Further implement The State Council's "Several policies on Encouraging the development of the Software industry and integrated Circuit Industry" (Guofa [2000] No. 18) and "Action Outline for Revitalizing the Software Industry" (Guofa [2002] No. 47) and other software industry policies. Actively encourage, guide and support domestic software developers, network operators, content providers and other enterprises to develop and promote online game products

¹⁴ The Ministry of Culture and Tourism, PRC was established in accordance with the Decision of the CPC Central Committee on Deepening the Reform of Party and State Institutions adopted at the Third Plenary Session of the 19th CPC Central Committee, the Plan for Deepening the Reform of Party and State Institutions, and the Plan for Institutional Reform of The State Council approved at the first session of the 13th National People's Congress.

The Ministry of Culture and Tourism is a ministry under The State Council.

that carry forward the national spirit, reflect the characteristics of The Times, and have independent intellectual property rights, so as to form a number of national game products with Chinese historical and cultural connotation, cohesion of national spirit and emotion. Strive to occupy the dominant position in the domestic market in about 3 years, and further develop and occupy the international market. At the beginning of this year, the national level began to pay attention to the game culture and began to upgrade the digital culture strategy.

On this basis, actively train online game planning personnel, research and development personnel and marketing management personnel. Promote game vocational training, improve the cultivation of talents in society, and actively encourage game enterprises to run schools independently or jointly with colleges and universities to train talents. At the same time, we actively cultivate incubators for the online game industry. In places with good conditions for the development of cultural industries, relying on high-tech industrial parks and software industrial parks, we will gather relevant enterprises and research institutes in the game industry chain to build a number of national digital entertainment industry demonstration bases. It mainly carries out training, research and development, industry incubation and international cooperation in the animation game industry, making it the incubator of China's online game industry. Focus on the research and development of online game core technology with independent intellectual property rights, the construction of China's independent game software reusable component database, as soon as possible to establish China's game software script, component library and other industrialization of the technical foundation, vigorously support the development of small and medium-sized enterprises.

2007-08-06 The Ministry of Culture recently issued the "Medium and Long-term Development Plan for Cultural Standardization (2007-2020)", which has made a comprehensive deployment and arrangement for the standardization construction in the cultural field. This is the first cultural standardization development plan issued by China's cultural field.

On August 13, 2008, the Ministry of Culture issued several opinions on supporting the development of China's animation Industry, which pointed out that it is necessary to run professional exhibitions such as China International Animation and Game Expo, and build a display platform for national original animation products to go to the world. As a new way of cultural transmission, animation and games are increasingly valued by the state.

On March 26, 2009, the Notice of the General Office of the Ministry of Culture on Matters relating to the application of the Export-Import Bank of China's "Support and Cultivation of Key cultural Export Enterprises and Key project Loans" was approved for export cultural enterprises, cultural products and service projects that meet the support conditions of the Export-Import Bank and involve commercial performances, art exhibitions, animation games, audio and video, entertainment, arts and crafts, Musical Instruments, etc Line support.

On September 23, 2011, the Cultural Marketing Department of the Ministry of Culture sponsored the first online game review essay selection activity. In the first online game review essay selection program, it is pointed out that online game, as a new category of cultural products, has been widely concerned by the society. How to scientifically understand and evaluate the cultural value of online game products,

strengthen academic guidance and supervision by public opinion, needs the participation of all aspects of society. Therefore, it is necessary to set up a team specializing in game culture review on the basis of the existing game product content evaluation research results, and build a theoretical system of game culture review. Domestic experts and scholars in the field of culture and art research should carry out theoretical construction of game culture, and regularly and continuously review the existing game products on the market through specific media release platforms. Explore the advantages and disadvantages of online game culture, explore the excellent content of online game culture, regulate online game business behavior, let more people know about online game and online game culture, and promote the healthy, green and sustainable development of online game. The national level began to pay attention to the construction of game culture.

On March 17, 2014, the Ministry of Culture issued the implementation opinions on implementing the "Several Opinions of The State Council on Promoting the Integrated Development of Cultural Creativity and Design Services and Related Industries", proposing to improve the cultural connotation of game products, cultivate well-known brands of domestic games, and enhance the core competitiveness and international influence of the game industry. Strengthen the standardized management of online games, and actively guide the industry and enterprise self-discipline. We will hold the China International Animation and Game Expo well, and build the most influential professional and international animation and game exhibition and trading platform.

On April 27, 2016, the "Notice of the Department of Cultural Industry of the Ministry of Culture on the enrollment of 2016 National Original Animation Senior Training Class (Digital Creative direction)" Animation games began to conduct professional training, and from then on, the game project entered the annual training project organized by the state. On November 14, 2016, "Ten Questions for the 2017 National Art Fund Art Talent Training Funding Project" Game creative talent became a National Art Fund funded project. From this year on, the state funded the game project every year. On December 28, 2016, the Ministry of Culture issued the notice of the Ministry of Culture's "One Belt and One Road" Cultural Development Action Plan (2016-2020), and the game became the "Internet + Chinese civilization" and "Cultural relics take you to see China" projects of the "One Belt and One Road".

On April 20, 2017, the Ministry of Culture clarified the value of the game industry in the notice on the issuance of the "Cultural Industry Development Plan of the Ministry of Culture during the 13th Five-Year Plan Period". Planning documents pointed out that by 2020, it is expected that the game industry market size will reach 300 billion yuan, cultivate a number of backbone game enterprises with strong brand influence and international competitiveness, and create and produce a number of healthy content and rich national characteristics of the game quality.

On April 12, 2019, the General Office of the Ministry of Culture and Tourism and seven other units on the 2019 National Preferred cultural and Tourism investment and Financing project recommendation Selection Work; Notice of the General Office of the Ministry of Culture and Tourism on Coordinating the Prevention and Control of the Epidemic in Rural Tourism and Accelerating the Market Recovery on July 17, 2020; Opinions of the Ministry of Culture and Tourism on Promoting the high-quality Development of the digital Cultural Industry on November 18, 2020; In October 2021,

the Ministry of Commerce¹⁵ and 24 other departments issued the "14th Five-Year Plan for the Development of Service Trade", proposing to "actively support the trade of digital products and create a good environment for digital products to go global"; On March 21, 2022, the Opinions of the Ministry of Culture and Tourism, Ministry of Education, Natural Resources, Ministry of Agriculture and Rural Affairs, National Rural Revitalization Bureau, National Development Bank on Promoting the empowerment of Cultural Industries and Rural Revitalization will be related to the deployment of a new communication of games, games as digital cultural empowerment. Create and disseminate digital cultural products showing rural characteristic culture, folk skills, local style, pastoral scenery, production and life, and plan and develop offline immersive experience projects to promote rural culture dissemination, display and consumption. In 2023, the People's Daily of China reported on "How the game industry does a good job of going to sea with Chinese characteristics", which further affirmed the game culture and encouraged excellent traditional cultural products and digital cultural products such as movies and TV dramas and games to "go out".

In general, in the post-epidemic era, games, as an important part of digital culture, have widely entered the public's vision, and the explosive "circle" of a number of phenomenon games coupled with the joint name of other industry products also indicates the huge social influence and economic benefits brought by the game industry. Behind the relevant national policy support, the country shows the broad prospects for digital cultural products, but also shows the cultural confidence behind it.

3.3 Analysis on the application and integration of Chinese traditional culture in electronic games

3.3.1 Application status of Chinese traditional culture in electronic games

The application of traditional Chinese culture in video games is becoming more and more extensive, which has become a trend. More and more game companies have begun to incorporate traditional Chinese cultural elements into their games in order to attract more players and improve the appeal of games.

Take Honor of Kings as an example. The popular mobile game incorporates many elements of traditional Chinese culture, such as character design, costumes and props, and backstory that reflect Chinese history and culture. At the same time, the music, pictures and plot of the game also fully demonstrate the charm of Chinese culture, helping players better understand and appreciate traditional culture. In addition, some online games also through the way of "culture + technology", innovative play with many traditional cultural characteristics, such as the introduction of the traditional Chinese "five elements" thought, through the five elements of gold, wood, water, fire, earth to design roles and scenes, so that players in the game to experience the wisdom and charm of traditional Chinese culture. In From "Electronic Heroism" to "Chinese Creation" : The Discourse Changes of Game Reporting in

¹⁵ Ministry of Commerce: The Ministry of Commerce of the People's Republic of China is a department of The State Council in charge of China's domestic and foreign trade and international economic cooperation. It undertakes the important responsibility of formulating and implementing China's domestic and foreign economic and trade policies and promoting greater opening up.

People's Daily (1981-2017), the authors He Wei and Cao Shule analyze the discourse from three aspects: text, discourse practice, and sociocultural practice, and discuss the interaction between reporting text and sociocultural practice according to four historical periods. It also discusses the ideological changes behind the change of game reporting discourse. The author proposes that the source of signifier and signified of key words in game reporting changing in different times is related to the online media of game media technology, product form and social application in different periods, and it is also the discourse construction behavior of various discourse producers to conceptualize reality. Nowadays, in People's Daily's game report, the change of discourse such as the dominant framework and the image of game players reflects the change of social cognition and even artistic form of digital games in China.

However, there are some problems with using traditional culture in games. Some game developers pursue commercial interests too much, resulting in the introduction of cultural elements too blunt or shallow; At the same time, due to cultural differences and moral and ethical issues, some players have limited understanding and acceptance of traditional cultural elements.

Despite some problems, the application of traditional Chinese culture in video games still has great potential and room for development. Game companies should better integrate traditional cultural elements into game design, improve the cultural connotation and artistic value of games, and pay attention to the experience and feelings of players, so as to create more popular and influential game works. In the Analysis of Key Points of Game Character Original Drawing Design, the author Li Bocheng believes that excellent game character design can not only meet the needs of different types and styles of players, but also convey the core of culture. As a game designer, in the process of designing game character modeling, he can learn from various aspects and absorb cultural connotations for in-depth research. Excavate and carry forward the local traditional cultural elements of the nation, improve the player's appreciation ability.

In the Discourse Analysis of People's Daily's Video Game Report (1989-2019), the author He Pengpeng proposed that under the background of the information age, people's cognition of things is profoundly influenced by the information environment shaped by mass media. The main functions of video game reporting are identity construction, image construction and cognitive construction. The author believes that mainstream media or mass media should be impartial when reporting on "video games".

The author Li Xueying proposed in the article "Research on the Change of Female Roles in Electronic Games from the Perspective of Communication Studies: A Case Study of Chinese and foreign role-playing electronic Games from 1980s to Now" : In the game, the aesthetic concepts of female characters are mostly stereotyped, gender attributes are strong, and the early female game characters are mostly sexualized or even pornographic. Today, although there are some more balanced female characters, the role of "playing the edge" is still common. There are fewer women working in the game industry than men, and female employees in game companies have less say.

In the book Research on the Application of Traditional Chinese Visual Elements in the Interface Design of Online Games, Chen Yi (2012) mainly studied and analyzed the characteristics and rich connotations of traditional visual elements,

and interpreted the application and design methods of traditional Chinese visual elements in game interfaces based on the actual operation experience of games and cross-research with related disciplines. The four characteristics of association, metaphor, abstractness and suggestion are summarized. And through the user experience, psychology Angle puts forward innovative and feasible design way.

In the book *Analysis on the Cross-cultural Communication of Chinese Elements in Games*, the authors Zheng Shanshan and Cao Yue scientifically comb out the application of traditional Chinese elements in *Di Renjie's Roses*. First, they depict the game scene by using pixels to fully show the face of Chang 'an City in the flourishing Tang Dynasty. The second is to use local publishers to carefully sinicize the game, optimize it according to the context of classical Chinese and the traditional drafting format of ancient official documents, and contact calligraphy practitioners to distinguish different epistolaries; The third is through the promotion of the plot and the portrayal of characters, rich in the great national spirit. Through the above production methods to show the rich art design and game plot structure, so that most players at home and abroad fully feel the charm of the traditional culture of the Tang Dynasty. It gives the game full of vitality and cultural connotation, and becomes one of the excellent ways of cross-cultural communication.

Roles from different perspectives are becoming more and more important for the communication of new media. Among them, online games based on the Internet platform, supported by rich and diversified content, have become the leader in the current communication media with unique ways of entertainment. In *A Brief Analysis of the Problems of Chinese Traditional Culture in the Communication of Online Games*, Qi Shuixia (2018) analyzed the characteristics of traditional culture in the communication of online games, such as virtuality, comprehensibility and time-span, by studying the current situation of the communication of Chinese traditional culture in online games. And the existence of excessive entertainment, serious homogenization and other major problems, and enumerate a large number of examples to demonstrate. Then, it is concluded that the governance of communication issues needs to be studied and explored from multiple perspectives, such as policy support, strengthening supervision, and digging deeply into the connotation of traditional culture. To promote more efficient dissemination of traditional Chinese culture through online games.

In the book *The Performance and Application of Chinese Traditional Culture in Online Games*, Xu Chunxia (2010) believes that online games are a kind of cultural products, and games should not only satisfy people's entertainment, but also serve as a deep extension platform of traditional culture. China's game production should deeply integrate traditional culture, break through the shortcomings of content, and break the current monopoly of Japan and South Korea in overseas markets. Give play to the leading role of other related industries to mitigate the negative impact of games on young people. Online games are usually accompanied by magnificent scenes, addiction, target groups are mostly teenagers, content is uneven and other characteristics. And through the analysis of the degree of traditional culture spread in several popular games, through the content level and technical level, combined with China's rich traditional culture, the contribution of the corresponding positive countermeasures.

production companies combine the essence of traditional culture with modern technology to create original games with Chinese characteristics. These games not only inherit the traditional Chinese culture, but also give the traditional culture new connotation and form through innovation and development. For example, the hero character design in "Honor of Kings" draws on the image and cultural connotation of Chinese historical figures while integrating modern aesthetics and creativity, which is deeply loved by players.

In addition, traditional cultural education is gradually integrated into video games. Some game production companies pay attention to the education and dissemination of traditional culture, by integrating traditional cultural knowledge and values into the game content, so that players can accept the influence and education of traditional culture in the game. For example, games such as "Chinese Character Champion" incorporate traditional cultural knowledge such as Chinese characters and poetry, so that players can learn the essence of Chinese culture in the game.

In general, the application status of Chinese traditional culture in electronic games shows the characteristics of diversification and innovation. Traditional cultural elements have been widely used and innovated in games, and traditional cultural inheritance and education have also received more and more attention and attention. With the continuous progress of science and technology and the deepening of cultural exchanges, it is believed that the application of traditional Chinese culture in electronic games will be more extensive and in-depth.

3.3.2 Analysis of the development trend of Chinese traditional culture integration in electronic games

As the country attaches importance to the export of digital culture and supports the game industry, Chinese game companies have also made adjustments to their games closely following national policies, from Guangming network report; miHoYo¹⁶The role of "Yun Jin" who produced "Original God" went out of the country with a song "Goddess and Goddess," which has become a hot cultural topic among global players. Cultural attribute is an important "soft power" of game products, which has become a consensus in the industry.Netdragon¹⁷The classic game "Magic Pocket Edition" has recently invited Master Wang Tianwen, a master of Chinese arts and crafts and an expert in the identification of Chinese shadow play carving, to series three forms of game, film and traditional intangible cultural heritage art to work together to create a shadow play micro animation of "Magic Pocket Edition" linked to "A Chinese Journey to the West" movie, offering an audio-visual feast for players.

Compared with other art forms, games have a stronger sense of interaction and immersion. When the player embarks on an adventure in the game, they shift from being a listener to a participant and creator of the story. When traditional culture is integrated into the game content, players can more deeply contact and experience the charm of traditional culture. This also makes the game an excellent carrier of

¹⁶ Shanghai Miha You Network Technology Co., LTD. (referred to as Miha You) was established in 2011, is a secondary cultural Internet enterprise with animation, comics, games and novels as the carrier.

¹⁷ NetDragon Websoft Inc., founded in 1999, is a leader in China's online game and mobile Internet application industries, as well as a leading force in China's online education and enterprise informatization industries.

traditional cultural content innovation. Major game manufacturers are also trying to give full play to the advantages of the game itself as a carrier of mass entertainment, and constantly innovate in the form of cultural presentation. For example, integrating classical music into the creation of the theme song of the game, and learning from the classic plot in ancient literature to create the story of the game, Netdragon "Magic Pocket Edition" once let "the Book of Mountains and Seas" into the game world. At the same time, some companies are more focused on creating novel content through traditional techniques.

Netease Inc¹⁸the independent development of the national style martial arts game "Forever" is born out of traditional Chinese culture, shaping a wuxia world of rivers and rivers, one move one style to restore the ancient weapons and martial arts of Chinese culture. When building the imperial city of the Song Dynasty in the game, Cold Against the Water invited Shan Jixiang, the former director of the Palace Museum, to serve as a guide based on historical classics. National style game can also be linked with museums, research institutes and other professional institutions, so that cultural relics into the game, users can stay at home to enjoy the national treasure, immersive tour of the world, feel the shock of China's 5,000 years of civilization.



Figure 34 Forever Without a Trace

Image source: https://www.wywyx.com/tu/202107/305491_4.html

¹⁸ NetEase (NASDAQ: NTES), founded by founder and CEO Mr. Ding Lei in Guangzhou in 1997 and listed on the NASDAQ Stock Exchange in 2000, is a leading Internet technology company in China. This refers to NetEase games.

A game co-produced by NetEase Games and the Palace Museum, the game recreates Wang Ximeng's "A Thousand Li of Rivers and Mountains," allowing users to unlock ancient mythological stories in ink scrolls.



Figure 35 "A Thousand Mountains of Good Writing"

Photo credit: <https://www.gao7.com/>

"The Land of the Land" is to join the Luoyang Dingdingmen Site Museum in the game to display the three countries cultural relics, so that users can better understand the three countries culture. (Xiong Meifang, 2021) "Hometown Life" is a single-player rural life simulation game in the new era being developed by Yi World Information Technology Group. The game integrates many elements of the real scene, humanity, architecture and other elements of the new countryside, so that the culture and vitality of the new countryside can be expressed digitally through games. At the same time, "Hometown Life" also combines the characteristics of modern young players looking for different travel experiences, moving the game's levels to the offline, so that players can experience the role online and turn it into a field punch, realizing multidimensional interaction from the online virtual scene to the real scene, so that the rural characteristic culture in the game can help the development of rural new cultural tourism. The Legend of the Sword is a traditional RPG game¹⁹ at that time, it stood out, in essence, was a victory of literary drama, which was based on ancient legends and stories, and built a worldview of the five spirits, drawing deep cultural heritage, which satisfied the imagination of players at that time for the Chinese traditional culture and the world of martial arts (Konka, 2022).

Li Min, producer of "King of Glory" from Tianmei Studio of Tencent, China's largest game company, systematically explained the follow-up planning of "King of Glory" for traditional culture: "We have decided to help the inheritance of traditional culture from three levels: the promotion of national spirit, the carrying of traditional art and the index of regional culture." "By consciously, multi-dimensionally and systematically building the traditional cultural content of Honor of Kings, we vividly convey the core of traditional cultural spirit to players." Carrying traditional art and

¹⁹ Role-playing Game (RPG) is a type of role-playing game in which the player takes on the Role of a specific character and interacts with other characters to advance the game by completing missions and fighting to achieve the goals set by the game.

reproducing cultural classics. China's traditional art heritage is extremely rich and brilliant, "King of Glory" combines traditional art elements with innovative forms of game expression. Make regional cultural index, create city business card. Regional culture is an indispensable part of Chinese traditional culture. "King of Glory" will use Tianfu culture as a pilot to introduce Chinese regional culture into the game. The game will introduce panda skin and return to the city special effects props, and will also reflect the ancient Shu culture represented by the Jinsha ruins in the world view.



Figure 36 Screenshot of the Honor of Kings game

Image source: Screenshot of the game

Because many of China's game culture comes from the Chinese culture with a long history of 5,000 years, there are countless games adapted from the background of Chinese history, classics, myths, and martial arts. Whether it is full of mythology "Journey to the West" or the magnificent "Romance of The Three Kingdoms", it is a frequent visitor to be adapted into games. In ancient legends, Pangu who opened the sky in chaos, Nuwa who refined the five-colored stone to make up the sky, Hou Yi who eliminated the evil for the people, etc., have accumulated a large number of story themes for the development of domestic games. Games to absorb the essence of the masterpiece can not only use the strong cultural heritage of the masterpiece to enrich the game connotation; At the same time, using the influence of the famous book to attract more attention. Among them, the most famous adaptation should be "Romance of The Three Kingdoms", and the single-player game "Chronicles of The Three Kingdoms" and "True Three Kingdoms Peerless" series are all based on the background of three Kingdoms culture. Based on the "Journey to the West" adaptation of "Fantasy Journey to the West" has also been sought after by many players, Q version of the cute shape and reasonable game Settings, so that today's "Fantasy Journey to the West" has maintained high popularity. After numerous updates, today's game is very mature, its popularity is also quite stable, and it continues to create a new high number of online people, and it is indisputable that it has become the most successful work of the famous book adapted into an online game so far. Based on the martial arts drama adapted into the game more classic "Tianlong Eight", "Sword Legend" and so on. These games are characterized by the fact that the classes are usually from Wuxia novels, and the enemies are mostly wuxia characters. Wuxia drama is a unique Chinese culture, which has influenced generations of people.

Those classic martial arts novels are also undergoing different forms of packaging evolution, from TV dramas, music, to single-player games, online games and so on in recent years. (Fan Zhen, 2012)

Game is not only a kind of entertainment product, but also the carrier and channel of cultural communication. (He Wei, 2022) constructs the game (industry) as a new economic engine, embedded in the context of the global financial crisis and China's promotion of the revitalization of the cultural industry, and believes that it is a sunrise industry with "countertrend growth". Play it at the same time, the report also blended in this period "of socialist core values", "going out" of Chinese culture, "speak good Chinese story", "self-confidence" and a series of mainstream narrative, frequent use of "national network game", "China" and other new concepts, think network game can also be "good", "boutique", "green" (Zhang He, golden phase, 2009)

Under the premise of continuous improvement and rapid development of social environment and game industry, game as a cultural product has great potential and influence. The story, setting, and character of a game can directly affect the player's values and behavior. Therefore, passing on positive cultural values through games has become one of the important tasks of game production. With the rapid development of China's game industry, Chinese games are no longer just entertainment products, but become an important part of China's cultural industry. The Chinese government has also introduced a series of policies to encourage the production and publication of games, while putting forward higher requirements for cultural communication in games. At the same time, game makers are paying more and more attention to cultural transmission in games. They not only introduce more traditional Chinese cultural elements into the game, but also tell Chinese stories and promote Chinese culture through the game.

3.4 Strategies for presenting regional culture in the development of electronic games

As a cultural product, electronic games have a huge number of players around the world. With the continuous advancement of technology and the expansion of the market, the content and form of video games are increasingly diversified. In this process, designers began to pay attention to the expression of regional culture and the dissemination of cultural ideas in the game. This design idea and means can not only enrich the content of the game, improve the appeal of the game, but also promote the dissemination and exchange of regional culture. This article will discuss the role of electronic games in expressing regional culture and spreading cultural ideas from the following aspects.



Figure 37 The game Never to Be Broken

Image source: Screenshot of the game

In the game, scenes with regional characteristics can be designed to increase the sense of realism and immersion of the game. For example, Chinese-style ancient buildings, European medieval castles, Japanese streets and so on, these scenes with regional characteristics can make players better feel the cultural atmosphere in the game. In the article "On the Application of Hui Style Architectural Elements in the Scene Design of Online Games -- Taking The World of Zhu Xian as an Example", the authors Gao Yun and Ao Yingxia believe that the modern game developers' demand for the combination of online games and traditional elements is increasing day by day, followed by the field of online games to integrate traditional architectural art in the scene design. Taking the World of Jade Dynasty as an example, we should be good at daily accumulation, application of traditional Chinese architectural elements, and artistic summary processing to achieve the purpose of matching the theme.



Figure 38 Screen shot of the game Jade Dynasty

Photo credit: Screenshot by author

Integrating elements of regional culture into the game, such as history, folklore, legends, etc., can enrich the story background and content of the game. For example, the character design, clothing props, music and sound effects in the game can be integrated into regional cultural elements, so that players can feel the cultural charm of different regions during the game. Create games based on regional culture, such as Chinese-style martial arts games and Japanese Zephyr adventure games. These regional culture-themed games allow players to have a deeper understanding and experience of the cultural characteristics of different regions. Through cooperation and communication with game production teams in other regions, we can learn from and learn from the cultural elements and creative experience of other regions to enrich the content and expression of games. At the same time, such cross-regional cooperation and exchanges also help promote the spread and development of different regional cultures.

Through the medium of electronic games, the knowledge of regional culture can be spread to players and their knowledge and understanding of regional culture can be improved. At the same time, games can also be used as a platform for educational and cultural exchanges to promote cultural exchanges and cooperation between different regions.



Figure 39 Character costumes in the game Tianxia 3

Image source: Screenshot of the game.

The presentation of regional culture in video games should pay attention to authenticity and details, as well as innovation and diversity. By integrating regional cultural elements into the game, players can better understand and experience the cultural characteristics of different regions, and promote cultural exchanges and dissemination.

3.4.1 Design ideas for displaying regional culture in video games

To represent regional culture in video games, you first need to understand the structure of the game. Then gather relevant material based on the context and worldview of the game architecture; Finally, according to the needs of the game, the collected materials are created to meet the needs of the game. Game players feel the corresponding culture through the game experience.

3.4.1.1 Understand the background and world view of the game

To reflect regional culture in the game, we must first define the background of the game, the style of the game, and the world view structure of the game at the beginning of the design. The setting of the game is the basic framework of the game setting. It describes the basic situation of the game world and provides the basis for the story and character setting. The story setting and plot of the game are usually set in an environment with specific regional cultural characteristics, such as ancient China, medieval Europe, Japan Edo period, etc. Such a setting can provide players with an immersive game experience, allowing players to better understand and feel the cultural characteristics of the region in the game. The setting of the game can be a historical period or a specific location in the real world, or it can be a fictional fantasy world or a future science fiction world. The world view of the game is the overall understanding and view of the game world. The world view of the game describes the existence and development of different races, nations and cultures in the game world, including their histories, traditions, beliefs, lifestyles and other aspects. These cultural Settings influence the character setting and social structure of the game, as well as the story and interactions in the game.

3.4.1.2 Understanding regional culture

The regional culture of the game is an important element built on the game structure. If the design of the corresponding area is not planned in the game planning stage, then the regional culture will not be fully displayed. Therefore, when constructing the cultural background of the game, it is necessary to collect the cultural content of the relevant period, including the information of architecture, clothing, humanities, etc., to provide reference for the design of the game. The character design in the game will incorporate elements of regional culture, such as clothing, hairstyles, accessories, etc. For example, in a game with an ancient Chinese theme, a character might wear a Han or Tang costume; In Japanese-themed games, characters may wear kimonos or samurai garb. Such a design can help players better recognize and understand the cultural characteristics of different regions. The scenes and architectural styles in the game will also reflect regional cultural characteristics. For example, in a game depicting ancient China, the game scene may include elements such as palaces, courtyards, and gardens; In a game depicting the Middle Ages in Europe, the game scene may contain elements such as castles, churches, streets, etc. This design allows players to experience the architectural style and cultural atmosphere of different regions in the game. For example, if the game is set in ancient China during the Silk Road period, the characters and buildings in the game should fit the characteristics of the Han Dynasty. The architectural style and the costumes and decorations of the characters must conform to the cultural characteristics of the Han Dynasty. If you want to represent a specific city, you need to collect the architectural features of the relevant city during the Han Dynasty.

3.4.1.3 Combine regional cultural characteristics with game worldview structure

Video games are a fantasy world, especially fantasy games, and their worldview structure can be fantastical. The essence of games is entertainment, so as a designer, serving the world structure of the game is the first condition of the game designer. Therefore, the designer will re-create and design the collected materials that meet the background of the game era according to the needs, so as to meet the functional and graphic requirements of the game. But designers will always respect the development of history from the historical background. Festivals and customs in the game will reflect the characteristics of regional culture. For example, in a game representing the Chinese New Year, the game may include such customs as setting off firecrackers and pasting Spring Festival couplets; In a game showing the cherry blossom season in Japan, the game may include customs such as viewing cherry blossoms and holding cherry blossom feasts. Such a design allows players to better understand and experience the festival culture and customs of different regions. For example, when designing a Chinese pagoda, the designer will re-create it according to the needs and add some design elements that meet the background of the game, but no matter how it changes, its shape still needs to reflect the characteristics of the Chinese pagoda. Designing a Tang Dynasty woman, no matter what kind of job, what kind of clothes she wears, will not become a European woman, or a Qing woman, which requires designers to find the intersection of reality and the game, which can serve the game and reflect its cultural values.

Therefore, the design ideas to express regional culture in video games are mainly reflected through the elements of story background, character design, scene and architectural style, festivals and customs. Such a design can allow players to better understand and feel the cultural characteristics of different regions in the game, and provide rich game experience for players.

3.4.2 Means of disseminating cultural ideas in video games

The beginning of game design defines the world view of the game and the setting and style of the game. At this time, it is necessary to choose the corresponding content to show the structure of the game world. Therefore, from the perspective of game art design, there are several aspects that can reflect culture in video games: the use of cultural symbols, scene design, and character design.

Use of cultural symbols: In the game, regional representative cultural symbols and symbols can be placed in specific places and special locations, such as national flags, badges, Chinese moire, Buddhist swastika, etc. These symbols and symbols usually reflect the values of a certain culture, and have a strong role in the culture in the game.

Game background and scene design: Scene design is one of the important means to express regional culture in video games. Through the restoration of historical buildings, urban style and other ways, players can feel the atmosphere of regional culture in the game. For example, in the Assassin's Creed series of games, designers have restored historical buildings and cities to give players a sense of the cultural atmosphere of medieval Europe. Storyline is one of the important means of spreading cultural ideas in video games. You can design a story with regional characteristics, such as historical events, myths and legends, so that players can understand the connotation of regional culture in the game. For example, in the

Witcher 3 game, the designer restores the historical events and myths of the European Middle Ages, so that the player can understand the connotation of European culture in the game.

The game can choose a specific region as the background, according to the geographical environment of the region, architectural style, natural landscape and other characteristics of the scene design. These Settings can be real world cities, villages, or fictional fantasy worlds or futuristic science fiction worlds. For example, set the game in a specific place and time period, such as the Qin Dynasty in China or the Middle Ages in Europe. At the same time, according to the historical background and local cultural traditions, the game can integrate the cultural traditions and customs of a specific region, and these elements can be used as the backstory, mission plot or prop setting of the game, so that players can understand and participate in the regional culture. For example, the scene design of the Chinese Spring Festival is displayed in the scene design process.

Character design: Character design is another important way to express regional culture in video games. By designing characters with regional characteristics, such as clothing, hair style, language, etc., players can feel the characteristics of regional culture in the game. In video games, it is the character that directly interacts with the player, and its importance in the overall game design is self-evident. The era background and regional culture reflected in the game are mainly designed through costumes and decorations, combined with the characteristics of regional characters. These characters can be historical figures from specific regions, heroes from folklore, or fictional characters based on local cultural contexts. For example, in the Original God game, the designer designed the characters of different regions, such as Mond, Rietsuki, Rice wife, etc., so that players can feel the cultural characteristics of different regions in the game. In games set in the Han Dynasty of China, characters can wear Hanfu and use ancient weapons.

At the same time, depending on the type of game, the content of the design process is different:

2D games are flat type games, because the player can only see one screen, so showing more details of physical features does not need to be particularly clear. Especially as the background of the environment, the designer only needs to highlight the external contour features and show a large volume relationship.

2.5D is a pseudo-3D game with a fixed Angle of view. Compared with 2D games, 2.5D games can adopt a more delicate and three-dimensional art style, and show the charm of culture through exquisite pictures and realistic special effects. Through the use of multi-level visual effects, light and shadow effects, texture design, etc., can make the game closer to reality, enhance the player's sense of immersion and inclusion, so as to better convey cultural ideas. Because it is a 3D picture effect, designers can add more design elements in the design process to achieve the purpose of transmitting culture.

3D games, as the most immersive form of gaming, are designed with the overall shape of a distant view in mind and the exquisite expression of details. Every detail, from the style of the architecture to the clothing of the characters to the setting, needs to be carefully designed based on the elements of the specific culture in reality to ensure that the game presents a real and culturally distinctive world. Through the comprehensive presentation of landscapes, characters, and storylines, 3D games carry

rich cultural connotations and provide players with the opportunity to deeply understand and experience a specific culture.

Different types of games use different means to spread cultural ideas. Fantasy games with entertainment and profit as the main purpose usually pay more attention to gameplay and mechanics, and have low requirements for the authenticity of the scenes and characters in the game. In this kind of game, the dissemination of regional culture exists, but the research of regional culture is not the primary goal. The player may only need to know whether the setting of the game is eastern or Western, and whether the buildings are ancient or modern, without paying too much attention to specific periods and locations. In contrast, as an educational or science functional game, every detail is required to be verified and demonstrated. This type of game is more focused on accurately communicating various aspects of a particular culture, including history, traditions, values, etc. Through carefully designed elements such as scenes, characters, storylines and music, as well as accurate historical Settings and cultural connotations, these games can provide a rich and in-depth cultural experience, allowing players to more fully understand and experience the unique charm of a particular culture. As a result, the way in which different types of games communicate cultural ideas and how they are presented can be influenced by the particular context.

3.5 The role of traditional Chinese culture in video games

The content of Chinese traditional culture is very extensive, including not only social history, literature and art, philosophical thoughts, but also religious culture, folk customs and so on. Electronic game design plays a very important role in it. It can be said that electronic game is a form of media combining traditional culture and modern technology.

On the one hand, the content and information of traditional culture appear in the form of game images and text in the game, thus playing the role of "cultural business card". On the other hand, electronic games can also integrate with traditional culture with their unique advantages. Chinese pagodas can be designed symbolically and artistically through the medium of games. In modern society, through the symbolic and artistic design of the stupa, people can not only understand the symbolic significance of the stupa in ancient Chinese society, but also carry forward our traditional culture through the medium of games. Taking Zhengding Ancient Pagoda in Hebei as an example, the game images, texts and images all symbolically and artistically design Zhengding Ancient Pagoda as a religious, artistic and historical relic. In the game, players can understand the internal structure, pattern characteristics, carving art and so on by symbolizing and artistic design of Zhengding ancient pagoda. Therefore, it is of great significance to carry forward our traditional culture through the medium of games.

From the point of view of the medium of video games, the pagoda in the game has a certain role of "cultural business card".

Zhengding Ancient Pagoda appears in the form of images in the game, which is a form of expression combining game images and game text. Image expresses meaning through image, and the image of Zhengding ancient Pagoda is no exception. In Zhengding ancient Pagoda, the image not only includes the overall shape of the tower body, but also includes various parts of the tower body. On the whole, Zhengding ancient Pagoda is composed of three levels: plane, space and three-

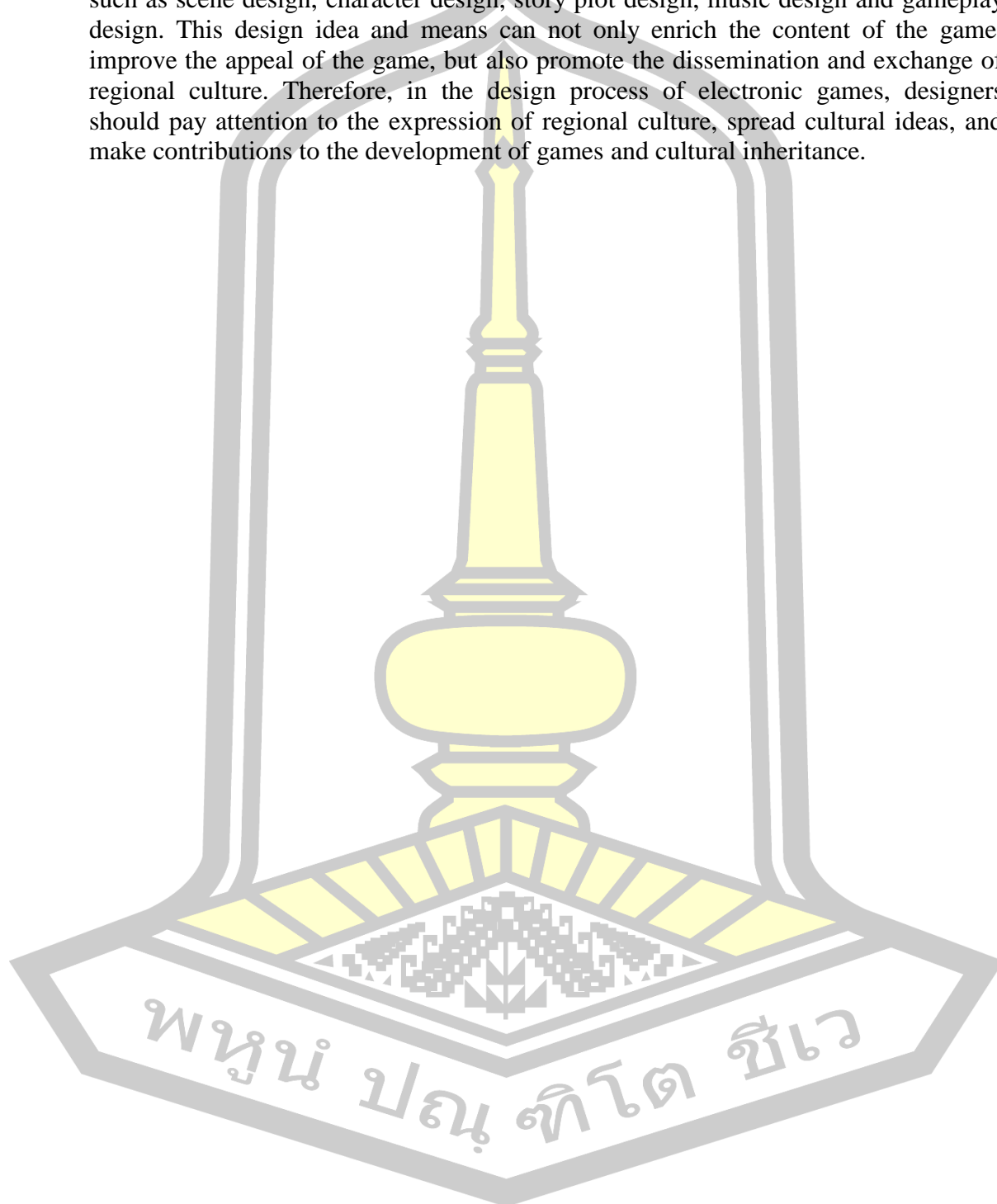
dimensional. The plane layer is the outer layer of the tower, which is mainly used to support the inner space of the tower. The space layer is a layer inside the tower body, which is mainly used to support various parts inside the tower body; The three-dimensional layer is a layer inside the tower body, which is mainly used to support various parts of the tower body. Zhengding Ancient Pagoda appears in the form of images in the game, which not only reflects the symbolic significance of Zhengding ancient pagoda as a religious relic, but also reflects its symbolic significance as a historical relic. Since Zhengding Ancient Pagoda appears in the form of images in the game, players can better understand this Buddhist relic in the game. This kind of game image can not only enhance the players' understanding and knowledge of traditional culture, but also play a role in promoting and spreading traditional culture.

Text refers to the text that players can use in the game, including text description and picture description. The design of text is very important, not only to the player's experience, but also to the content and theme of the game. From the perspective of traditional culture, the text in the game needs to focus on the story and the theme of the game, rather than simply collage the text in the game. In a game with the Zhengding ancient pagoda as the scene, you can set the story and character introduction about the pagoda. From the text that players can read in the game, it can be seen that Zhengding Ancient Pagoda is both a Buddhist building and a Buddhist cultural site. Therefore, text is very important in games.

Image is a description of things, through the image can make people understand the nature of things, so as to better understand things. Images are different from text in that they have a stronger visual effect. Therefore, through the analysis and research of images, we can better understand the content and information in Chinese traditional culture. From the image of Zhengding ancient pagoda in Hebei, the carving content of Zhengding ancient pagoda mainly includes Buddha, Bodhisattva, heavenly king, warrior, stupa, bodhi and so on. In the game setting, players can learn about the origin and development of Buddhism and the influence of Buddhism on ancient Chinese society. In the game, players can also understand the structure and characteristics of the Zhengding ancient tower through the image. For example, in the game, the player can learn that Zhengding Ancient Pagoda is made up of thirteen pagodas; On the top of the tower is a large bronze lotus seat; The tower is made of seven thin layers of bricks; There is also a Buddha statue on the top of the tower. All these reflect the symbolic significance of Zhengding Ancient Pagoda in Chinese traditional culture. In addition, Zhengding ancient pagoda images also contain a lot of Buddhist and Taoist content. For example, in the game, the player can learn what the seven treasures of Buddhism are; What is the "seven treasures" in Taoism?

In the game, players can observe and study the tower from different angles, different colors and different materials. Players can not only see the carved art and decorative patterns inside the tower, but also learn about the symbolic significance of the pagoda as a religious belief and historical relic. At the same time, players can also learn about some important people or events in ancient Chinese society through the game images. For example, through the game images, players can learn about the experiences of famous ancient Chinese writers such as Ouyang Xiu and Wang Anshi in carving and decorating Buddhist pagodas; You can also learn about some important events and important people in ancient Chinese society through the game images.

As a cultural product, electronic games have unique advantages in expressing regional culture and spreading cultural thoughts. Designers can express regional culture and spread cultural ideas in different types of games through various means such as scene design, character design, story plot design, music design and gameplay design. This design idea and means can not only enrich the content of the game, improve the appeal of the game, but also promote the dissemination and exchange of regional culture. Therefore, in the design process of electronic games, designers should pay attention to the expression of regional culture, spread cultural ideas, and make contributions to the development of games and cultural inheritance.



Chapter IV : The application and performance of pagoda elements in video games

4.1 The image of the pagoda in video games

After the introduction of Buddhism into China, temples were built all over the country, and ancient Chinese poems related to the scene of temples are also abundant, such as the Ming Dynasty poet Zhang Mu's "Lingyan listen to five kinds of different kinds, ten miles to climb the highest peak." Although it seems that Ping did not directly describe the temple, the words "bell" and "climb the peak" appear. One might ask, "What does this have to do with the game scenario in your title?" The "big bell" is an important element that appears in every temple, and the word "climbing the peak" quickly reminds us of some temples located among famous mountains. People who like to play games or engage in the game industry must know that some of the games developed in China now, many of the more popular game types are mostly ancient fantasy and aesthetic style games. Among them, the market response of role-playing games about immortal and martial arts is considerable. For example, NetEase's "A Chinese Journey to the West", "A Chinese Girl's Ghost", Jinshan West House's "Swordsman Love online III" (referred to as "sword network 3"). The story background of "A Chinese Journey to the West" and "Sword Net Three" all appeared in the Tang Dynasty. We all know that the Tang Dynasty was the flourishing period of Buddhism, and there were Buddhist buildings in many areas, such as Buddha statues, pagodas, bells and other components with Buddhist charm. And "A Chinese Ghost Story" has a more famous building - Lanruo Temple. And many games set in ancient China will appear in the "Shaolin" school. It can be imagined that the Buddhist architecture in the game is how high the rate of appearance, basic every ancient style game, such as Buddha statues, pagodas such buildings appear. The architectural Settings in the game are all changed and improved on the basis of our traditional Chinese architecture. (Wang Sihui, 2015)

In addition, in the game design of "seven-level Butu", everyone knows the phrase "saving a life is better than building a seven-level Butu", but few people know what the Butu is and why it is a seven-level butu. In fact, Butu refers to the Buddhist pagoda, and each pagoda is the tomb of a deceased bhikkhu, which is often dedicated to the Buddhist monk's relics (remains) and clothes.

The height of the stupa determines the achievements of the bhikkhu's practice during his life. Specifically speaking, the highest number of layers is 13, which symbolizes the seven pagodas of the Buddha and Bodhisattva after nirvana, but traditionally speaking, the seven pagodas symbolize the Buddha and Bodhisattva's fruit position, and the highest pagodas are generally six layers of enlightenment, five layers of hearing, four layers of "unyielding fruit" and two layers of "one fruit". "Pre-flow fruit" layer. So in the game let each player through the tower to practice, the first cover into the seven-level butu people have the most wisdom, to win the game, and named the board game "seven-level Butu". In addition, we often see nine points on the head of a monk in movies and TV dramas, but we do not know the origin of these points. In fact, in Chinese Buddhism, this is called ring scar, since the Yuan Dynasty, each monk who was ordained in the altar has a different number of ring scars on the head, the higher the practice, the better the monk who holds the ring, the more ring

scars on the head. Generally speaking, depending on the degree of practice, three, six, nine, or twelve rings can be burned. Therefore, in the board game "Seven levels of Butu", the concept of ring scars is also integrated into it, respectively, with a total of 3 points, 6 points and 9 points of three different dice to symbolize different levels of monks, in addition to the game to join the altar, through the altar of ordination, you can upgrade the number of monk dice, the higher the number of monk dice in the game has a higher ability to promote the Dharma. (Wang Longyi, 2018)

Thus, in some games, the stupa may be a quest objective or clue that requires the player to reach a specific stupa in order to complete the quest. Players can get a sense of accomplishment and reward in the process of completing the mission, but also can understand the story and background of the game. At the same time, the pagoda may be a cultural element, representing the cultural tradition of a certain region or nation. For example, in the Original God, there is a Mount Xumi in the city of Xumi, the main mountain of the Xumi Order, on which there is a symbol of great wisdom - the thousand Winds Spirit. Here is also held the grand ceremony of the Order House - the selection ceremony of discipline officers. In the game, players can understand the cultural traditions of different regions and nationalities and increase cultural literacy.

In reality, pagodas are real buildings with religious, cultural and historical backgrounds. The pagoda in the game is a fictional game element, mainly to enrich the game experience, but as a designer will also take reality as a reference and combine the era background and world view of the game to design. The Zhengding Pagoda has its own architectural characteristics and era background. If combined with the era background of the game, the pagoda architecture can fully reflect the history and regional culture.

The white Pagoda in Age of Empires 4, a unique Mongolian landmark in the game, has the effect of automatically producing stone without the need for a stone mine. The Ayutthaya Stupa in Overwatch is a temple in the game whose style blends artistic and religious elements from Sukhothai and other places. The stupa is Khmer style, and there are several styles in Ayutthaya, Thailand, most of which are used for storing relics. In the Chang 'an City of "Easy Love" mobile tour, there is a Big Wild Goose Pagoda designed as a prototype of the real Big Wild Goose Pagoda. It is the holy land of the Buddha, for generations to be sacrificed by incense, into the Big Wild goose Pagoda, each layer of the center has a solid gold carving, workmanship is extremely gorgeous Dayi lotus, and under the lotus, several Buddha statues surrounded, very solemn. There are many cases placed in the tower, the candles above are long bright, the incense is constantly burning, and there are portraits of the gods and Buddhas such as Avalokitesvara Bodhisattva on the wall.



Figure 40 Easy Life game interface

Image source: <http://news.17173.com/content/07172023/175012812.shtml>

4.2 Integration of Chinese architectural culture into video games

As a unique cultural element, architectural culture plays an important role in video games. Game teams can provide players with a unique gaming experience by incorporating architectural culture into the game, but also serve as a cultural transmission. There have been many approaches to incorporating architectural culture into video games by past game teams, and here are a few representative examples.

First, take the Assassin's Creed series. The game series is set in the historical Assassin Order and allows players to explore different historical periods and regions throughout the game. The Assassin's Creed series of games is set in various periods of history, such as ancient Egypt, ancient Greece, and medieval Europe. The architectural style and layout of the game have been carefully designed to restore the original history. In the game, players can see many famous buildings in history, such as Notre Dame Cathedral in Paris, the Colosseum in Rome and so on. The level of detail and reproduction of these buildings is very high, and the player can feel the historical and cultural value of these buildings in the game. Players can not only enjoy

a variety of architectural styles in the game, but also understand the cultural background and historical story behind the building through the tasks and stories in the game. This way of closely combining architectural culture and game content allows players to appreciate the charm of different cultures in the game, so as to achieve the purpose of cultural dissemination.

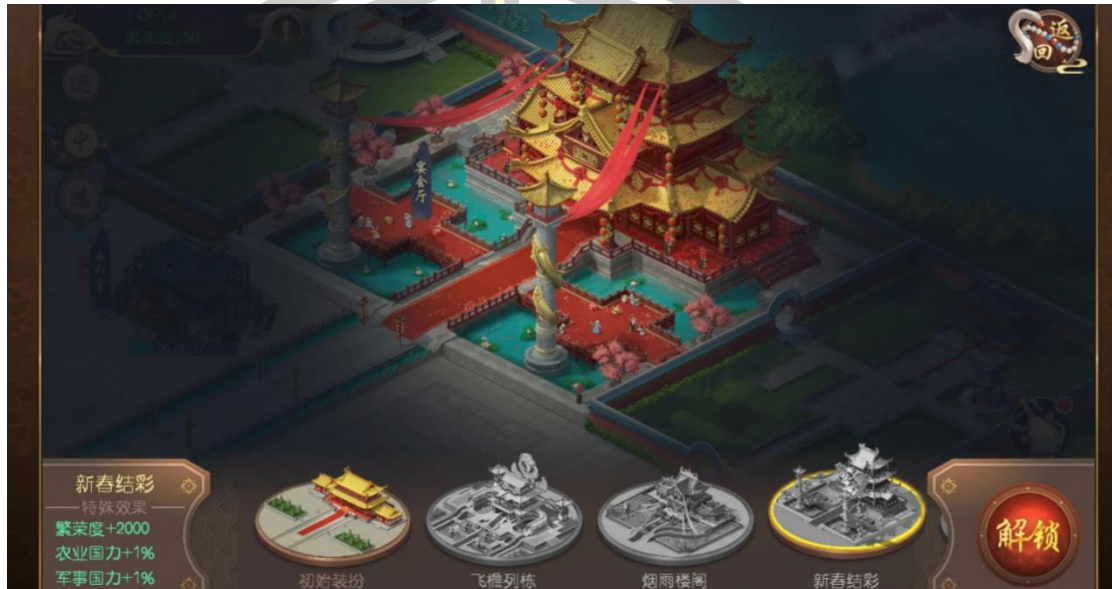


Figure 41 Screenshot of Call Me Viva

Image source: Screenshot of the game

Another game worth mentioning is Minecraft. Unlike Assassin's Creed, Minecraft is a sandbox game in which players are free to build various structures. Since the game itself doesn't have a lot of story and missions, the building is one of the most important elements in the game. Players can show their creativity and aesthetics by building a variety of buildings with cultural characteristics, such as ancient Chinese buildings, European castles, etc. At the same time, the architectural styles and materials in the game have been carefully designed to allow players to understand and learn from different architectural cultures during the construction process.

In addition, the game team also adds some historical and cultural elements in the game, such as ancient etiquette, clothing, weapons, etc., so that players have a deeper understanding of history and culture. This approach not only allows players to have fun in the game, but also plays a role in spreading culture.

In addition to the above two games, the Civilization series is also a representative work that integrates architectural culture into games. The Civilization series is a turn-based strategy game that incorporates architectural and cultural elements from various historical periods. In the game, players can choose different civilizations, such as ancient Egypt, ancient Rome, China, etc., and develop their own civilization by building cities, developing science and technology, diplomacy and other ways. In the game, players can see the architectural styles and cultural characteristics of different civilizations, such as the pyramids of ancient Egypt, the Colosseum of ancient Rome, and the Forbidden City of China. The level of detail and reproduction of these buildings is also very high, and players can feel the historical and cultural values of different civilizations in the game. Players in the game not only

to develop the economy and technology, but also to build a variety of cultural characteristics of the building, such as the pyramid, the Roman Colosseum and so on. These buildings not only have practical functions, but also are important carriers of cultural inheritance. By building these buildings, players can gain a deeper understanding of the characteristics and values of different cultures.

Therefore, there are many ways to integrate architectural culture into video games, and game teams can achieve the purpose of cultural dissemination by restoring the original appearance of history, creative construction, etc. These games not only let players enjoy the charm of different cultures in the game, but also let players understand and learn different architectural cultures through the architectural elements in the game.

4.3 Application of stupa in video games

In video games, elements that can be applied to a pagoda include: architecture, patterns, characters, architectural styles, game levels, etc.

In terms of architecture, the appearance of Zhengding Tower is a typical "Chinese architecture" and a representative of ancient Chinese towers. In the game, players can experience the charm of Zhengding Tower through the architectural appearance, and players can understand ancient Chinese pagodas through the architectural appearance.

In terms of patterns, the patterns of Zhengding Pagoda can be divided into three types: Buddhist patterns, Buddhist symbols and Taoist patterns. In the game, players can design the pattern of the positive tower according to their favorite style. In addition to the positive Ding Tower, other pagodas with storylines can be designed into the shape of characters in the game.

In terms of figures, the figures in Zhengding Pagoda can also be divided into three types: Bodhisattvas, arhats and Buddhas. When designing game characters, we should pay attention to the following points: the characters should conform to the cultural connotation of the pagoda itself; Design the character image according to the cultural connotation of the pagoda itself; The symbolic meaning of the pagoda itself should be reflected in the design of the character image.

4.3.1 Construction

In video games, the architectural element is a very important element. Players can see many buildings in the game, such as houses, monasteries, temples, etc. Through these buildings, players can learn about the living environment and ideas of ancient people. Zhengding Pagoda is a very typical Chinese pagoda, and its appearance is one of the representatives of ancient Chinese architecture.

In the positive Ding tower, the architectural elements include: the base, the tower body, the tower eaves and the space inside the tower. Among them, the space inside the tower is one of the main elements that the player will experience when entering the game. In the game Settings, the player can open the space inside the tower by clicking the "Pick up" button.

4.3.2 Patterns

In the "King of Glory", players can use the "thousand Buddha Map", "Futu City" and "unmatched country" three game levels. Among them, the "thousand Buddha map" is used to represent Amitabha Buddha in Buddhism. Players can use this level to learn about ancient Chinese Buddhist culture and experience the storyline of the game. In League of Legends, the player can use the "City of the Butu" level. In

this level, players can gain higher health by killing enemy heroes and experience the storyline of the game. When designing a game, it is important to pay attention to the following: the game level should be designed to fit the story of the game; Pay attention to the connection between the pagoda pattern and the story of the game; Pay attention to the connection between the pagoda pattern and the figure.

4.3.3 Character image

In video games, the characters on the positive tower can be applied to the game.

Bodhisattva: In the game, the Bodhisattva is the highest Bodhisattva in Buddhism, usually the symbol of "saving the suffering", symbolizing the spirit of "compassion". In the game, the Bodhisattvas can be designed into a variety of different shapes, such as: Tathagata Buddha, Avalokiteshvara, Sakyamuni and so on. In Honor of Kings, players can acquire different characters through skills, which represent different Buddhist cultures. In "King of Glory", players can design different characters into different shapes of "heroes".

Arhat: Arhat is one of the earliest Buddhist figures in Buddhism, representing "wisdom and virtue" and symbolizing the spirit of "enlightenment and Buddha". In the game, players can obtain different types of Arhats through skills.

Buddha: In the game, Buddha represents the highest belief and highest spiritual state of Buddhism.

The level in the game refers to the level designed by the player through the game elements in the game, which is mainly divided into the main level and the side level. In Honor of Kings, the function of the main level is to guide the player through the game and let the player understand the basic content of the game. The function of side levels is to let the player experience the content of the game, and to experience the fun of the game. In Honor of Kings, there are three main types of side levels: Hero Trials, League of Legends, and story missions. Among them, the hero trial is the presequence part of the main story mission, but also the main side mission; League of Legends is a follow-up to the main story quest and the main side quest; The story quest is an extension of a series of main story lines. These side quests give the player an idea of what the game is about. These side quests are challenging and fun.

4.4 Problems existing in the application of stupa in video game design

There may be some limitations to the use of Chinese pagodas in video games, and here are some possible factors:

Cultural background and understanding differences: As one of the important symbols of Chinese Buddhist culture, pagodas have rich religious, historical and cultural connotations behind them. However, different players' knowledge and acceptance of Buddhist culture may vary, which may lead to different understandings and experiences of the stupa in the game.

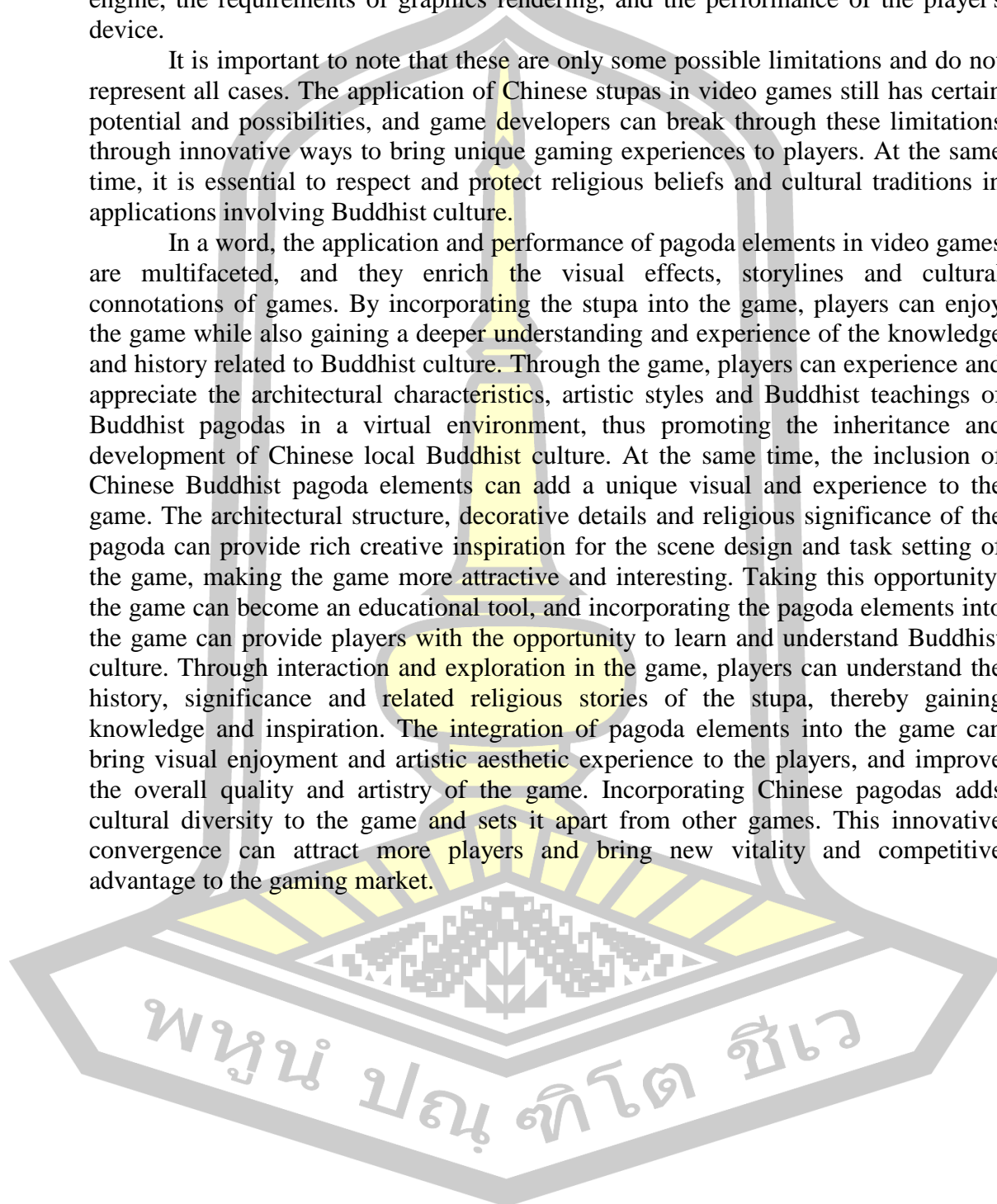
Copyright and legal restrictions: Copyright and legal restrictions may be involved when applying real-life stupa elements to video games. Game developers need to ensure that they have legal authorization or permission to avoid infringement.

Adaptation of genre and theme: The image and symbolism of the pagoda may be more suitable for certain types of games, such as role-playing games, adventure games, or historical games. In other types of games, the application of the stupa may not fit well or be difficult to integrate into the overall atmosphere of the game.

Technical and design limitations: Accurately presenting the details and features of a pagoda in a video game may require a high level of technical skill and design ability. Game developers need to take into account the limitations of the game engine, the requirements of graphics rendering, and the performance of the player's device.

It is important to note that these are only some possible limitations and do not represent all cases. The application of Chinese stupas in video games still has certain potential and possibilities, and game developers can break through these limitations through innovative ways to bring unique gaming experiences to players. At the same time, it is essential to respect and protect religious beliefs and cultural traditions in applications involving Buddhist culture.

In a word, the application and performance of pagoda elements in video games are multifaceted, and they enrich the visual effects, storylines and cultural connotations of games. By incorporating the stupa into the game, players can enjoy the game while also gaining a deeper understanding and experience of the knowledge and history related to Buddhist culture. Through the game, players can experience and appreciate the architectural characteristics, artistic styles and Buddhist teachings of Buddhist pagodas in a virtual environment, thus promoting the inheritance and development of Chinese local Buddhist culture. At the same time, the inclusion of Chinese Buddhist pagoda elements can add a unique visual and experience to the game. The architectural structure, decorative details and religious significance of the pagoda can provide rich creative inspiration for the scene design and task setting of the game, making the game more attractive and interesting. Taking this opportunity, the game can become an educational tool, and incorporating the pagoda elements into the game can provide players with the opportunity to learn and understand Buddhist culture. Through interaction and exploration in the game, players can understand the history, significance and related religious stories of the stupa, thereby gaining knowledge and inspiration. The integration of pagoda elements into the game can bring visual enjoyment and artistic aesthetic experience to the players, and improve the overall quality and artistry of the game. Incorporating Chinese pagodas adds cultural diversity to the game and sets it apart from other games. This innovative convergence can attract more players and bring new vitality and competitive advantage to the gaming market.



Chapter V : The re-creation design practice of Zhengding pagoda culture in the field of video games

As one of the representatives of ancient Chinese Buddhist architecture, Zhengding Stupa has unique historical and cultural value, and integrating its elements into the game can add a strong cultural heritage to the game. At the same time, the architectural style, aesthetic characteristics and cultural connotation of Zhengding Pagoda can provide rich visual symbols for the game art, which can show the spectacular and beautiful pagoda in the game and attract the attention of players. As a game with the attribute of cultural communication, the knowledge related to Zhengding Buddha pagoda can be integrated into the game task, plot or decryption link, which can teach and enjoy, so that players can understand the historical culture and religious connotation of the pagoda during the game process, and increase players' cognition of the culture of Zhengding region. The incorporation of Zhengding pagoda elements into the game can also play a role in promoting and promoting Zhengding area tourism. Attract more players to be interested in positive Ding, thus promoting the development of local tourism economy. Thus, it can be seen that it is feasible to integrate Zhengding stupa into game design from various perspectives, such as cultural value, artistic expression, educational knowledge dissemination, story creation, and promotion of local economy. However, it is necessary to fully consider the principles to be followed and matters to be paid attention to in the re-creation of Zhengding stupa in video games.

5.1 Principles that should be followed in recreating Zhengding Stupa in video games

In order to better integrate traditional cultural elements into video games, research can be carried out from the following aspects: First, the historical origin and connotation of the pagoda are studied. Since Buddhism was introduced into China, pagodas have existed in Chinese society for hundreds or even thousands of years. It is an important part of ancient Chinese architecture. It has not only religious symbolic significance, but also high historical value. In the game design, the stupa can be treated and decorated differently according to different times and occasions, so that it can be better accepted by players. The second is to analyze the game graphics and sound effects. Game graphics are one of the most intuitive visual elements in a game. Through the analysis of the game screen, you can know the genre, theme, style and art style of the game. At the same time, it can also analyze the specific expression form and existence mode of the pagoda in the game according to the above information.

In modern society, as a new medium, electronic games are favored by more and more people. In this case, how to integrate traditional cultural elements into video games becomes a question worth discussing. The first is to analyze and design the theme of the game. With the rapid development of the video game industry, its themes have become increasingly rich. For example, in "Super Mario", character modeling design, background screen design, storyline design can be carried out according to the game theme, so as to make it better artistic and ornamental, but also to attract players to consume the game.

In traditional Chinese culture, there are many excellent works of art that convey feelings and thoughts through sound. For example, in *The Art of War*, Sun Tzu expresses feelings and thoughts through various sounds. In *A Dream of Red Mansions*, various voices are used to express the inner world of the characters. In the *Book of Songs*, various emotions are expressed through different types of sounds. Therefore, in game design, music, sound effects and other aspects can be analyzed and designed, so that the game can better reflect the various thoughts and emotions contained in Chinese traditional culture. In ancient society, pagoda culture has a rich variety of forms and contents, which involve Buddhism, Taoism, Confucianism and many other fields, and these cultural elements can be expressed through the plot. In the re-creation of video games, the positive Dinh pagoda as a cultural element should follow the following principles:

Respect for history and culture: The Zhengding Stupa is an important heritage of Chinese history and culture, representing the essence of Buddhist culture and ancient architecture. In the re-creation of video games, history and culture should be respected, and the real appearance and characteristics of Zhengding stupa should be restored as much as possible, so as to avoid distorting or tampering with history and culture.

Maintaining authenticity and detail: The architectural style and detailed features of the Zhengding Stupa are an important part of its unique cultural charm. In the re-creation of video games, attention should be paid to maintaining the authenticity and details of Zhengding Stupa, including architectural structure, materials, decoration, etc., in order to present its unique artistic style and historical and cultural connotation.

Adapt to gameplay and artistry: Video games are a medium that combines interactivity and artistry. When recreating Zhengding stupa, the needs of gameplay and artistry should be taken into account, so that it has both cultural heritage and can adapt to the overall style and visual effects of the game. Through creative design and artistic treatment, Zhengding Buddhist pagoda can be combined with the plot of the game, character interaction and other aspects to increase the fun and attraction of the game.

Education and cultural communication: As a medium of cultural communication, video games have a wide range of influences. When recreating Zhengding Stupa, attention should be paid to the function of education and cultural communication, so that players can understand and touch the historical, cultural and artistic value of Zhengding Stupa while playing games. Through the story, tasks, puzzles and other ways in the game, the knowledge and cultural connotation related to the Zhengding pagoda can be transmitted to the player.

Technical implementation and user experience: Video game re-creation involves aspects of technical implementation and user experience. When recreating Zhengding stupa, the feasibility of technical implementation and the comfort of user experience should be taken into account. Through advanced technical means, such as three-dimensional modeling, virtual reality, the realistic reproduction of Zhengding pagoda can be realized. At the same time, it is also necessary to pay attention to the interactive experience of users in the game, providing convenient and natural ways of

operation, so that players can better experience and understand the cultural charm of Zhengding Stupa.

Therefore, Zhengding stupa should follow the principles of respecting history and culture, maintaining authenticity and details, adapting to gameplay and artistry, focusing on education and cultural communication, as well as technical realization and user experience in the re-creation of video games. The implementation of these principles can create both cultural and interesting video games, allowing players to deeply understand and experience the historical, cultural and artistic value of Zhengding Stupa.

5.2 The matter that the pagoda should be paid attention to in the creation of electronic games

development of The Times and the progress of the society, its traditional cultural resources have been continuously discovered, but it is worth thinking about how to integrate these cultural elements into the design of electronic games in the design of the game. In recent years, many game designers have begun to create and design traditional cultural elements. However, it is a complicated problem to integrate traditional cultural elements into electronic games, which requires designers to have a deeper understanding and understanding of traditional culture. As a cultural element, it is important to note the following:

Accuracy and authenticity: zhengding pagoda has a unique historical and literary background, and its architectural style and detail features have high academic requirements. In the creation of electronic games, it is necessary to ensure that the description and rendering of the orthotics is accurate and true, avoiding errors or misleading players. This requires the production team to have sufficient history and knowledge, and to conduct in-depth research and understanding of the definite buddhist tower.

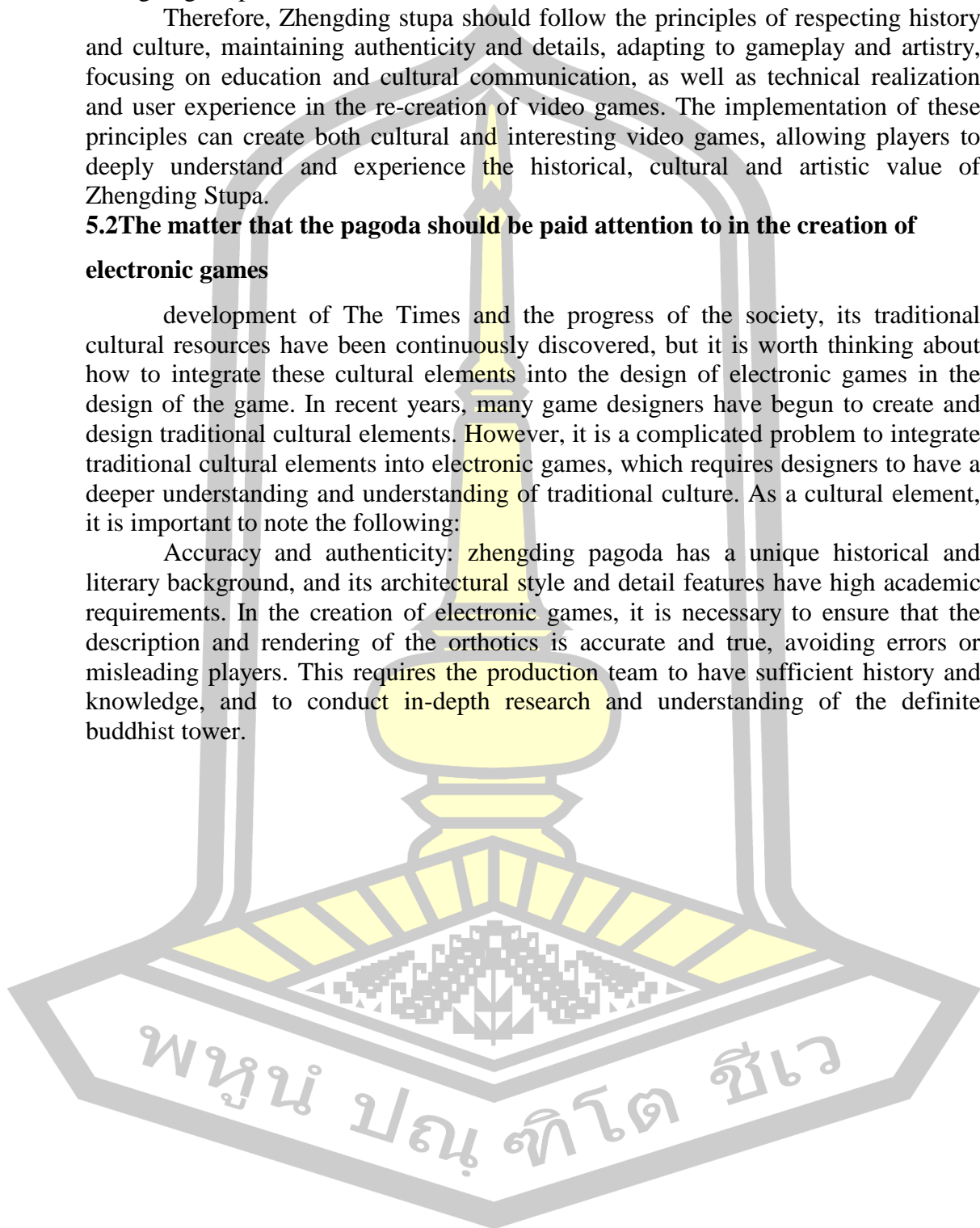




Figure 42 Is the details of the ancient tower

Image source: network

culture and artistry: zhengding pagoda is the treasure of ancient Chinese culture and art, which has great artistic value. In the creation of electronic games, it is necessary to show its unique culture and artistry, including architectural style, sculpture art, cultural connotation and so on. At the same time, according to the overall style of the game and the need of visual effect, the appropriate art treatment and creative design are carried out to increase the appeal and playability of the game.

Interactivity and gameplay: the core of video games is interactivity and gameplay. When it comes to making the formation of the tower, it needs to combine it with the game plot, the role interaction, etc., and design an interesting and challenging game task and play. For example, you can design players and the buddhist mysteries, adventure tasks, etc., and allow players to interact with the Buddha in the game, adding to the interest and attraction of the game.

Technology and difficulty: the creation of electronic games involves complex technological implementation. When it comes to making the formation of the pagoda, it is necessary to consider the technical and the difficulty of the realization. According to the technical strength and resources of the game development, the model and scene design of the buddhist tower are carefully planned to avoid the waste of technical problems and resources. At the same time, we need to focus on the performance and optimization of the game, to ensure the flow and stability of the game.

Respect culture and history: zhengding pagoda is an important part of China's historical and cultural heritage, with high cultural and historical value. In the creation of electronic games, we need to respect the authenticity of culture and history and

In general, it is important to pay attention to the accuracy and authenticity, culture and play, interactivity and game, technology and implementation of the game, and to respect culture and history. Only in these areas should be fully considered and planned to create an electronic game that has both cultural and interesting flavors, allowing players to understand and experience the history, culture and artistic value of the taiji in the game.

[illegible]

According to the author of the paper, "the study of the visual form of the ancient pagoda," the ancient tower is one of the important categories of traditional architecture, not only the holy land of the buddhist Buddha, but also a traditional aesthetic, carrying the Chinese culture of the next five thousand years. As a masterpiece of Chinese ancient pagoda, the ancient tower of the ancient tower, which has shown the beauty of the rich art of the ancient pagoda, has concentrated the art and culture of the ancient pagoda. At the same time, the connotation and symbolic significance of the cultural connotation of the ancient pagoda are expounded, and the reference basis is provided for the spiritual and cultural construction of the game art.

5.3.1 Cultural dissemination value

Zhengding pagoda is an important legacy of Chinese historical culture, representing the essence of buddhist culture and ancient architecture. By integrating the Olympic pagoda into video games, it can be used by the modern media, inheriting and protecting the legacy. In the game, the player understands and contacts the history, culture and artistic value of the established Buddha, which helps to expand the scope of the culture and improve the understanding and understanding of the historical culture.

With the process of globalization, cross-cultural communication and communication are becoming more and more important. As one of the representatives of Chinese culture, it can spread it to a broader audience and promote the communication and understanding of foreign languages. This helps to improve the influence and competitiveness of Chinese culture on the international stage.

5.3.2 Aesthetic value

Artistic innovation and creative expression: video games are a medium of interactivity and artistic combination, which provides a wide range of space for creative expression. In the video game, the formation of the buddhist tower can be combined with the game plot and the interaction of the characters, through creative design and art processing, increasing the interest and attraction of the game. This kind of artistic innovation and creative expression helps to promote the fusion of culture and technology, and enrich the connotation and expression of the game industry.

5.3.3 Economic value

Tourism promotion and local economic development: zhengding pagoda as a famous tourist attraction, has high visibility and influence. Through video games, this widely distributed medium can further promote the tourism resources of the buddhist tower, and attract more visitors to visit and travel. This helps to promote the development of local economies and the prosperity of tourism.

Education and science: video games also have extensive application value in the field of education and science. Through the integration of the Olympic tower into video games, it can design interesting, challenging game tasks and gameplay, allowing players to learn from the game middle school and learn about the history, culture and art of the buddhist tower. This kind of teaching can help improve the interest of players and the awareness of science science, and promote the development of education and science.

The value of zhengji in the field of electronic games is mainly reflected in the inheritance and protection of culture, artistic innovation and creative expression, tourism promotion and local economic development, education and science, and cross-cultural communication and communication. Through the creation of electronic games, we can further excavate and play the cultural value of the establishment of the buddhist tower, and promote the integration and development of culture, science and technology and economy.

5.4 Zhengding pagoda in video game field to create user research

User research is a very important part of user research for the re-creation of Zhengding Stupa in the field of video games. Through face-to-face communication with target users, we can deeply understand their needs, expectations and opinions on Zhengding Stupa video games, and obtain more real, specific and in-depth information. In the user research survey, the author mainly focuses on the following aspects:

Understanding and cognition of Zhengding Stupa: Understanding of users' cognition of Zhengding Stupa, including their understanding of its historical and cultural background, architectural style and other aspects. This helps determine the extent to which the presentation and cultural connotations of the Zhengding Pagoda are explored in the game.

Game needs and expectations: Ask users about their needs and expectations for Zhengding Stupa video games, including game play, story, art style, etc. Understanding the user's preferences and expectations for a game can help the production team develop a game design that is more in line with the needs of the market.

Game experience and feedback: Let users share their experience and feedback on the Zhengding Pagoda video game, including the game's operation, graphics, sound effects, plot and other aspects. Through the feedback of users, the problems and room for improvement in the game can be found, which provides a basis for the subsequent optimization of the game.

Interest and attitude towards Zhengding Stupa: Understand users' interest and attitude towards Zhengding Stupa, including whether they are willing to learn more about the historical, cultural and artistic value of Zhengding Stupa, and whether they are willing to recommend others to play the game. This helps to evaluate the market potential and promotion value of Zhengding Stupa video game.

Evaluation and comparison of competing products: Ask users about the evaluation and comparison of Zhengding Stupa related video games in the market, including game play, graphics, sound effects, plot, etc. By understanding the user's evaluation of competitive products, we can better grasp the market trend and user needs, and formulate a more scientific and reasonable game development strategy.

In the course of the research, the following points were noted by the author:

Select representative target users as far as possible to ensure that the information obtained is extensive and representative.

Maintain an open, friendly and respectful attitude during the research process and encourage users to express their views and opinions. The information provided by users is recorded and analyzed in detail to facilitate subsequent data collation and trend analysis.

Adjust game development strategy and direction based on research results to meet market needs and user expectations.

User research is one of the important user research methods that Zhengding Stupa re-creates in the field of video games. Through face-to-face communication with target users, we can deeply understand their needs, expectations and views on the game, which provides an important reference for the development of the game. At the same time, the game development strategy and direction can be timely adjusted

according to the research results to improve the competitiveness and market performance of the game.

In the user research that Zhengding Stupa recreates in the field of video games, in addition to user research, opinions and suggestions from a wider range of target user groups can also be collected through questionnaires.

Subsequently, three questionnaires were set up for different perspectives, respectively for pagoda visitors, game players and game practitioners, and the contents of the questionnaire are shown in the appendix.

5.4.1 Field investigation

First of all, for the local people and local departments, the author will focus on the research on the culture of the pagoda itself, what level of public cognition is about, and whether it is comprehensive.

Interpretation of result

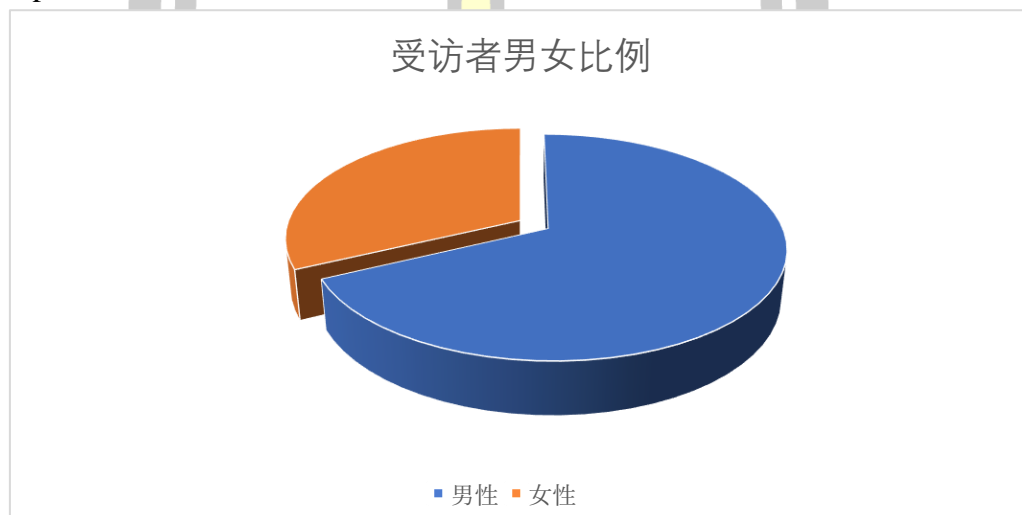


Figure 43 Ratio of male to female respondents
Data source: questionnaire prepared by the author
Knowledge of Zhengding Stupa:

Most respondents said they had heard of the Zhengding Pagoda, but had limited knowledge of its specific historical, cultural and artistic value. This shows that it is necessary to strengthen the background introduction and cultural connotation of Zhengding Pagoda in the game. More than half of the players said they like to see Buddhist pagodas or traditional Chinese buildings in the game, indicating that these types of buildings have a certain appeal. The majority of tourists choose C (know a little), indicating that tourists have a certain interest in the culture of the stupa, but more in-depth understanding is needed. In terms of the significance of stupa culture to the inheritance of Chinese culture, tourists responded positively, believing that stupa culture is of great significance in enriching history and culture and inheriting religious beliefs.

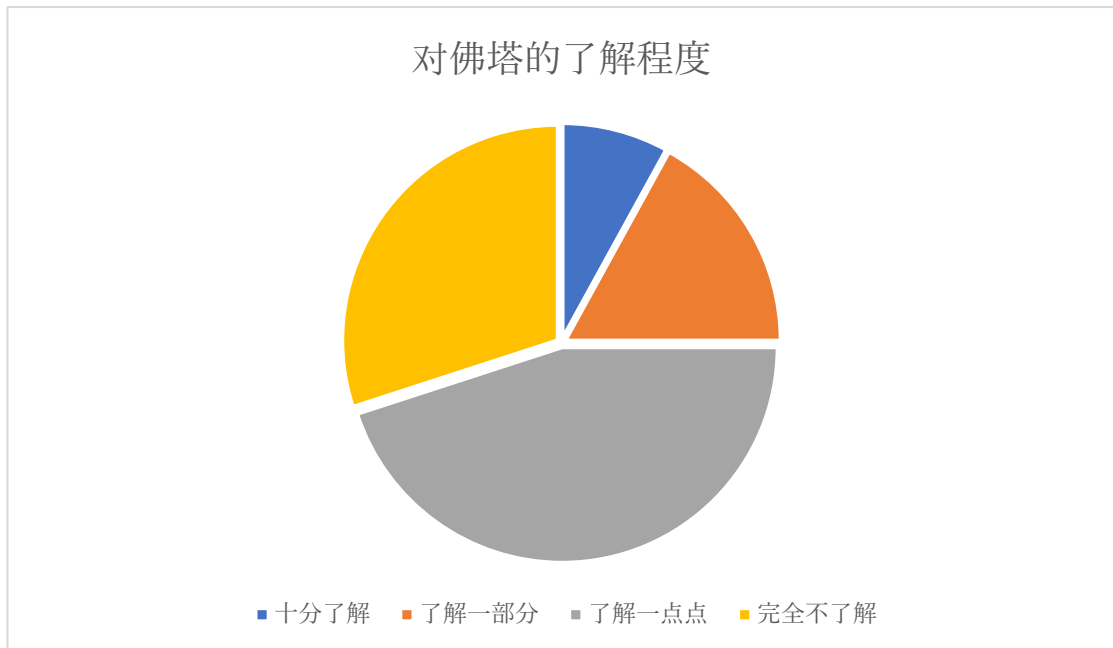


Figure 44 Knowledge of the stupa

Data source: questionnaire prepared by the author

On the question of whether they know the culture of the stupa, more tourists choose A (Yes), indicating that the stupa culture has been spread to a certain extent. However, a significant number of visitors still chose B (no), indicating that there is still room to improve visitors' awareness of the pagoda culture.

For the question of whether they have visited the stupa, the proportion of A (yes) is higher, reflecting the attraction of the stupa as a tourist attraction. Tourists' cognition of the main role of the pagoda is diversified, and a high proportion of them choose A (religious belief) and C (tourist attraction), indicating that the role of the pagoda in religion and tourism has been recognized.

When tourists visit the pagoda, the most interesting aspects mainly include architectural style, historical culture and Buddhist culture. In terms of the characteristics of pagoda architecture, the characteristics of tall and straight, unique shape and rich in decoration have been more recognized.

However, the inheritance and development of pagoda culture in modern society faces some problems, such as the lack of protection awareness mentioned by tourists and limited capital investment. Most tourists believe that the protection and inheritance of pagoda culture should be strengthened, and are willing to contribute to it by strengthening publicity and education.

In order to let more people know and understand the stupa culture, it can be promoted through various ways, such as carrying out cultural activities and using social media.

To sum up, the survey shows that tourists have a certain awareness and interest in the pagoda culture, but it needs to be strengthened in terms of protection and inheritance. Through further publicity and education, tourists' attention to and participation in the pagoda culture can be improved, and its better inheritance and development can be promoted.

5.4.2 Enterprise survey

For enterprises, the author focuses on investigating how designers embody culture through games, so as to learn the ideas and methods for making games, and takes this opportunity to understand what information is needed to make a game from the perspective of game makers.



Figure 45 The author enters the enterprise research

Photo credit: Photo by the author

In the development of Zhengding Buddhist Pagoda video games, it is necessary to strengthen the background introduction and cultural connotation of Zhengding Buddhist Pagoda mining, more players tend to introduce the historical and cultural background simply or through tasks/activities, which helps players better understand the significance of the building. To meet the needs of users for historical and cultural experience.

When I conducted a survey for employees of a game company, I focused on the content of the game, aiming to explore issues related to the spread of game culture, and analyze its feasibility from the perspectives of game clothing features, characters, props, weapons, etc. Here are some of the analysis and recommendations based on the findings:

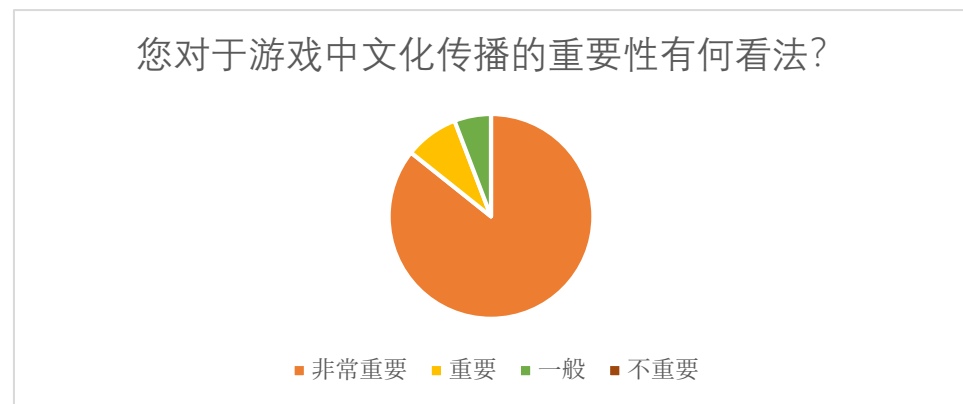


Figure 46 Views on the importance of cultural communication in games

Data source: questionnaire prepared by the author

The importance of cultural communication in games: Most of the game company employees who participated in the survey think that cultural communication in games is very important (85.71%), which shows that they realize that games are not only entertainment products, but also have the responsibility of cultural inheritance and communication.

The research results show that the main ways to reflect cultural characteristics in games are the dress characteristics of game characters (78.57%), the architectural style of game scenes (71.43%), the background setting of game plot (64.29%), the style of game music (50%) and the design of game props (42.86%). This shows that these aspects of design need to be focused on during game development to better spread culture.

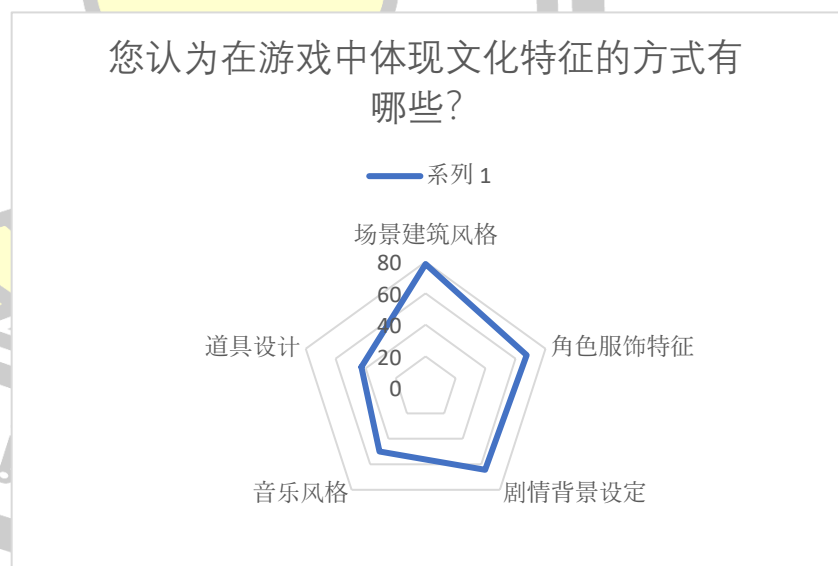


Figure 47 What practitioners consider to be the ways in which cultural identity is reflected in games

Data source: questionnaire prepared by the author

Influence of game dress features on cultural communication: More than half of game company employees believe that the influence of game dress features on cultural communication is very high (57.14%) or relatively high (35.71%). This shows that clothing features in games are one of the important ways to spread game culture, which can attract the attention of players through unique design and elements, and then spread culture.

The importance of game character design in spreading game culture: The vast majority of game company employees believe that character design in games is very important in spreading game culture (85.71%). This shows that game characters are a bridge between the player and the game culture, and through the design of unique appearance, backstory, personality and character traits, we can better engage the player and spread the game culture.

Unique appearance and image (78.57%), rich backstory (71.43%), strong skills and abilities (57.14%), unique personality and character traits (57.14%) were considered to be the characteristics that game characters should have. These traits help characters engage players and spread the game's culture.

Importance of game items in spreading game culture: More than half of game company employees say items in games are either very important (57.14%) or important (35.71%) in spreading game culture. This shows that game items are an important part of game culture and can be designed to attract players' attention and spread game culture through their unique appearance, function, association with characters or story lines.

Unique appearance and functionality (71.43%), connection to the character or storyline (64.29%), ability to enhance the player's game experience (57.14%), collectible or tradable value (35.71%) are considered to be the characteristics that game items should have. These features can help the item better engage players and spread the game culture.

How important game weapons are to spreading game culture: More than half of game company employees say weapons in games are either very important (57.14%) or important (35.71%) to spreading game culture. This shows that game weapons are an important part of game culture and can be designed to capture players' attention and spread game culture through their unique appearance, attack power and skills, and association with characters or storylines.

Unique appearance and styling (71.43%), powerful attack and skills (57.14%), connection with the character or storyline (57.14%), and ability to enhance the player's game experience (57.14%) are considered to be the characteristics that game weapons should have. These features help weapons engage players and spread the game's culture.

How to express cultural characteristics: color and pattern (42.86%), accessories and details (35.71%), and cultural symbols and symbols (28.57%) are the most common ways to express cultural characteristics. This shows that in these ways, game developers can incorporate cultural elements into game dress features to spread game culture.

How do game dress features match the overall style and atmosphere of the game: More than half of game company employees believe that dress features in a game should fully mirror the overall style of the game (57.14%). This suggests that

game costume features should be designed in accordance with the overall style and atmosphere of the game to enhance the immersion and coherence of the game.

How game costume features are communicated and displayed through social interaction: The appearance and details of clothing are displayed in the images of in-game characters (71.43%), game developers can create a community of players, so that players can share their own game screenshots, videos and experiences in the community (71.43%), and some activities related to game clothing can be held. For example, fashion shows and design competitions (57.14%) are more common. This shows that there are ways in which game developers can encourage social interaction, display and share features of game clothing, and spread game culture.

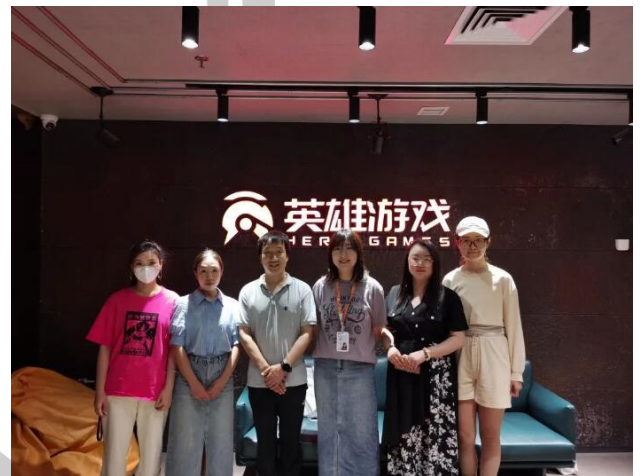


Figure 48 The author enters the enterprise research

Photo credit: Photo by the author

How game clothing features relate to real-world fashion trends: Some popular fashion brands and styles are co-branded into the game's clothing features (57.14%), through virtual stores to display and sell (35.71%), players can buy their favorite game clothes in virtual stores to show their personality and style (35.71%) are the most common ways. This shows that there are ways in which game developers can link game clothing features to real-world fashion trends to increase the sense of style and appeal of games.

How characters, items, and weapons work together to spread game culture: More than half of game company employees believe that characters, items, and weapons should be integrated into the setting and storyline of the game (57.14%) to enhance immersion and continuity. This shows that during game development, there is a need to focus on the compatibility of characters, items, and weapons with the game's setting and storyline in order to better spread the game culture.

How characters, props and weapons in games are promoted in products outside the game to spread game culture: making peripheral products (71.43%), transforming characters, props and weapons in games into comics, novels, animations and other forms (57.14%), and holding cosplay exhibitions (57.14%) are the most common ways. This shows that in these ways, game developers can promote characters, items and weapons from the game into products outside of the game to spread the culture of the game.

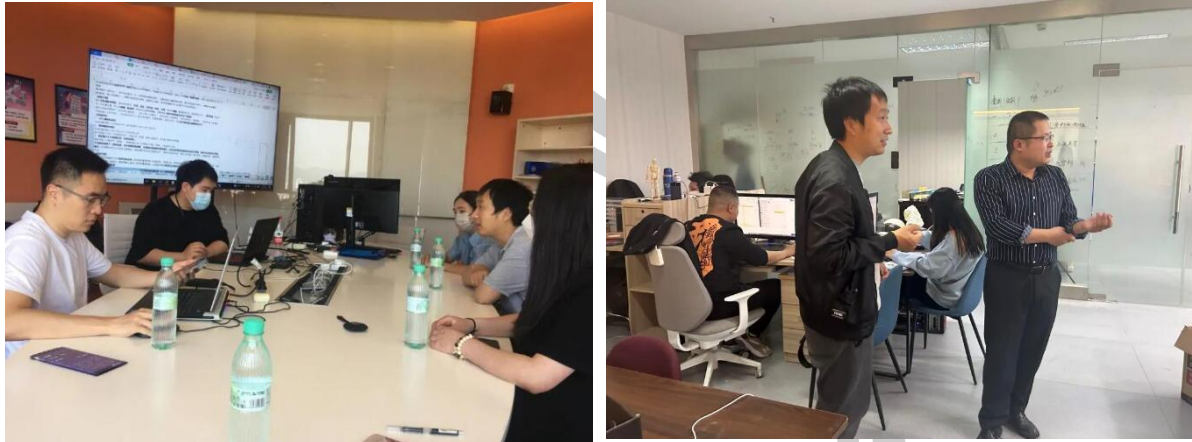


Figure 49 The author enters the enterprise research

Photo credit: Photo by the author

How in-game characters, items, and weapons are purchased or traded in order to spread game culture: Creating a "treasure store" system (42.86%), and building a bridge between players through official game guarantees (28.57%) are the most common ways. This shows that game developers can encourage players to buy or trade characters, items and weapons within the game in these ways to spread the game culture.

Based on the above research results, game companies can start from the following aspects when spreading game culture:

Pay attention to the design of game clothing characteristics: integrate cultural elements into the game clothing characteristics, and express cultural characteristics through the design of colors, patterns, accessories and details. At the same time, ensure that the clothing features match the overall style and atmosphere of the game, enhancing the immersion and coherence of the game.

Enhance the design and development of game characters: give game characters a unique appearance, backstory, personality and character traits to make them more attractive and appealing. In addition, the characters are integrated with the setting and storyline of the game to enhance the immersion and coherence of the game.

Design unique game props and weapons: Integrate cultural elements into the design of game props and weapons to attract the attention of players and spread the game culture through the design of unique appearance, function and connection to the character or storyline.

Encourage social interaction and presentation: Provide a community or social platform where players can share screenshots, videos, and tips, and show off their in-game clothing features. In addition, activities related to game clothing can be held, such as fashion shows, design competitions, etc., to encourage players to participate in social interaction and spread game culture.

Combine fashion trends in the real world: Connect the features of game clothing with fashion trends in the real world, attract more players' attention and participation in the game through co-branding, virtual stores, etc., and spread game culture.

Promote multiple applications of game characters, props and weapons: transform game characters, props and weapons into comics, novels, animations, etc., or produce peripheral products, hold cosplay exhibitions, etc., to expand the spread of game culture and attract more attention from non-game players.

Optimize the in-game trading system: Create a similar trading system, or through the game's official guarantee, to build a transaction bridge between players and encourage players to buy or trade characters, items and weapons in the game to spread the game culture.

Therefore, game companies can strengthen the spread of game culture and enhance the cultural value and social influence of games through the above ways. At the same time, game companies should also pay attention to the quality of games and user experience, in order to attract more players to pay attention to and participate in games, and jointly spread and develop game culture.

5.4.3 Feedback of survey data of game players

After a survey, it was found that players prefer traditional art styles and authentic sound effects, and the fusion of ancient and modern styles or the imitation of pagoda styles have been supported to some extent, which shows that players have diversified demands for architectural styles. At the same time, I want the game to have a compelling story and a variety of gameplay. This provides direction for the game's art design, sound production, and story writing. Players are focused on aesthetic, functional, and historical values, and this requires that games be designed to fully reflect these values

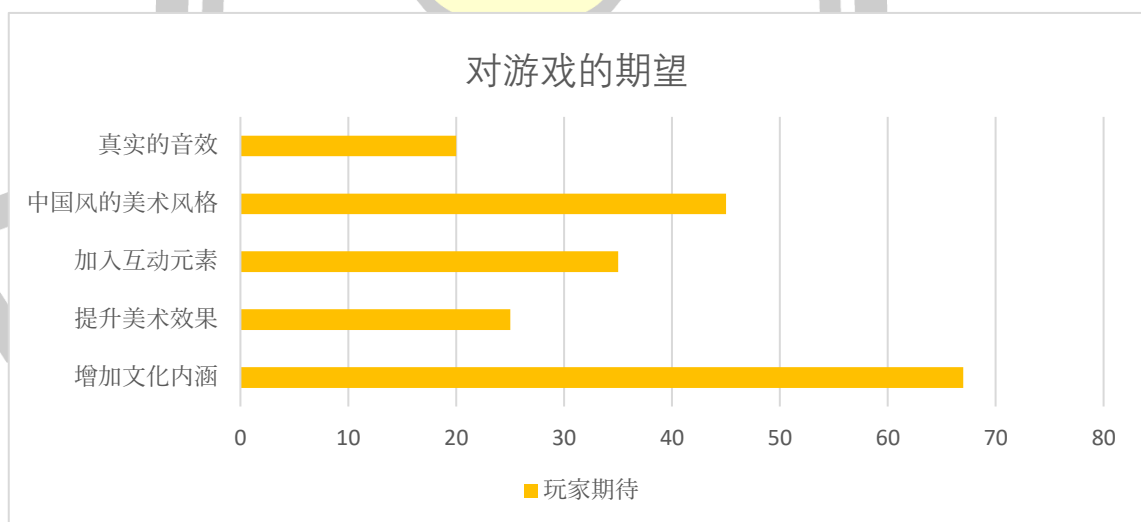


Figure 50 Gamer expectations for Stupa games
Data source: questionnaire prepared by the author

Some of the current market Zhengding pagoda related video games have some problems, such as inconvenient operation, poor picture effect, monotonous plot and so on. It needs to be improved and perfected in the subsequent development of the game. Most of the target players are interested in Zhengding Stupa-related video games and are willing to try them out, which indicates a large market potential. It can strengthen the promotion and marketing of the game and attract more users to participate in the experience.

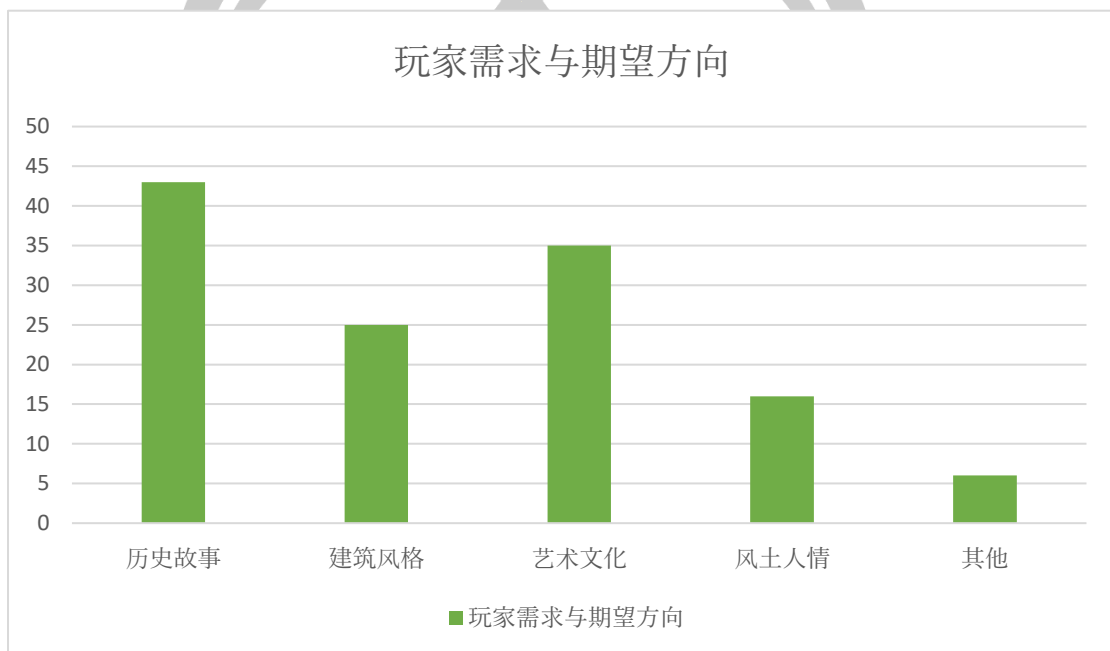


Figure 51 Player demand and desired direction

Data source: questionnaire prepared by the author

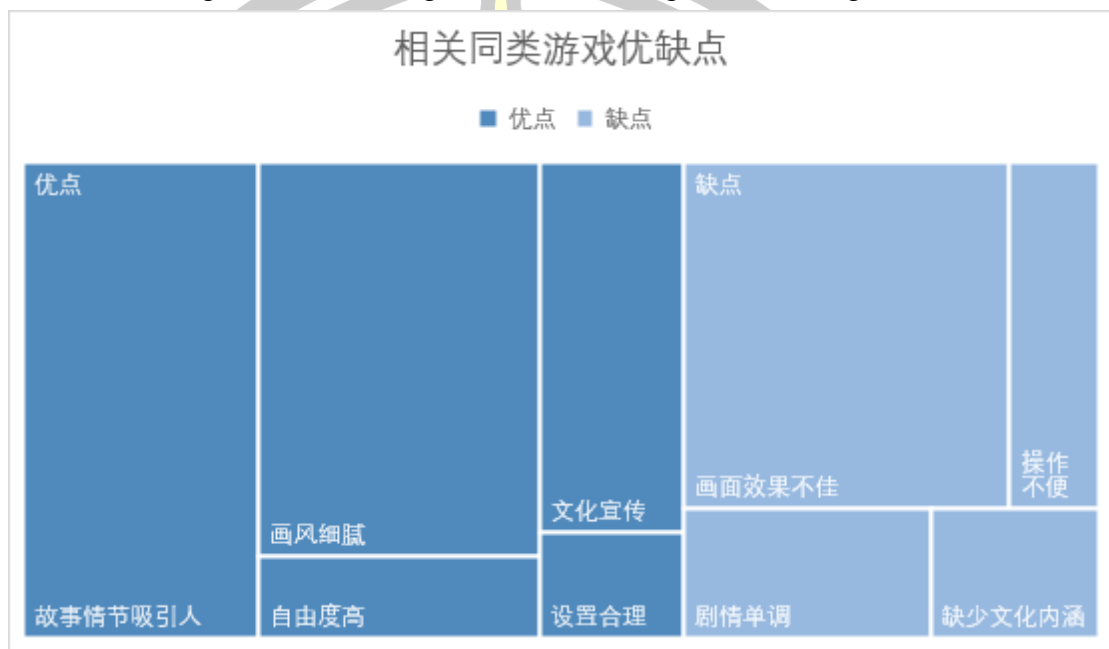
Game needs and expectations: Most respondents want to experience historical stories, architectural styles and artistic culture related to Zhengding Stupa in games. They prefer traditional art styles and authentic sound effects, but also want a compelling story and a variety of gameplay. The majority of players felt that adding a pagoda or a traditional Chinese building would increase the appeal of the game, suggesting that such buildings could become a feature of the game.

Game experience and feedback: Some respondents are satisfied with Zhengding Stupa related video games in the current market, but some respondents think that there are problems in the game such as inconvenient operation, poor picture effect and monotonous plot. Players think that pagodas or traditional Chinese buildings can play the role of ornaments, landmarks, or scenes that can be entered, which provides a variety of options for game design. This provides direction for subsequent game optimization.

Interest and attitude towards Zhengding Stupa: Most respondents expressed willingness to try playing video games related to Zhengding Stupa and would recommend them to others. This shows that Zhengding stupa has great market potential and promotion value. Most players expect pagodas or traditional Chinese buildings to be climbed, entered, or done on quests/activities, which means that interaction mechanisms need to be designed within the game.

Analysis of market trends and competitive products: Most respondents believe that the future development trend of such games is to pay more attention to the mining of cultural connotations and the presentation of artistic effects, and hope that more interactive elements and social functions can be incorporated into the game.。

Figure 52 Advantages and disadvantages of similar games



Data source: questionnaire prepared by the author

The contents of these three questionnaires help the author to comprehensively understand the views and demands of people from different perspectives on Zhengding Stupa-related video games. Through the investigation of pagoda tourists, game players and game practitioners, we can obtain information about pagoda cognition, game demand, experience feedback, interest attitude and evaluation of competitive products. These data will help the game production team to deeply understand the market and users, and provide valuable references for the design, development and promotion of the game, in order to create a more in line with user expectations, with market competitiveness of Zhengding Buddhist Pagoda video game.

5.5 Zhengding Stupa re-creates design positioning and ideas in the field of video games

5.5.1 Creation Positioning

In video games, the game scene plays an important role, not only as the background of the game world, but also as a key element in the context of the environment, region and era in which the game is played. Among them, the game building as an important part of the game scene, has a special significance. First of all, the game scene through the scene layout, backstory and other means, can reflect the regional characteristics of the game, such as the game takes place in an ancient eastern city, a mysterious jungle or a future science fiction world. Secondly, the game scene can also reflect the time background of the game, for example, a game may be

set in medieval Europe, the future age of technology, or ancient China and other different times. Therefore, game architecture, as one of the most symbolic elements in the game scene, carries the important responsibility of showing the geographical and historical background of the game.

As the representative of traditional Chinese architecture, Chinese architecture is unique in the history of world architecture, with unique characteristics and charm. China's architectural style has been developing and evolving continuously. After thousands of years of historical accumulation, it has formed an architectural style with distinct regional characteristics. As an important part of Chinese architecture, pagodas have far-reaching historical origins and cultural significance.

Since the Han Dynasty (1st century AD), Buddhist pagodas have been introduced into China along with Buddhism. After long years of precipitation and evolution, they have not only integrated traditional elements of Chinese architecture, but also gradually developed unique architectural features. These pagodas are not only important structures of Buddhist monasteries, but also have unique architectural forms, structural styles and decorative arts. It shows the exquisite skills and profound connotation of Chinese architecture.

The shape and style of the original pagoda were mostly influenced by Indian Buddhist architecture. However, with the passage of time, the stupa began to combine with the local architectural art, and gradually formed the stupa architecture with distinct regional characteristics. These pagodas, towering in the sky or simple and elegant, not only show the far-reaching influence of Buddhist culture, but also reflect the exquisite skills of ancient Chinese architecture.

In addition, the pagoda also carries a profound cultural connotation in China. It is not only the symbol of Buddhist belief, but also the embodiment of ancient Chinese culture, philosophy and aesthetic concepts. The architectural style, decorative patterns and cultural connotation of the pagoda all reflect the spiritual outlook and aesthetic pursuit of the ancient Chinese society.

Zhengding ancient Pagoda, as the bright pearl of Zhengding stupa architecture, not only stands in the long river of history, but also is an outstanding representative of Zhengding ancient architecture art. Each of these four ancient towers has its own unique architectural characteristics, whether it is the smooth lines of the tower body, or the overlapping of the tower eaves, all demonstrate the exquisite skills and profound connotation of ancient Chinese architecture. At the same time, these ancient pagodas are also important carriers of Buddhist culture, carrying the important functions of Buddhist belief and cultural inheritance.

Video games, as a virtual world, are designed at the beginning not only to pursue entertainment, but more importantly to build a complete and fascinating game world view and background. The world view construction of games is all-encompassing, it involves history, culture, art and other fields. The structure of the game, especially the art design, is influenced by culture and history.

This design aims to design and re-create Zhengding Ancient Pagoda, and use Zhengding ancient Pagoda as a prototype for game art creation. In the process of creation, the work will dig deep into the architectural characteristics and cultural connotation of Zhengding ancient pagoda, and present it in the game world through artistic means. Such re-creation can not only show the characteristics of the ancient

pagoda, but also design a unique building that meets the characteristics of the game through artistic processing.

At the same time, through such a design to achieve the perfect combination of game and reality, so that players can not only feel the grandeur and mystery of the ancient pagoda in the game, but also have a deep understanding of the cultural connotation and historical background behind it. Such a design can not only enhance the artistic value and cultural heritage of the game, but also convey the connotation of the pagoda and the value of cultural communication in the game, so that more people can understand and understand the extensive and profound Chinese ancient architectural art and Buddhist culture.

In short, by designing and recreating Zhengding Ancient Pagoda and integrating it into game art creation, we hope to create a video game with both entertainment and cultural connotation, so that players can enjoy both visual and spiritual enjoyment in the game, and also feel the unique charm of ancient Chinese architectural art and Buddhist culture in the game. So as to realize the value of transmitting the connotation of the pagoda and cultural communication in the game.

5.5.2 Design Process

When designing the original painting of the pagoda building based on the Zhengding ancient pagoda in the game, we followed the following design ideas:
Prototype research:

First of all, the in-depth study of Zhengding ancient pagoda. The historical, cultural and architectural features of Zhengding Ancient Pagoda as the prototype are the cornerstone of the design. By reading a lot of historical documents and architectural materials, I have a deep understanding of the historical background, cultural connotation and architectural structure of Zhengding ancient pagoda. At the same time, the ancient pagoda was visited on site, and its appearance was carefully observed, capturing its unique architectural elements and details.

Extract core elements:

Extract the most representative architectural elements from Zhengding ancient pagoda, such as the proportion of the tower, lines, cornice design, decorative details. These elements will form the basis of the original painting design. At the same time, many of the works underwent some reconstructions and re-creations to fit the game's worldview and art style.

Color and Style:

In the 19th century, researchers began to study the psychological effects of color more systematically. One of the first studies was carried out by the German writer and philosopher Johann Wolfgang von Goethe (August 28, 1749 - March 22, 1832). Goethe believed that color had a profound effect on the human psyche and wrote a book called *Zur Farbenlehre* (The Theory of Color), in which he explored the subjective nature of color perception and its effect on thought and emotion. His work paved the way for later researchers, such as Wilhelm Wundt, who is considered the founder of modern psychology. Wundt conducted a series of experiments in the 18th and 19th centuries investigating the physiological and psychological effects of color on human perception. Color has a great influence on our mood and mood. Different colors can evoke different emotional responses, and the same color can have different meanings and effects according to different contexts and cultures. For example, red is often associated with passion, excitement and energy. It can also represent danger,

anger; Green is often associated with nature, growth and life. It can also represent greed and sickness, and green is often used in games to show toxic effects.

In the game design, the colors will be matched according to their own characteristics. For example, normal pagodas are sacred and mysterious, and are the spiritual trust of people, so warm colors will be used, especially yellow. Conversely, the game will also appear in the pagoda town demon situation, such as the demon tower and other buildings, its color selection will choose the dark series of cold tones, evergreen blue or purple. But in reality, the ancient pagoda also has its own real color reference, so through studying the color and overall style of the Zhengding ancient pagoda. Taking into account the architectural style of ancient China and the characteristics of Buddhist architecture, the appropriate color combinations and painting styles were selected to ensure that the colors of the original painting were in harmony with the style and colors of the ancient pagoda. At the same time, this creation pays attention to the design of light and shadow, and creates the three-dimensional sense and spatial sense of the pagoda through clever light and shadow changes.

Scene and Background:

The original painting of pagoda architecture is not only limited to the tower itself, but also includes its environment and background. Therefore, at the beginning of the design, the environment meeting the requirements is designed according to the game background, such as mountains, rivers, temples, cities, etc., in order to create a corresponding atmosphere. The selection and design of these background elements need to be coordinated with the stupa building itself to enhance the overall visual effect.

Detail reinforcement:

In the original painting, attention to detail. This includes the texture of the tower body, the carving of the cornice, light and shadow effects, etc. Through the performance of details, enhance the three-dimensional sense and realistic sense of pagoda architecture.

Game worldview integration:

The original painting of the pagoda building is combined with the worldview of the game. Consider the overall style, atmosphere and story setting of the game, and make sure that the original painting of the pagoda building harmonizes with the other elements of the game. At the same time, it is also necessary to innovate the design of the pagoda building according to the needs of the game, such as adding elements related to the plot of the game or adjusting the proportion and details of the building, so as to create a pagoda building that meets the background of the game and has a unique artistic style.

Creativity and re-creation:

On the basis of maintaining the consistency with the prototype of Zhengding ancient Pagoda, the elements of creativity and re-creation are added. This can involve innovative design of ancient tower buildings, or the addition of elements related to the plot of the game, such as mysterious runes, fluttering prayer flags, etc.

Multiple revisions and feedback:

During the design process, the original painting was revised and improved many times. Communicate with team members, game designers, and other stakeholders to get feedback and make adjustments. Ensure that the final design of the

original painting is consistent with the characteristics of the Zhengding ancient tower, and can be perfectly integrated with the game.

Through this design idea, we can create an original painting of the pagoda building with both the features of the Zhengding ancient pagoda and the world view of the game, bringing the player a unique and fascinating visual experience.

5.6 Zhengding Stupa is re-conceived and developed in the field of video games

5.6.1 Scenario Conception

Architectural feature analysis:

The four ancient pagodas have clear style characteristics in Chinese pagoda architecture, which can reflect the characteristics of Chinese architecture. Among them, Chengling Tower is a typical dense eaves tower; Lingxiao Tower a carpet-style tower of brick and wood; A carpet-like tower built of black brick; Huatan Tower is a loft-style tower made of lime gully brick and loess.

General silhouette²⁰, Explore its external image characteristics :

Silhouette can simplify an object or scene into its basic outline shape, highlight the outline features of the object, and make it more prominent and easy to recognize. For example, cats, dogs, elephants, tanks, planes, etc., we do not need to know the internal structure, we only need to see its silhouette to know what it is, and the silhouette has the importance of reflecting the characteristics of the object.

At the same time, in design, silhouette can be used to simplify complex scenes or backgrounds, highlight the subject object, and make it more prominent and easy to understand. This simplified effect helps to improve the readability and visibility of the design work. In addition, by using multiple silhouettes in the design or placing the silhouettes in different positions, visual rhythm and dynamic sense can be created, making the design work more vivid and interesting. Therefore, it is necessary to summarize the silhouette features of the positive ancient pagoda in the initial stage of design, so as to make early preparations for the later stage of design.

²⁰ A silhouette is a simplified depiction of the outline of an object, usually a black shape, often used in design and art to emphasize shape, line and contrast. Silhouettes usually do not contain the internal structure of the object, focusing only on the external outline.

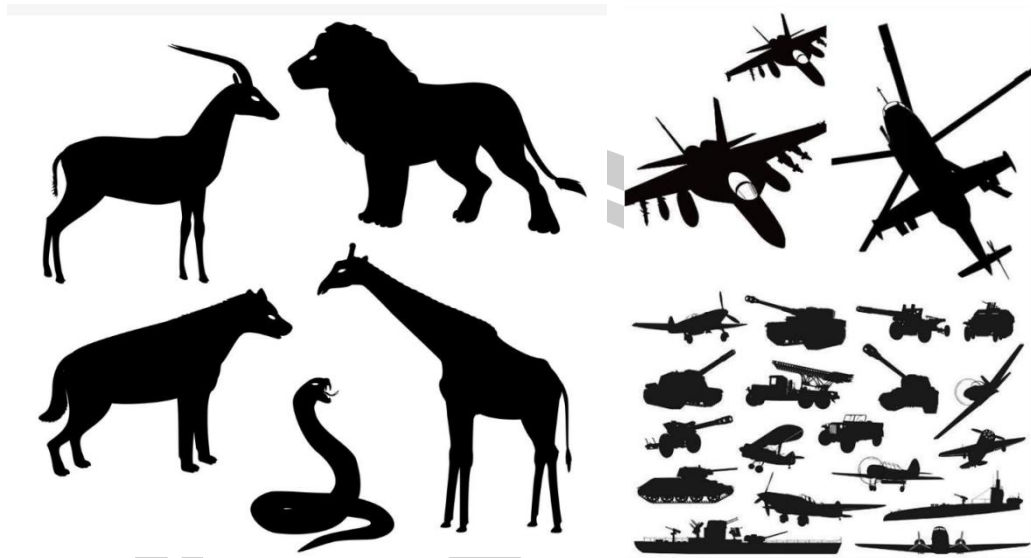


Figure 53 Silhouette design

Photo credit: <https://image.baidu.com>

Line draft drawing, refining the main structure:

Silhouette is mainly to emphasize and highlight the external outline of an object. It is a high degree of generalization and integration of the shape of the object, so that the audience can quickly identify the main shape and posture of the object, and feel the overall shape and dynamics of the object. The line manuscript pays more attention to the expression of the internal structure of the object. Line drafts use lines to depict the outline, details, and internal structure of objects, as well as to show the internal structure and composition of objects.

The modules are disassembled to form a single small element:

The entire stupa design project often involves multiple complex components. By breaking down the design task into smaller modules, the overall complexity can be reduced, and each module can be designed as an independent functional unit, making it easier to improve the manageability and controllability of the design. When designing a stupa, it is possible to better understand the requirements and functions of each part through in-depth analysis and design of each module. This ensures that all parts of the building meet their intended function to the maximum extent possible and that they are coordinated as a whole. At the same time, by adding new modules or modifying existing modules, new functions or features can be easily added to the design, which helps to improve the flexibility and extensibility of the design, making it easier to modify, extend, or reuse the design. Each module can be viewed as a separate unit with a clear function and purpose. If it is a team effort, each module can have designers independently optimize the design of each module without worrying about the impact on the entire building.

Add design elements:

According to the module game requirements, add design elements that meet its game characteristics. This design is designed around Zhengding ancient pagoda, so it will choose some Chinese building cornices, brackets, glazed tiles and other elements at the same time to integrate the image of Buddha, so as to make it more design sense. These elements not only conform to the historical style of Zhengding Ancient pagoda, but also bring players a strong Chinese cultural atmosphere.

Design mix:

In order to make the shape more design, it is generally necessary to combine the design materials and the body elements of a single element through the methods of concave and convex, straight, long and long, edge stretching and contrast, and even intentionally "destroy" the conventional form of some elements. The purpose of this is to create new visual effects when the design material and body elements are combined, thus enhancing the uniqueness and appeal of the design. The design must first consider the rhythm and beauty of the external outline, to ensure the characteristics of the elements, to ensure the rhythm of the edge, but also consider the contrast of the internal structure, to create a rich visual effect.

However, after the completion of the design with the elements, the designed volume was recombined to form a new architectural outline, making it more designed. At the same time, the internal structure and volume are sorted and integrated.

When the design of the single element was completed, the volumes needed to be recombined to form a new architectural profile. This step required a high sense of space and innovative thinking, ensuring that the new arrangement would maintain the character of the individual blocks while making the overall building silhouette look more harmonious and unified.

Refine the internal structure to form a complete line work:

After completing the silhouette design, you need to turn the silhouette into a design draft. In this process, two key aspects need to be paid attention to: the beauty of the external contour and the dense control of the internal structure. First of all, the beauty of the external contour is the basis of the overall design, which determines the visual appeal and overall coordination of the work. Therefore, we have to carefully consider every curve and edge to ensure that they are smooth and beautiful, but not lack of beauty in them. Secondly, it is necessary to balance the relationship between the front and back and the interpenetration relationship, so that the line manuscript works look unified and rich on the whole. Through reasonable arrangement of the position and proportion of the internal elements, the overall structure has a sense of hierarchy and does not appear chaotic, so it is necessary to reasonably reflect the elements such as Buddha statues and Chinese ancient buildings to be used. Finally, the designer will carefully comb and integrate the internal structure and volume. The purpose of this step is to ensure the integrity and consistency of the design and to avoid the appearance of incongruity between the internal structure and the external outline. Through this design process, it is possible to create a game building work that has both a unique design sense and aesthetic principles.

Color matching and light expression:

According to the world view of the game and the game background needs to match the color, the design should set the basic tone, and determine the light source to show its characteristics. Different colors and different light source directions will present different visual feelings to the audience. This design mainly focuses on the culture in the game. On this premise, the color will be the main tone of the ancient pagoda in reality, and the positive definite ancient pagoda is mostly brick structure, so the main color will be gray or cyan. This tone not only fits in with the cultural background of the game, but also creates a calm and mysterious atmosphere for the player. The light source is a normal oblique overhead light, which not only simulates the effect of natural light, but also highlights the structural features and texture details

of the stupa. When the light source is tilted upward, the outline and details of the pagoda will be more vivid against the shadow. After determining the basic tone and light source, the details of the pagoda will be processed. This includes adjusting textures, adding shadows, highlights, and more. Through continuous optimization and adjustment, make the pagoda in the game more real and vivid.

Through the above design, it is necessary to ensure that the design has the characteristics of the ancient pagoda itself, but also reflect its design and innovation. For example, if the same pagoda is added with Buddha images and Buddhist symbols, the external wall or the top of the pagoda is beautifully carved and decorated, and the colors are warm, the holiness and majesty of the pagoda can be expressed. On the contrary, if the skeleton, chain, spike is used as the element, and the color is cool, it will become the repression and terror of the "demon tower". The tower is still a fixed tower, but we gave the ancient tower a unique attribute in the game. Therefore, when designing Zhengding ancient pagoda, it is necessary to ensure its original characteristics. Only in this way can it play a role in spreading ancient pagoda culture and connotation in the game and conform to the characteristics of the game.

5.6.2 Original painting

5.6.2.1 Select the main body-Huata and analyze its characteristics and general structure.

Huatahua Pagoda consists of a main tower and a small subsidiary tower, all made of brick. The main tower is a pavilion building, so it is necessary to extract the silhouette first, master its physical characteristics, and then make a preliminary analysis of the structural combination of Huata, and draw the internal structure through the line draft.



Figure 54 Draw a silhouette based on the Huata image

Image source: Silhouette author drawing



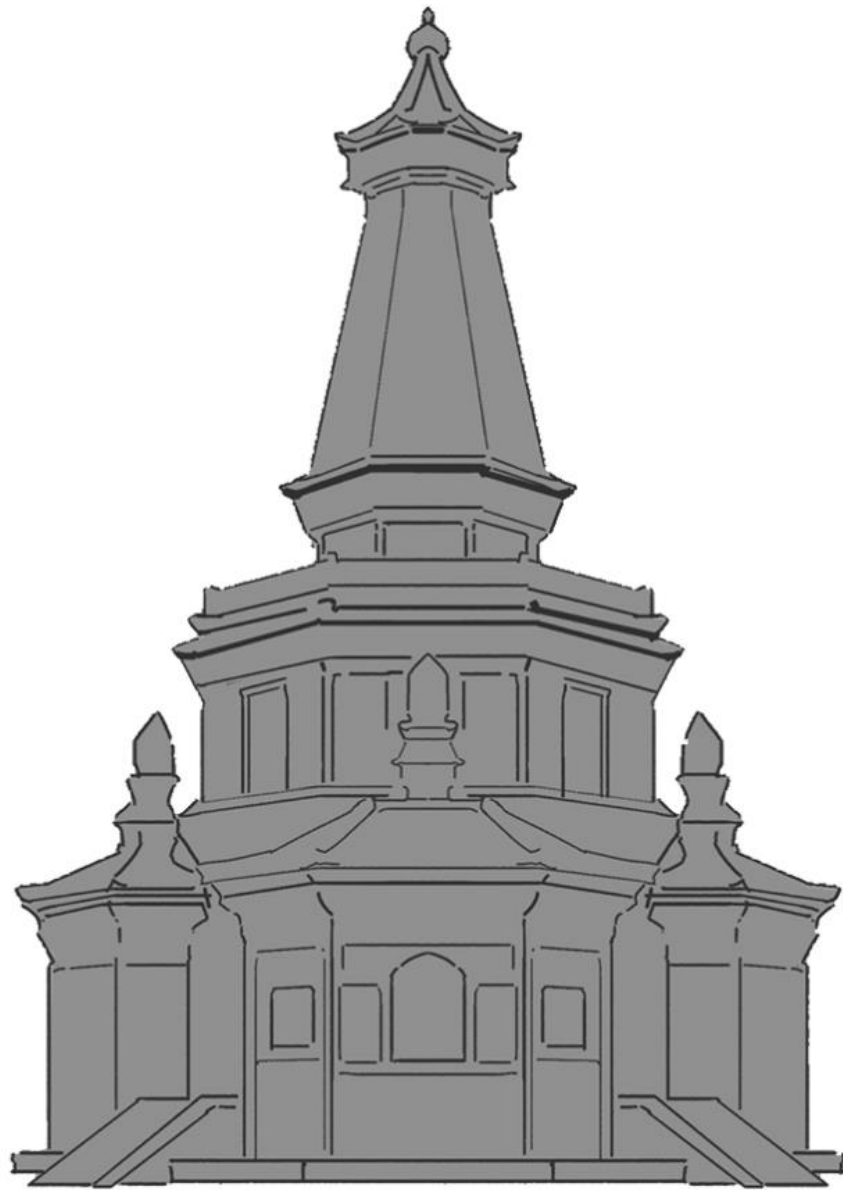


Figure 56 Drawing the internal structure

Image source: Author drawing

5.6.2.2 Pagoda

The pagoda is generally composed of underground palace, base, tower body and tower brake. Through analysis, the pagoda has a total of four layers, composed of the main tower and affiliated small towers, all built of brick, sitting on the same square base, the total plane is octagonal. Therefore, the structure of Huata should be disassembled to form a single small module. Here, the characteristics of each module should be guaranteed, and the function of the analysis should be carried out to distinguish the main and auxiliary buildings.

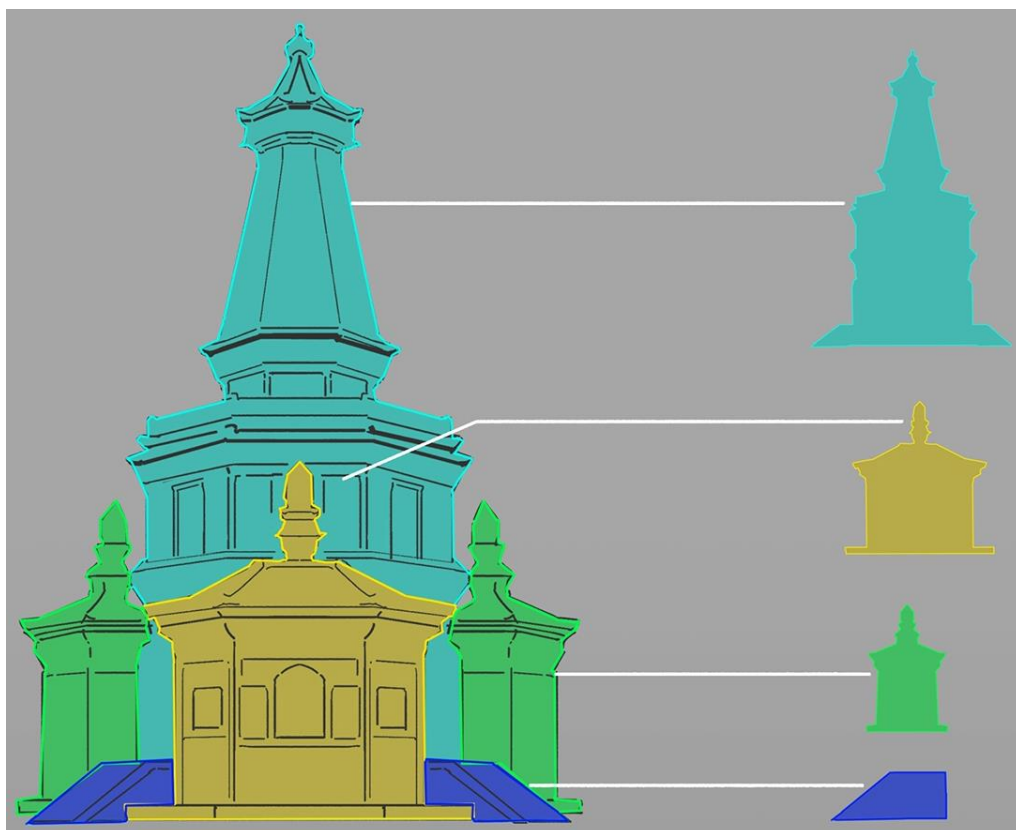


Figure 57 Splitting a module

Image source: Author drawing

5.6.2.3 Select the available design elements according to the characteristics of the game and the game background

Because this design mainly reflects the art of the pagoda in the game, the game is biased towards positive energy, and the pagoda is Chinese architecture, so a large number of Buddha statues and Chinese architecture will be selected in the selection of design elements. The selection of elements in these two directions can not only reflect the particularity and sanctity of the pagoda as a Buddhist product through the Buddha image, but also integrate the characteristics of Chinese architecture to convey Chinese culture. Material principles as much as possible to help provide more possibilities for later design.





Figure 58 Element reference diagram
Image source: <https://image.baidu.com>

5.6.2.4 Design each module in combination with selected elements and Huata-divided modules

This step mainly designs the shape structure to make its shape more design and rhythm. Generally, the outline of a single element is redesigned by means of concave and convex, straight, long and short, and damage to achieve the desired effect. Design process in the case of ensuring the general characteristics of each module of the pagoda, the shape of the edge can be designed to make it more design, so as to make the overall design more colorful.



Module modeling design

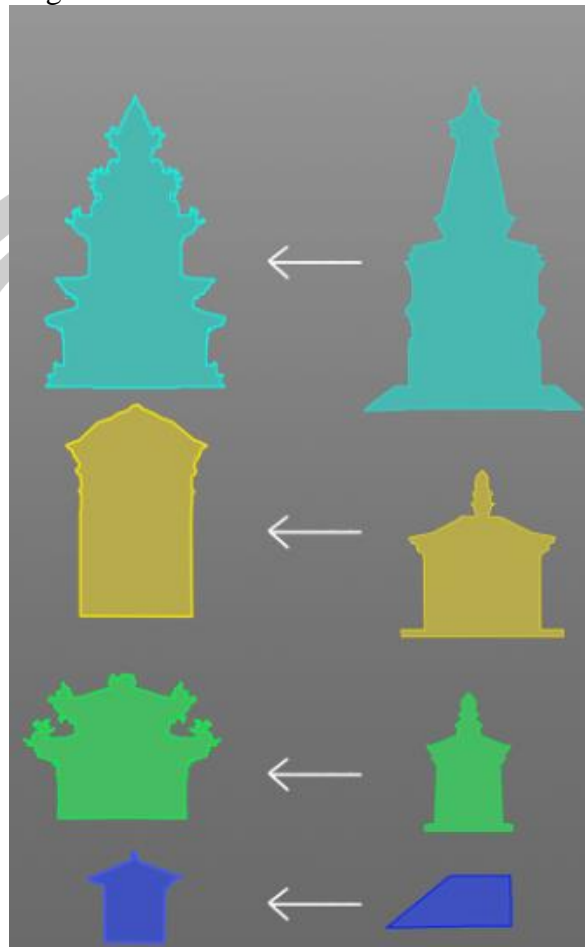


Figure 59 Module modeling design

Image source: Author drawing

5.6.2.5 ReAssemble module Shapes

Observe the rhythm and rationality of the design; At the same time, it should be considered that the basic characteristics of Huata as a stupa remain unchanged. Sometimes when the design of a single module is more reasonable, but after integration, the effect may appear chaotic, overlapping and other unreasonable situations, this time it is necessary to adjust the small module, such as adjusting the length and width of the tower eaves, to ensure the overall effect. This stage mainly considers its basic shape and overall beauty feeling, while considering the use of elements, more is to consider the rhythm of the external form.

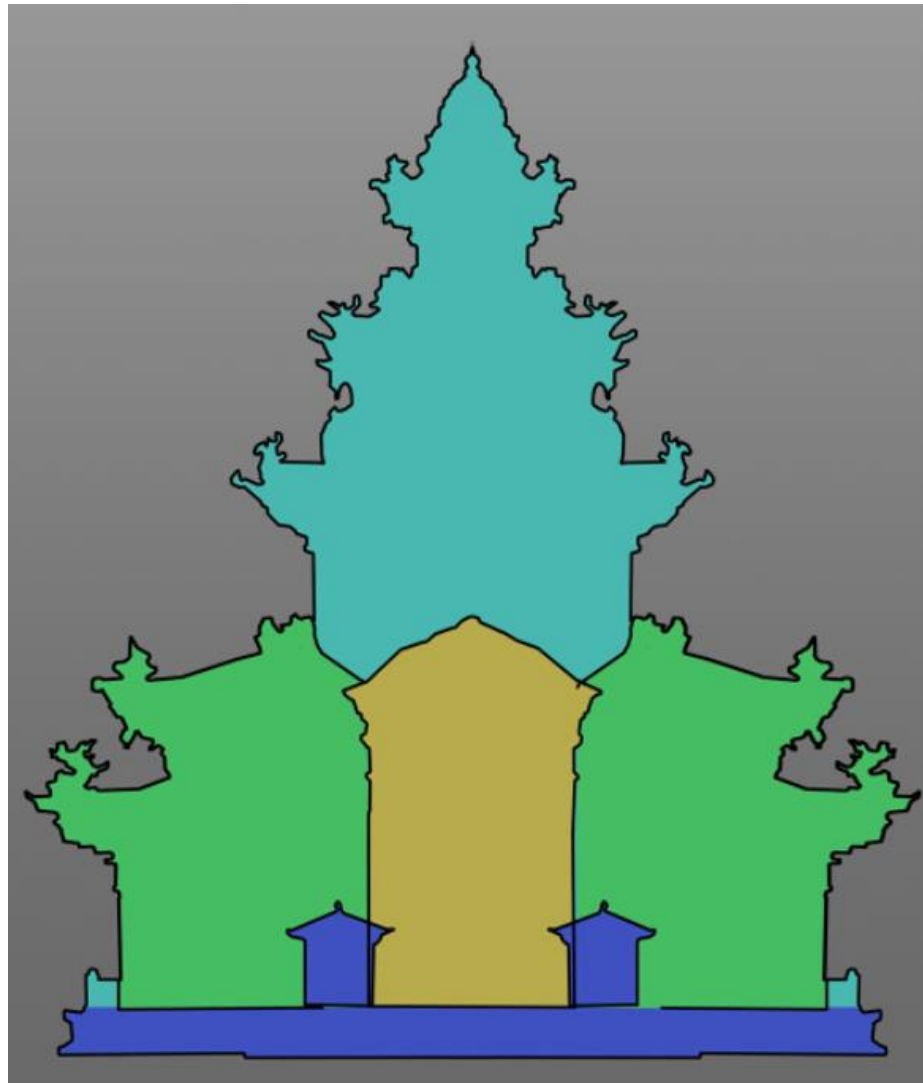


Figure 60 Modular design modeling combination

5.6.2.6 Module refinement to strengthen design elements

This step requires the internal depiction of all the combined modules and the transformation from the external outline design to the internal shape design. This step is the key link of the design. By drawing the internal structure of the tower, tower body and tower brake, the basic characteristics of the pagoda should be guaranteed and the requirements of the game should be met. The part of the pagoda body is fused with the shape of the Buddha statue, which is embodied in the form of relief to realize the purpose of the cultural publicity of the pagoda. The eaves of the tower integrate a large number of Chinese architectural elements and the combination of ridge animals, which can better reflect the characteristics of Chinese architecture. The base part adds guardrail and cornerstone shape, so that the pagoda has the function of passing, but also reflects the solemn sense of the pagoda. According to the interactive nature of video games, the original stone doors and Windows were redesigned, and the ancient Chinese doors and Windows were designed into wooden structures to make them more interactive.

Figure 61 Detail description of internal structure

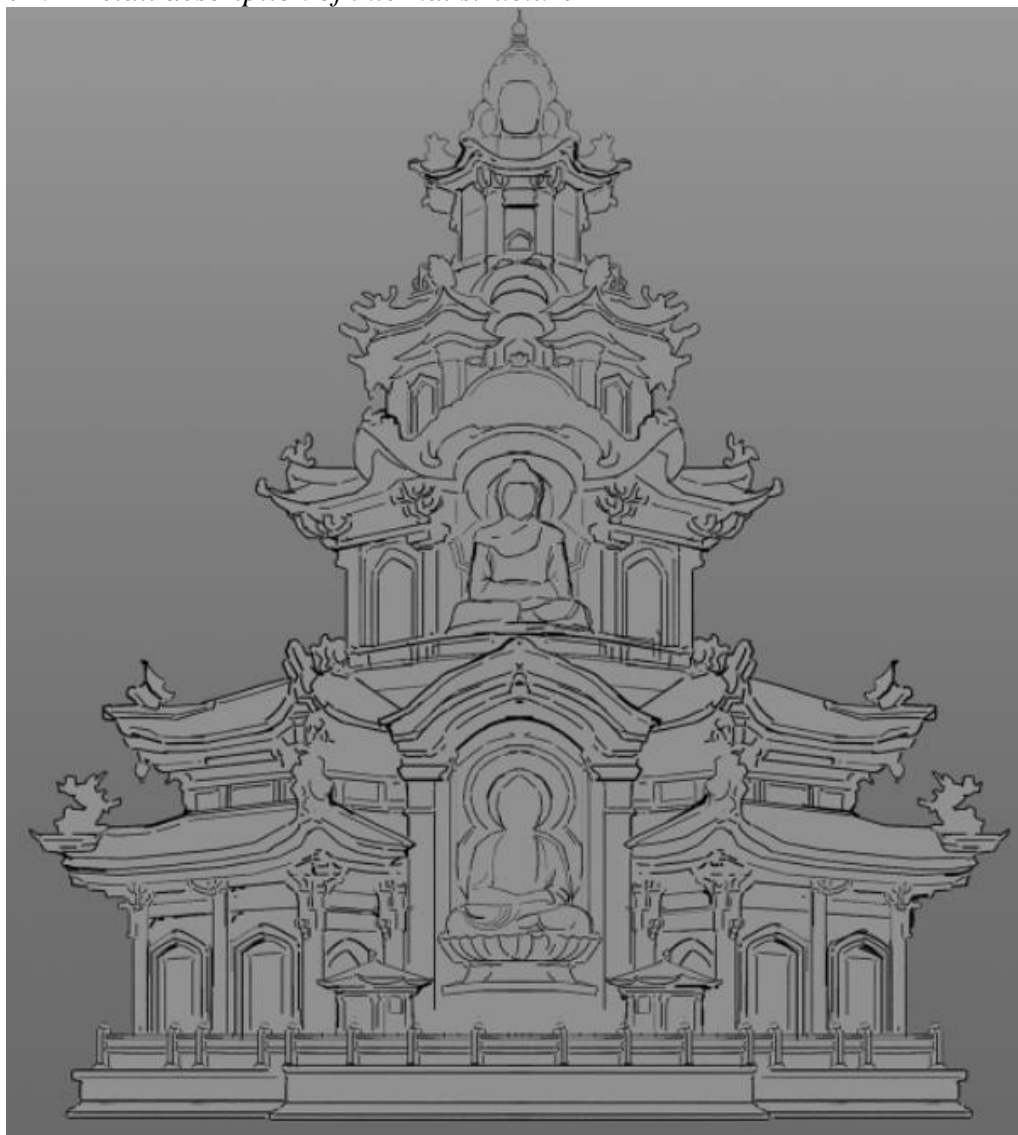
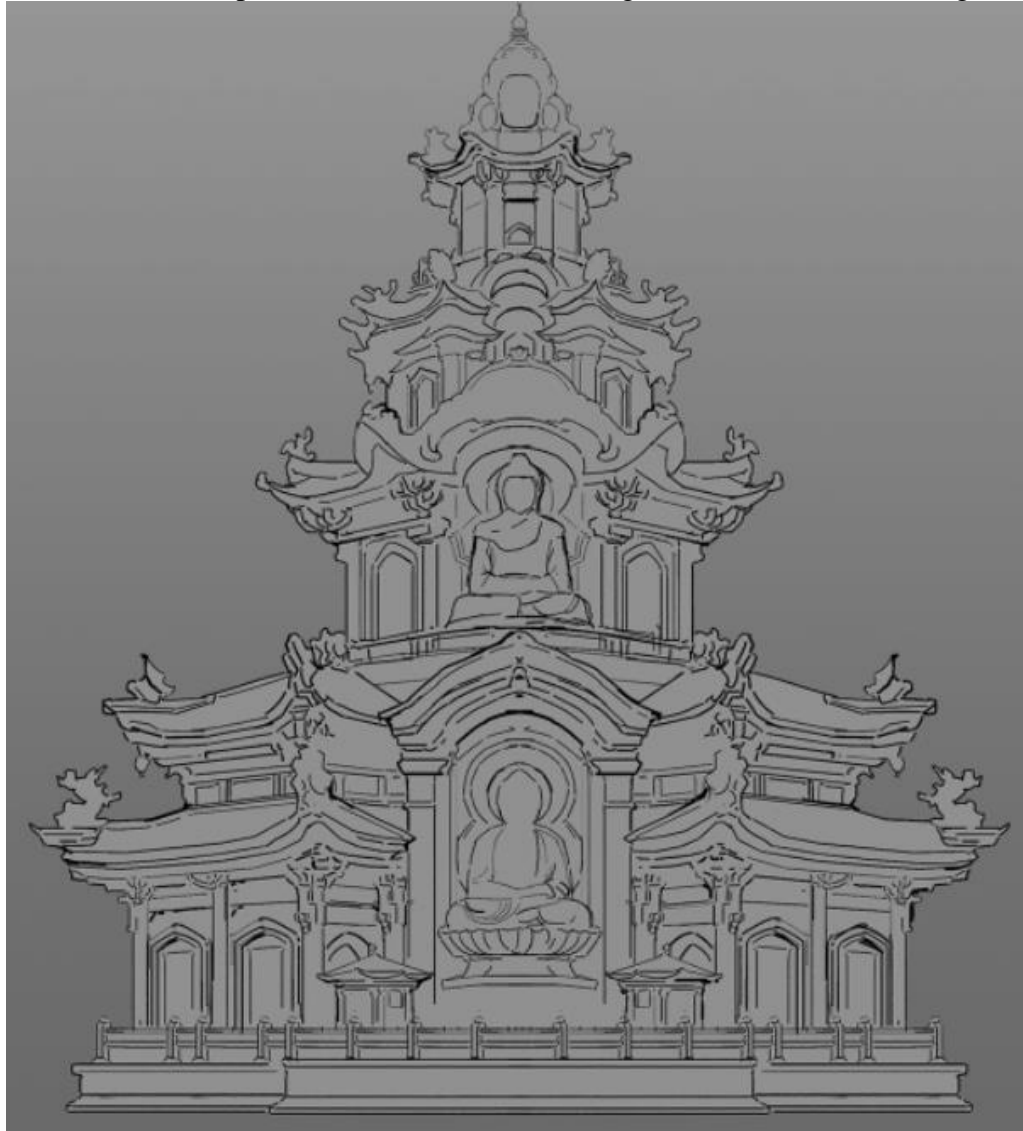


Figure 62 Detail description of internal structure Image source: Author drawing



5.6.2.7 Specify the color, determine the light source, and depict the pagoda

This step takes a long time for the purpose of showing the final effect, most of the design is actually completed in the module refinement and strengthening elements, this step is more to specify the color and material, to facilitate the game team to create other art resources. The color selection is warm, basically considering the state of the original material, the cyan color of the stone and the red color of the wood in the Chinese architecture. The light source uses the Angle of natural light.

Image source: Author drawing



Figure 63 The final image
Image source: Author drawing

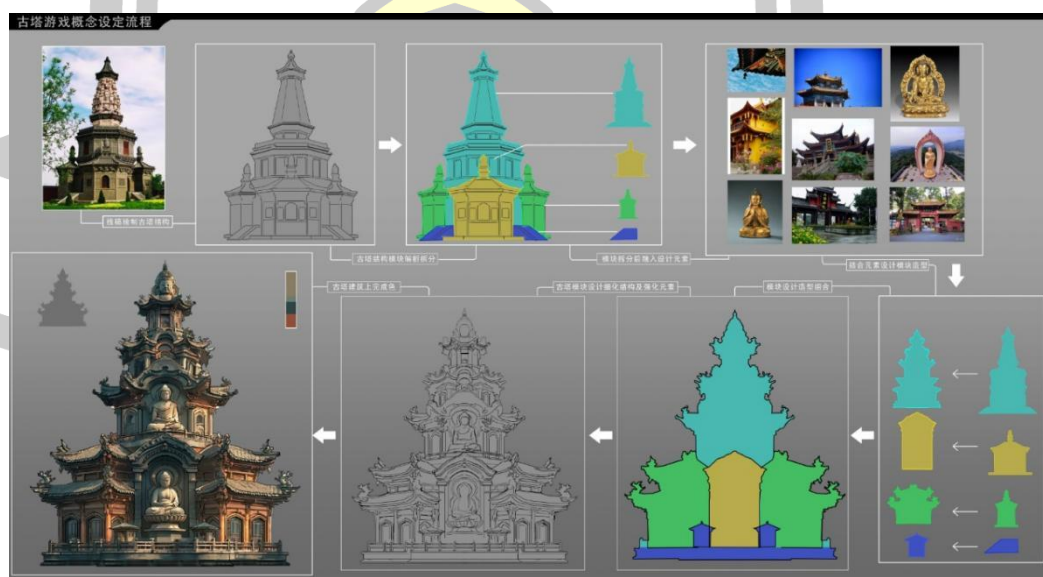


Figure 64 Design flow layout
Image source: Author design

This kind of design is mainly used for the original drawing design in the early stage of 2.5D and 3D games, because in this kind of games, there is more interaction between the building and the player. The game is a 3D game, and the player can even walk through the pagoda or even enter the pagoda. Therefore, the pagoda shape will be adjusted according to the characteristics of the game, and the pagoda will be integrated with more elements. It mainly needs to meet the needs of the game, so it will integrate a large number of design elements, and its spiritual culture transmission and Chinese architectural characteristics are prominent.

The following pagodas are based on 2D games as the standard, more is to show its inherent characteristics, the design elements will be combined with the elements related to the original building design, mainly can be used for logo background or card game picture culture display, this kind of design has more unique local characteristics expression, the pagodas characteristics are more clear. However, the limitation is relatively large, and it is only suitable for specific games.

Building analysis :



Figure 65 Lingxiao Pagoda (left) and Chengling Pagoda (right)

Image source: Network screenshot

พหุ ประถมศึกษา



Figure 66 Xuni Pagoda

Image source: Network screenshot

Ancient tower silhouette design

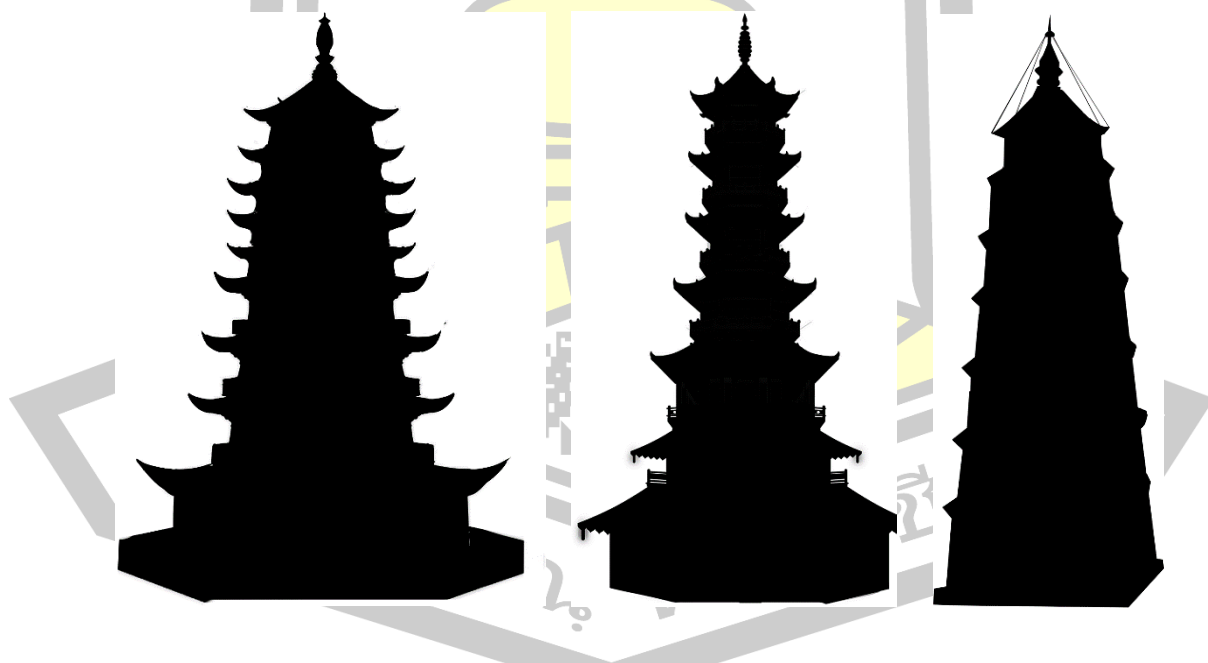


Figure 67 Lingxiao Pagoda (left) and Sumiling Pagoda (center) Sumi Pagoda (right)

Image source: Silhouette author drawing

Guta line draft design

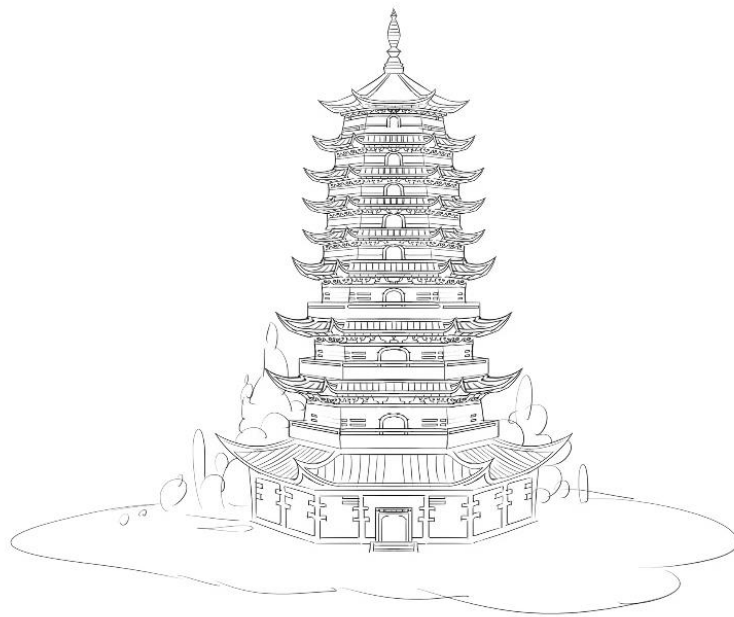


Figure 68 Linxiao Tower line draft
Image credit: Author design

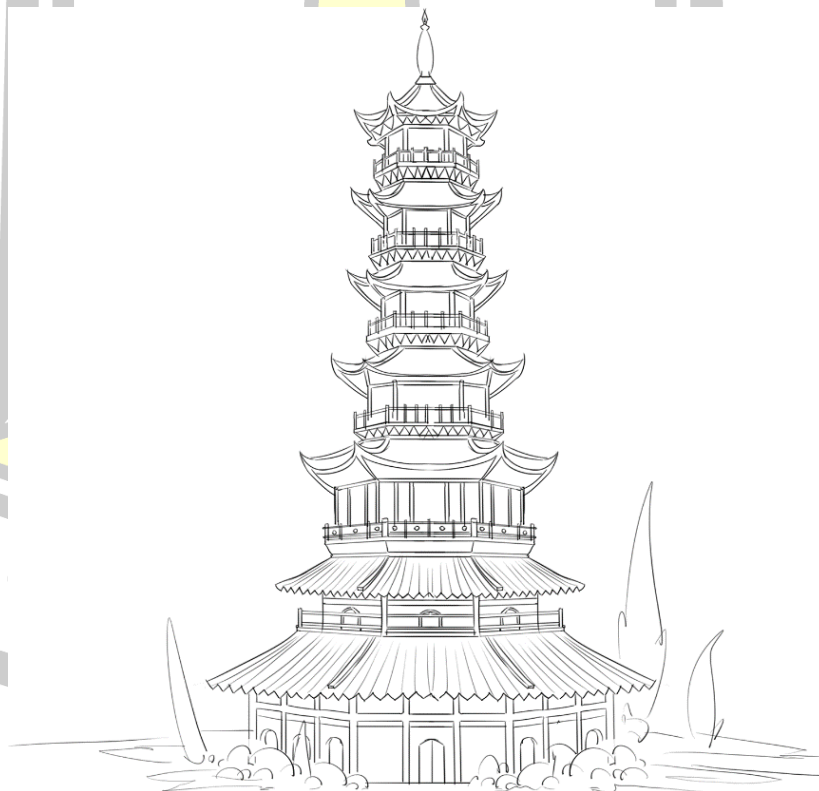


Figure 69 Chengling Tower line draft
Image credit: Author design

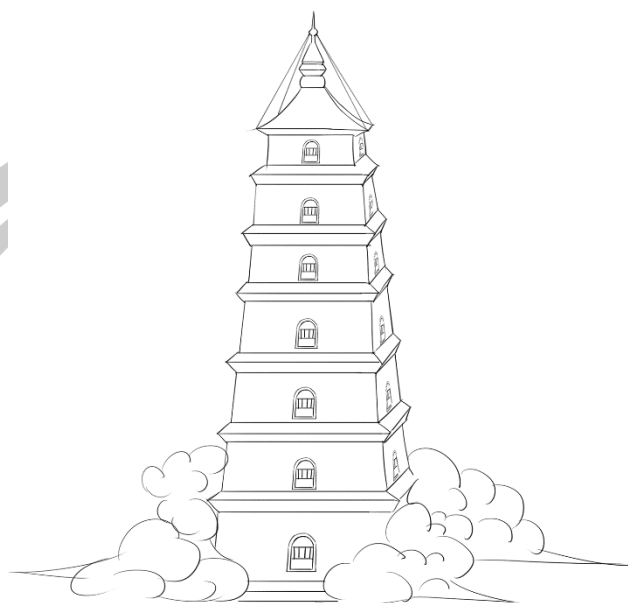


Figure 70 Sumita wire draft
Image credit: Author design
 The ancient pagoda is painted and painted



Figure 71 Effect of Lingxiao Tower
Image credit: Author desig

Figure 72 Effect of Chengling Tower

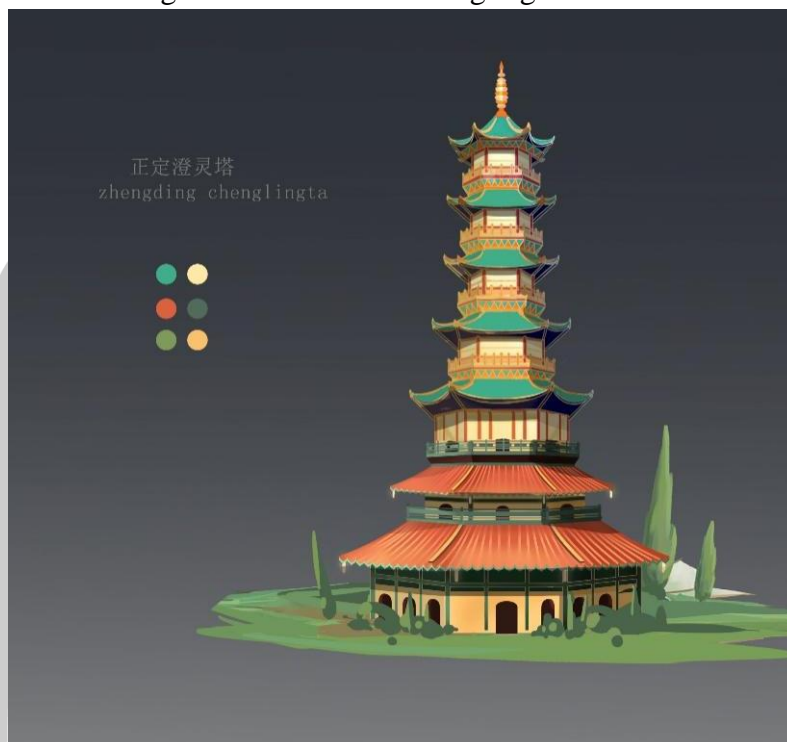


Image credit: Author design



Figure 73 Effect of Sumita
Image credit: Author design

The application of Guta in 2D games



Figure 74 The application of Chengling Tower in the horizontal plate map

Image source: Author design and network material combination

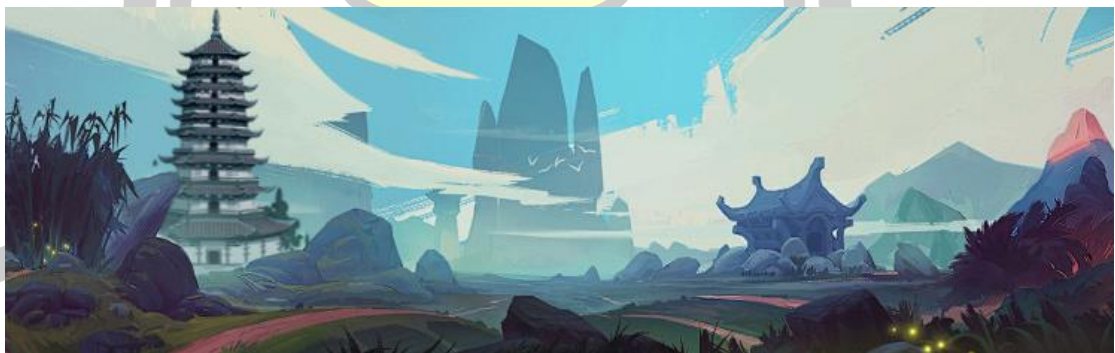


Figure 75 Application of the Lingxiao Tower in the horizontal plate map

Image source: Author design and network material combination



Figure 76 Application of Sumita in the horizontal plate map
Image source: Author design and network material combination

5.6.3 Designing Applications

Regarding the design of the Zhengding Ancient Tower, the original painting is not only of key significance in the game scene, but also shows its potential application in multiple fields. Not only can it be used in video games, but also can be used in daily life items as Zhengding's unique souvenirs for cultural export, and can also promote the development of local economy.

First of all, the pagoda pattern is integrated into the costume design, which gives the clothing a unique artistic character. This design not only creates a unique style for the wearer, but also conveys the profound connotation of culture and religion.

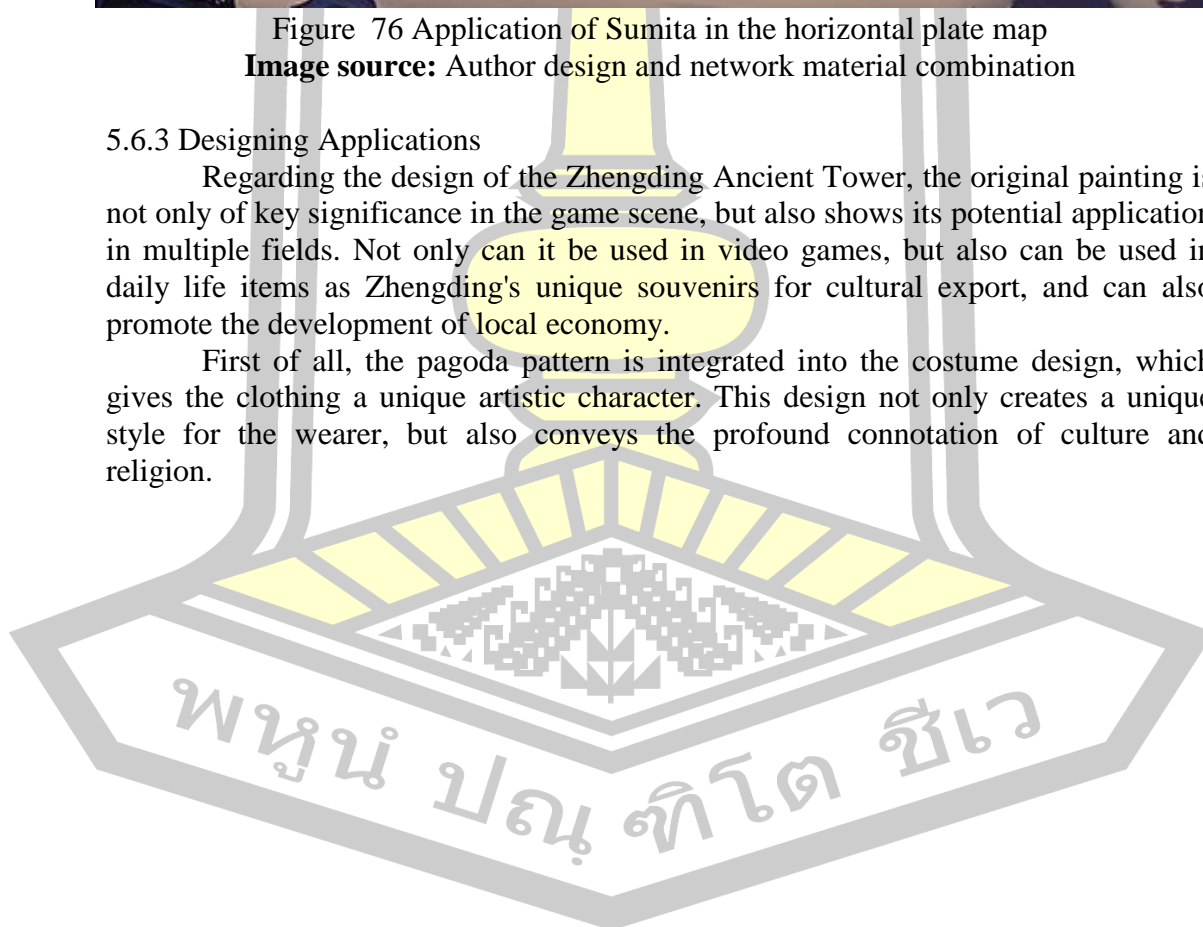
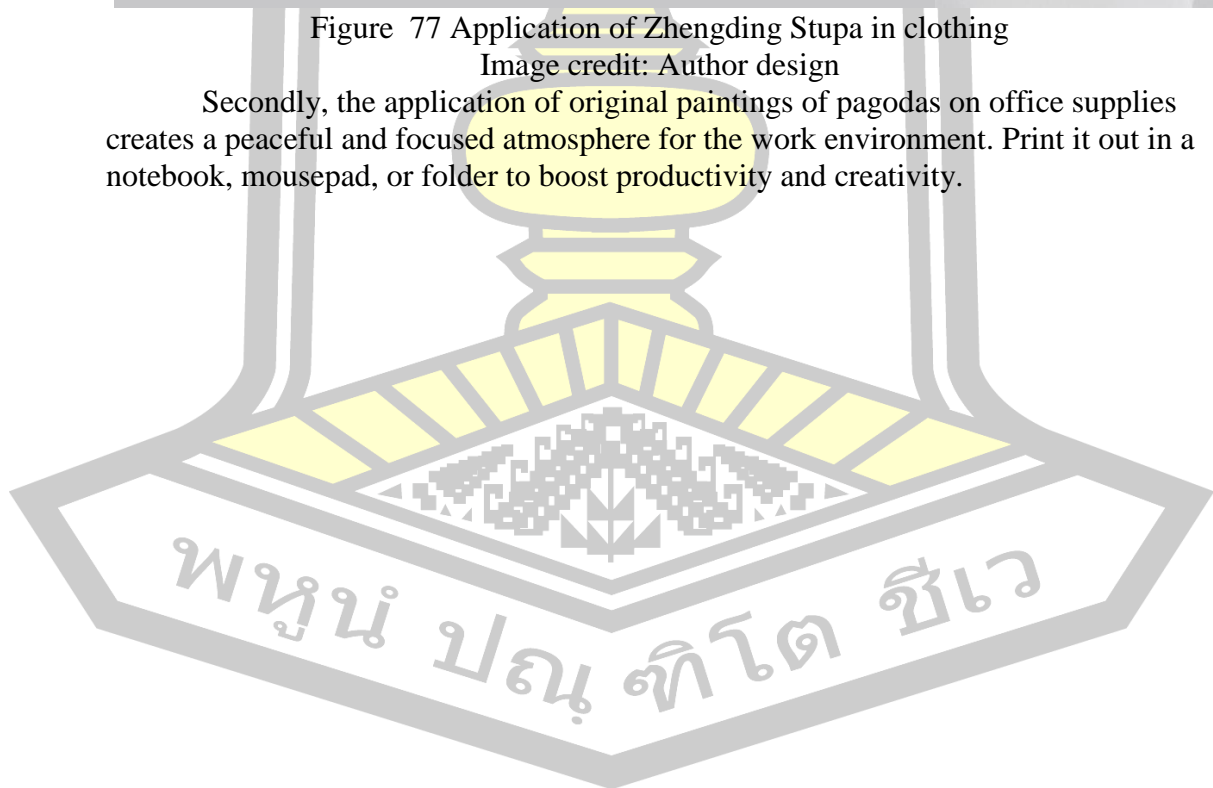




Figure 77 Application of Zhengding Stupa in clothing

Image credit: Author design

Secondly, the application of original paintings of pagodas on office supplies creates a peaceful and focused atmosphere for the work environment. Print it out in a notebook, mousepad, or folder to boost productivity and creativity.



In addition, the use of stupa patterns in home decoration can create a space with spiritual connotations. By transforming original paintings into murals, tapestries or decorative pieces, a peaceful living atmosphere is created.



Figure 79 The application of pagoda elements in home decoration
Image credit: Author design

In addition, the original painting of the pagoda also has potential application value in the fields of advertising design and packaging design. Its unique image can attract the attention of consumers and convey the specific values of the product or brand.



Figure 80 Application of pagoda elements in packaging design
Image credit: Author design



Figure 81 Application of pagoda elements in cultural and creative products
Image credit: Author design

The stupa pattern has wide application potential in the fields of clothing, office supplies, home decoration, advertising design and packaging design. Its unique artistic image and cultural connotation can not only attract people's attention, but also add unique value to the product or brand. In addition, the application of the original painting of the pagoda is not only limited to the material level, but also can bring quiet and peaceful feelings to people on the spiritual level. This combination of art and utility provides a new way of thinking and direction for the value expansion of the original game painting. Future research can further explore the application possibilities of original pagoda paintings in other fields, and how to better play their cultural and artistic value. At the same time, it is also necessary to pay attention to issues such as copyright protection and cultural inheritance of the original painting to ensure that the application of the original painting of the pagoda is legal and in line with cultural traditions.

Through the above product design, it is not difficult to find that the stupa drawn in the original painting of the game has multi-field application potential. These applications not only highlight the artistic value of the original painting, but also provide rich design inspiration and cultural connotation for various fields. Further research and innovation will dig out more application possibilities of original paintings in different fields. In short, the applied research on the pagoda in the original painting of the game shows us its value and potential in many aspects. Further exploration and innovation will help promote the application and development of game original art in a wider field.



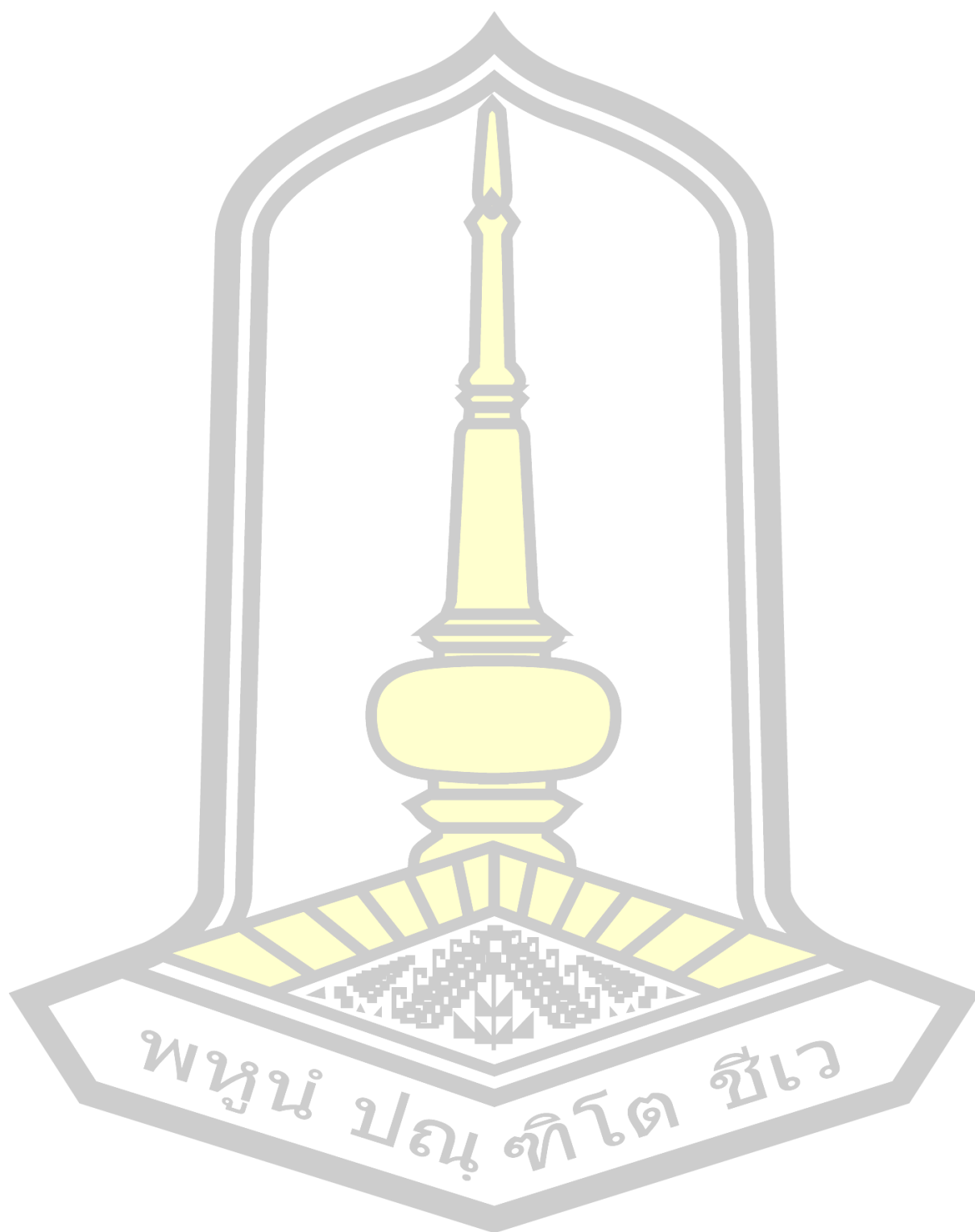
Chapter VI Conclusion

Based on the analysis of Chinese pagodas and ancient pagodas in Zhengding, Hebei Province, this paper studies the symbolic meaning of Chinese pagodas and their performance in video games from multiple perspectives. Firstly, through the analysis of the religious, historical and artistic values of Chinese pagodas, we can understand their symbolic significance. Secondly, through the analysis of video games, we can understand the performance of the pagoda image in them. Through the in-depth discussion of the historical, cultural and artistic value of Zhengding Ancient Pagoda, and the analysis of the possibility of its re-creation in the field of video games, Zhengding Ancient Pagoda as an important heritage of Chinese history and culture has a unique symbolic significance. It not only represents the essence of Buddhist culture and ancient architecture, but also carries rich historical, cultural and artistic values. Recreating Zhengding Ancient Pagoda in video games can inherit and protect this cultural heritage through the modern medium of games, so that more people can understand and contact the historical, cultural and artistic value of Zhengding Ancient Pagoda.

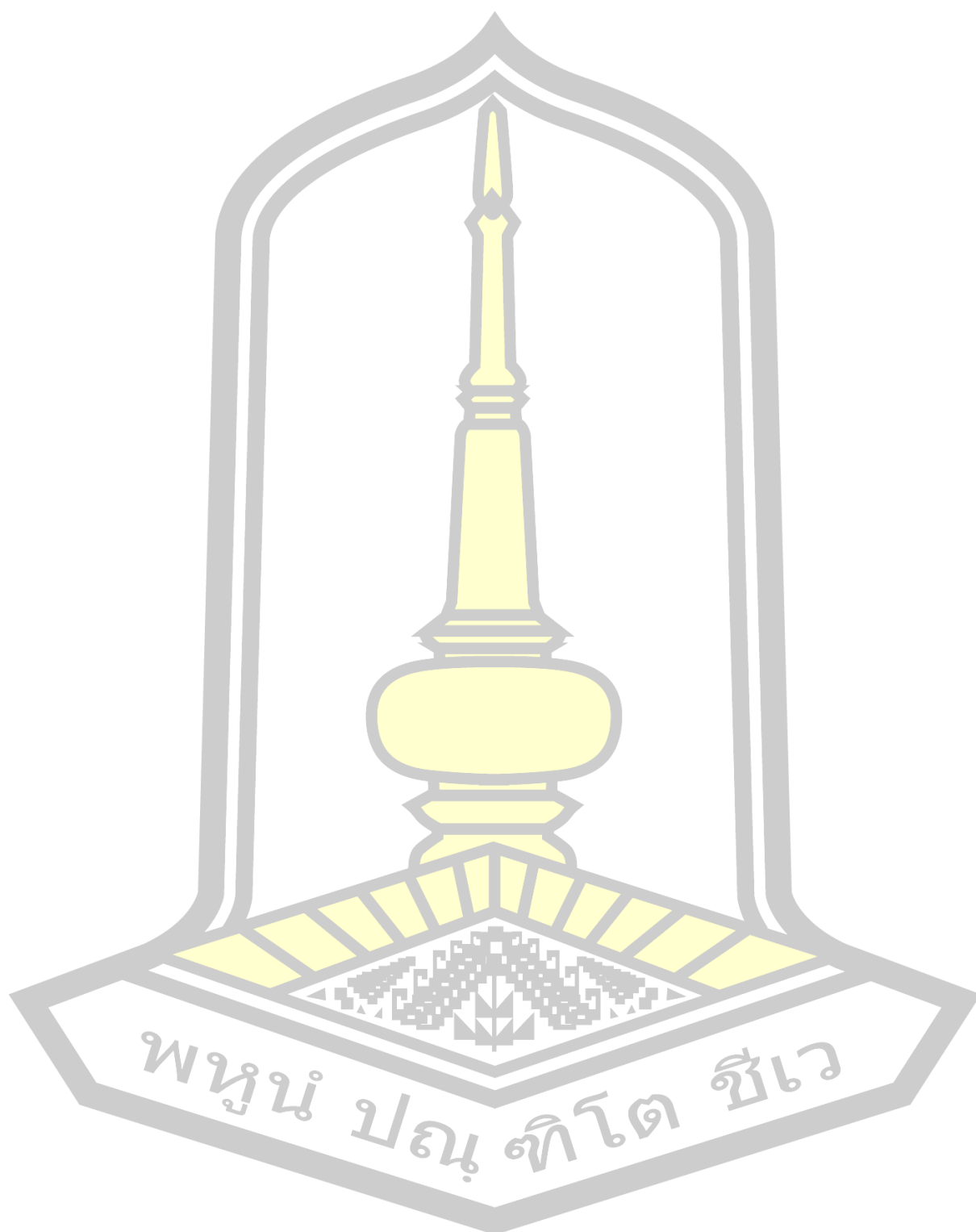
As a medium combining interactivity and artistry, video games provide a broad space for the re-creation of Zhengding ancient pagoda. Through creative design and artistic treatment, the architectural style, sculpture art and cultural connotation of Zhengding Ancient Pagoda can be vividly presented in the game, while combining the game story and tasks, so that players can deeply understand and experience the history, culture and artistic value of Zhengding Ancient pagoda in interaction.

Electronic games also have a wide range of application value in the field of education and science popularization. By integrating Zhengding Ancient Pagoda into video games, interesting and challenging game tasks and gameplay can be designed, allowing players to learn and understand the history, culture and art knowledge related to Zhengding Ancient Pagoda in the game. This way of edutainment helps to improve players' learning interest and popular science awareness, and promotes the development of education and popular science. With the acceleration of globalization, cross-cultural communication and communication become more and more important. As one of the representatives of Chinese culture, Zhengding Ancient Pagoda can be spread to a wider audience through the re-creation of video games, and promote the exchange and understanding of Chinese and foreign cultures. This will help enhance the influence and competitiveness of Chinese culture on the international stage.

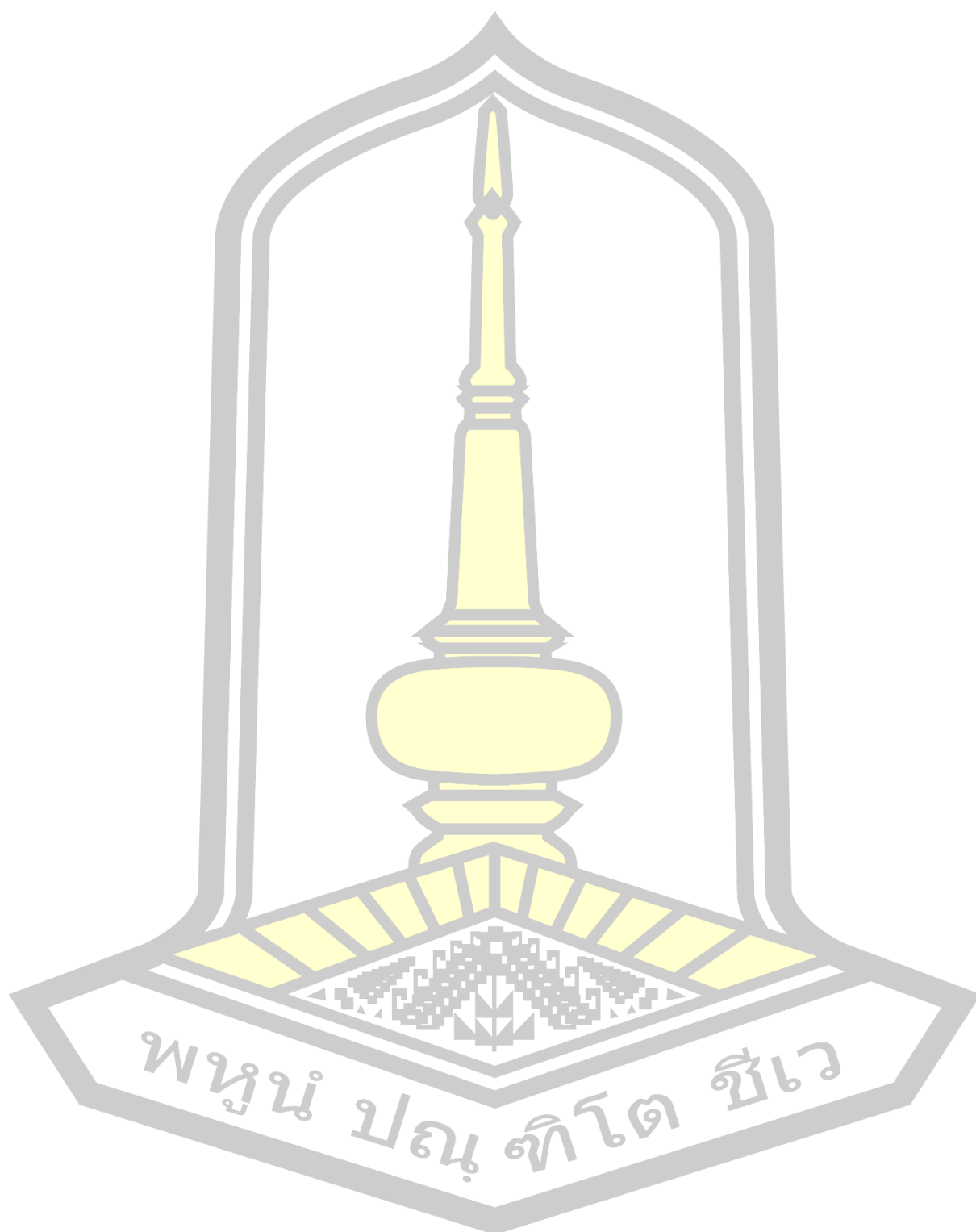
Therefore, this paper reveals the important value and possibility of re-creation of Zhengding Ancient Pagoda in the field of video games. Through the re-creation of video games, we can better explore and play the cultural value of Zhengding Ancient pagoda, and promote the integration and development of culture, science and technology and economy. This will not only help protect and inherit this valuable historical and cultural heritage, but also improve people's cultural identity and literacy, and promote social harmony and development.



REFERENCES



REFERENCES



He Li.(2023). Research on Robust linear programming based on neurodynamic optimization. Chongqing jiaotong university, DOI: 10.27671 /, dc nki. GCJTC. 2023.000957.

Chang Mengting.(2023). Morphological characteristics and evolution of Buddhist pagodas in Yungang Grottoes. North central university, DOI: 10.27470 /, dc nki. GHBGC. 2023.000584.

Shen Yatong.(2023). Research on Ancient Chinese pagodas from the Perspective of Religion. Shandong university, DOI: 10.27272 /, dc nki. Gshdu. 2023.000007.

Xu Ran.(2022). Research on the Decorative art of Buddhist pagodas in Wujing Area of Liaoning Province. Jiangnan university, DOI: 10.27169 /, dc nki. Gwqgu. 2022.001647.

Zheng Fangyuan.(2021). Aesthetic Characteristics of Ancient pagoda Architecture. Encyclopedic Knowledge,(33):15-16.

Jing Lijia. Xu Zhenmin (2021). Research on Composing Techniques of Symphonic Overture "Huaxia Ode". Henan university, DOI: 10.27114 /, dc nki. Ghnau. 2021.000314.

Hu Manli.(2021). Buddhist Temples and Urban Space in Luoyang, Northern Wei Dynasty. Hunan university, DOI: 10.27135 /, dc nki. Ghudu. 2021.003415.

Liu Zhaoyang.(2021). Study on External Structure and modeling of Shanxi Pagodas. Harbin normal university, DOI: 10.27064 /, dc nki. Ghasu. 2021.000246.

Yin Miwen.(2021). Investigation of pagodas in Hexi Area. Northwest normal university, DOI: 10.27410 /, dc nki. Gxbfu. 2021.000167.

Zhou Tongtong.(2021). Research on the protection and utilization Status of National Relegation Pagoda Cultural resources in Xi 'an. Northwestern university, DOI: 10.27405 /, dc nki. Gxbdu. 2021.001018.

Yang Zimo.(2021). Research on the design culture of early Buddhist Stone Pagoda in China. Suzhou university, DOI: 10.27351 /, dc nki. Gszhu. 2021.004405.

Liu Lidong, Hu Manli.(2021). Analysis of the Tang Dynasty Legacy in the architectural art of Guangjiao Temple in Song Dynasty. Art Education Research,(03):102-103+112.

Li Zi-Ang.(2021). Study on Chinese Classical Architectural Forms. South China university of technology, DOI: 10.27151 /, dc nki. Ghnlu. 2021.005141.

Duan Xiaoqing.(2020). Security analysis of block cipher based on automated search. Xian university of electronic science and technology, DOI: 10.27389 /, dc nki. Gxadu. 2020.002682.

Huang X. (2019). A Study of Buddhist pagodas in the Western Xia Dynasty. Inner Mongolia university of science and technology, DOI: 10.27724 /, dc nki. GNMKG. 2019.000643.

Xin Wen-Qian.(2019). Security analysis of cryptographic algorithms based on automated tools. National university of defense technology, DOI: 10.27052 /, dc nki. Gzjgu. 2019.000957.

Shang Xiaoxu.(2019). A study on flower towers in Beijing-Tianjin-Hebei region. Beijing University of Civil Engineering and Architecture.

Jin Lanxi.(2019). Study on the characteristics of ancient Buddhist pagodas of Ming and Qing Dynasties in Southern China. Jiangnan University.

Cao Y. (2019). Research on Buddhist pagodas in Yungang Grottoes. Shanxi university, DOI: 10.27284 / , dc nki. Gsxu. 2019.000787.

Wang Axiu.(2018). Study on the modeling of pavilion-style pagodas in Tang Dynasty. East China Normal University.

Hu Xiangqi.(2017). A Preliminary study on the form of pagodas under the background of Esoteric Buddhism in Tang Dynasty. South China University of Technology.

Zhang Liyan.(2016). The beauty of architectural decoration of Guwan Buddhist Pagoda in Mengcheng. Bengbu college journal, (03) : 173-176. DOI: 10.13900 / j.carol carroll nki JBC. 2016.03.040.

LAN Zhongying.(2016). Archaeological research on Liao Dynasty Buddhist pagoda art in Western Liaoning. Shenyang Normal University.

Mo Rigen.(2016). Xizuzhao Tibetan stupa Architecture art in Inner Mongolia. The Chinese and foreign architecture, (5) : 36-38. DOI: 10.19940 / j.carol carroll nki. 1008-0422.2016.05.007.

Dai Xiaojun.(2014). Chinese Ancient pagodas and their aesthetic and cultural characteristics. Shandong University.

Qiu Tao.(2013). Research on the architectural art form of Kaifeng Fan Tower. Henan University.

Yu Xu.(2012). Aesthetic Characteristics of ancient Buddhist architecture in Thailand. Southwest University.

Peng Fei.(2007). On the Architectural Achievements of the Pagoda of Liao Dynasty in China. Inner Mongolia University of Technology.

Liu Xuhong.(2005). Analysis on the architectural achievements of pagodas in China. Sichuan Building Science Research,(02):147-148.

Tian Lin, Lin Xiuzhen.(2003). A Preliminary study on the architectural art of ancient pagodas of Liao Dynasty in Hebei. Cultural Relics Spring Annals,(06):42-47.

Peng R.(2002). Research on Chinese Buddhist Art. Sichuan University.

INTERNET

1.<https://baijiahao.baidu.com/s?id=1759543091957129938&wfr=spider&for=pc>

2.<https://www.psd8.com/jiankangkepu/221124.html>

3.<https://zhuanlan.zhihu.com/p/616281556>

4.<https://www.shudongwenxue.com/article/410592.html>

5.<https://zangdiyg.com/Home/Article/detail/id/8623.html>

6.https://mbd.baidu.com/newspage/data/dtlandingsuper?nid=dt_4359962027560638211

7.<http://tradeinservices.mofcom.gov.cn/article/wenhua/xinxifb/202212/143176.html>

8.<https://baijiahao.baidu.com/s?id=1757859915793431650&wfr=spider&for=pc>

9. Ministry of Culture and Tourism of the People's Republic of China (mct.gov.cn)

10. Ministry of Commerce of the People's Republic of China (mofcom.gov.cn)

APPENDIX

QuestionnaireI

1. What is your gender?
 - A. Boys
 - B. Girls
2. What is the age group?
 - A. Under 18 years old
 - B. Ages 18 to 30
 - C. Age 31 to 40
 - D. Over 41 years old
3. Have you ever known the changes in the forms of ancient pagodas in different dynasties?
 - A. Most of the understanding, even the details of the change trend also understand
 - B. Only some understanding, but not very clear about the details of the change
 - C. Except for a few known
 - D. I don't know. I always feel the same
4. How familiar are you with the categories of ancient Buddhist pagodas: attic pagodas, dense eaves pagodas, single-storey pagodas, lama pagodas, etc.?
 - A. Most of them know, and even understand the difference in the content of each type of tower
 - B. Only know a part of the ancient pagoda, but do not know much about the difference between them
 - C. Except for individual understanding, other features of the ancient pagoda are not very well understood
 - D. Hardly ever heard of it
5. Have you ever played a video game with Chinese Buddhist pagoda elements?
 - A. Played
 - B. Never played
6. What games have you played with traditional Buddhist pagoda scenes based on ancient Chinese themes? (multiple choices)
 - A. Against the Cold
 - B. The Moonlight Sword
 - C. The series "Tenryuba"
 - D. The Legend of the Ancient Sword series
 - E. The Three Kingdoms series
 - F. The Legend of the Sword
 - G. The Nine Yin Sutra
 - H. Taigo E Scroll
 - I. Xuanyuan Sword series
 - Z. Other
7. What do you think of the performance of Chinese pagodas in video games?
 - A. Very real, as if you were there
 - B. More real, can feel the solemn and historical sense of the pagoda
 - C. In general, it is different from the reality
 - D. Relatively poor, can not truly reflect the charm of the pagoda

8. Do you think that in the process of playing such games, you will increase your cognition of the knowledge of the stupa, or take the initiative to understand the knowledge of the ancient stupa?

A. Yes

B. No

9. Do you have the desire to visit because of the charm of Chinese Buddhist pagodas in video games?

A. Yes, I'd really like to see it

B. I have the idea, but I haven't decided yet

C. No, I prefer video games

D. I'm not interested in real pagodas

10. What do you think are the shortcomings of Chinese pagoda elements in video games? (multiple choices)

A. Out of harmony with the overall style of the game

B. Oversimplification, unable to reflect the details and historical background of the pagoda

C. The pagoda in the game is too different from the reality, misleading the player's understanding of the pagoda

D. There is no obvious deficiency

11. What do you think could be improved about Chinese pagodas in video games?

A. Add more historical context and story lines

B. Enhance the detail and realism of buildings and scenes

C. Add gameplay and interactive elements related to the stupa

D. Improve the art style of the game to make it more close to the pagoda in reality

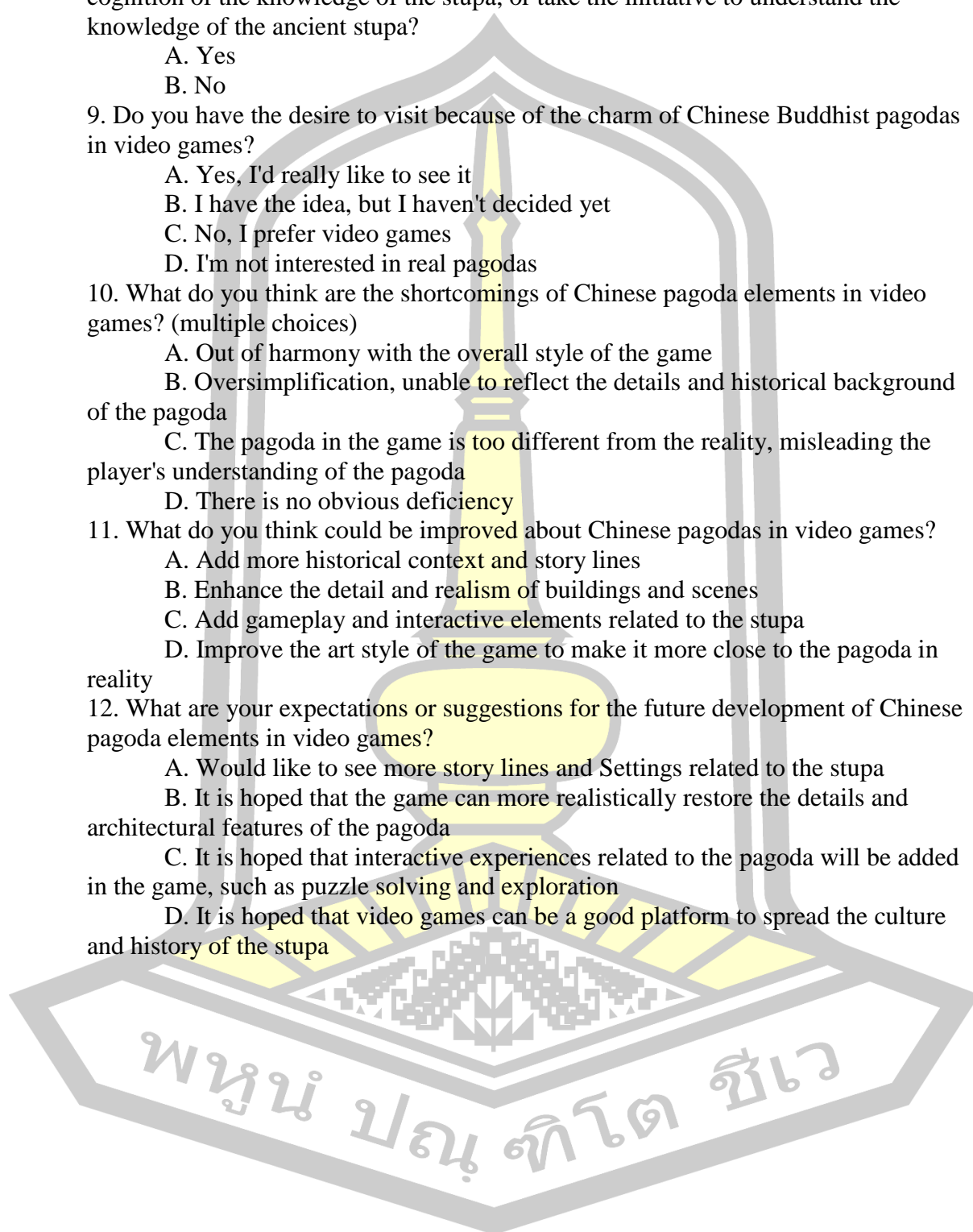
12. What are your expectations or suggestions for the future development of Chinese pagoda elements in video games?

A. Would like to see more story lines and Settings related to the stupa

B. It is hoped that the game can more realistically restore the details and architectural features of the pagoda

C. It is hoped that interactive experiences related to the pagoda will be added in the game, such as puzzle solving and exploration

D. It is hoped that video games can be a good platform to spread the culture and history of the stupa



QuestionnaireII

Survey visitors' knowledge and understanding of pagoda culture

1. Do you know anything about stupa culture? [Multiple choice]
 - ☐A. Yes
 - ☐B. No
2. Have you ever visited a pagoda? [Multiple choice]
 - ☐A. Yes
 - ☐B. No
3. What do you think are the main functions of pagodas? [Multiple choice]
 - ☐A. Religious belief
 - ☐B. Historical sites
 - ☐C. Tourist attractions
 - ☐D. Others
4. How much do you know about stupa culture? [Multiple choice]
 - ☐A. Very well understood
 - ☐B. Learn about it
 - ☐C. No idea
5. What do you think is the significance of stupa culture for the inheritance of Chinese culture? [Fill in the blank]

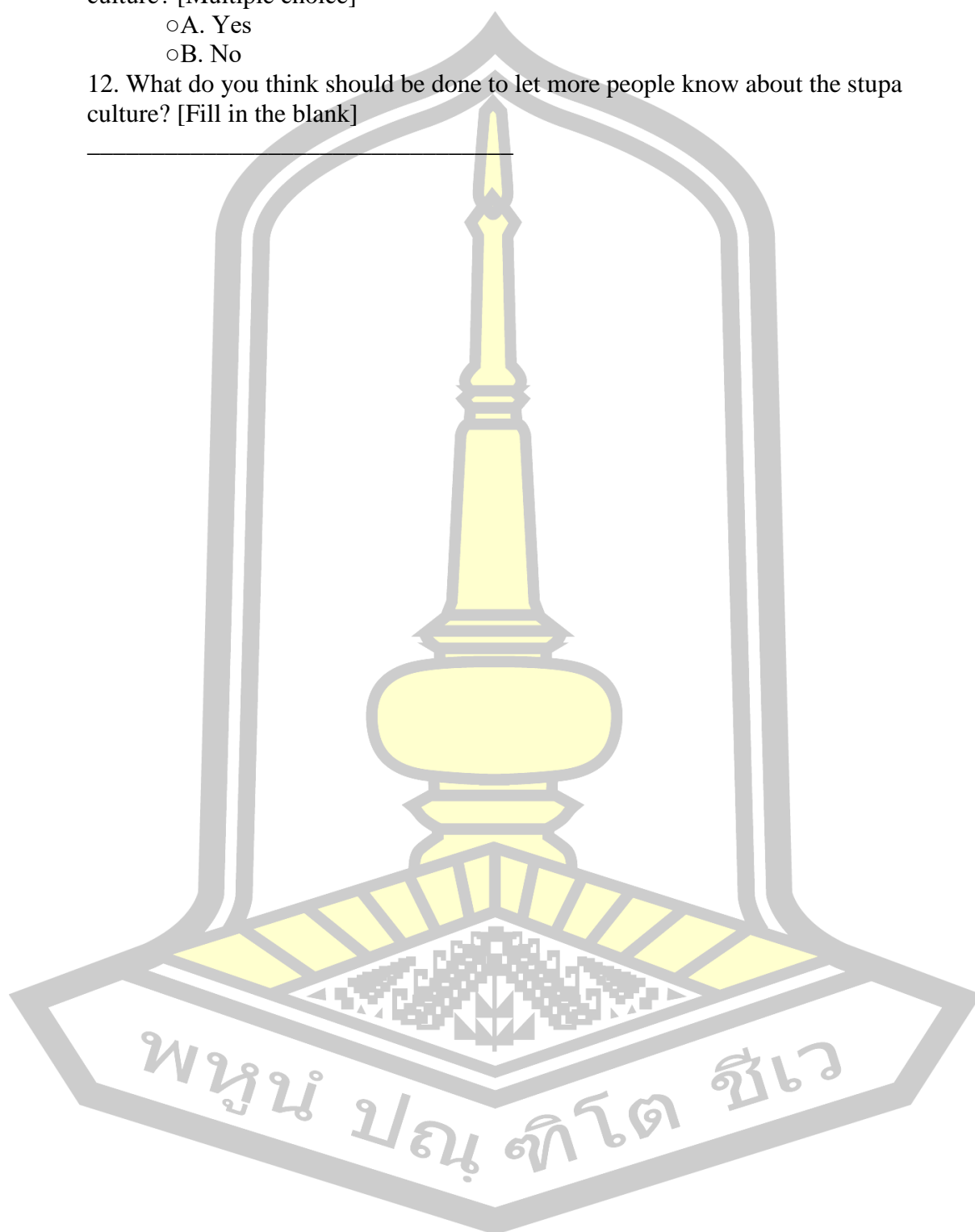
6. When you visited the pagoda, what aspects were you most interested in? [Multiple choice]
 - ☐A. Architectural style
 - ☐B. History and culture
 - ☐C. Buddhist culture
 - ☐D. Art collection
 - ☐E. Others
7. What do you think are the characteristics of pagoda architecture? [Multiple choice]
 - ☐A. Tall and straight
 - ☐B. Unique shape
 - ☐C. Decorative
 - ☐D. Long history
 - ☐E. Others
8. In your opinion, what problems do you face in the inheritance and development of stupa culture in modern society? [Fill in the blank]

9. Do you think the protection and inheritance of pagoda culture should be strengthened? [Multiple choice]
 - ☐A. Yes
 - ☐B. No
10. In your opinion, what measures should be taken to strengthen the protection and inheritance of Buddhist pagoda culture? [Multiple choice]
 - ☐A. Strengthen supervision and management
 - ☐B. Strengthen publicity and education
 - ☐C. Strengthen investment and financial support
 - ☐D. Others

11. Are you willing to contribute to the inheritance and protection of the stupa culture? [Multiple choice]

- ☐A. Yes
- ☐B. No

12. What do you think should be done to let more people know about the stupa culture? [Fill in the blank]



QuestionnaireIII

Research game players' opinions or Suggestions on traditional architecture in the game or Chinese traditional architecture

1. Do you like to see Buddhist pagodas or traditional Chinese buildings in the game? [Multiple choice]

- ☐ A. Yes
- ☐ B. Don't like it
- ☐ C. It doesn't matter

2. Do you think adding stupas or traditional Chinese buildings to the game will increase the appeal of the game? [Multiple choice]

- ☐ A. Yes
- ☐ B. No
- ☐ C. Not sure

3. What role do you think pagodas or traditional Chinese buildings should play in games? [Multiple choice]

- ☐ A. Decorations
- ☐ B. Landmark buildings
- ☐ C. Accessible scenes

4. How do you think pagodas or traditional Chinese buildings should be interacted with in games? [Multiple choice]

- ☐ A. Can climb
- ☐ B. Access the interior
- ☐ C. It can perform tasks or activities
- ☐ D. It can trigger the plot

5. What historical or cultural background do you think pagodas or traditional Chinese buildings should have in the game? [Multiple choice]

- ☐ A. Brief introduction
- ☐ B. Details
- ☐ C. Can trigger the introduction of tasks or activities
- ☐ D. No introduction is needed

6. How do you think pagodas or traditional Chinese buildings should be designed in games? [Multiple choice]

- ☐ A. Copy the pagoda style
- ☐ B. A style that blends with other ancient buildings
- ☐ C. Blend with modern style

7. How do you think the value of pagodas or traditional Chinese buildings should be reflected in games? [Multiple choice]

- ☐ A. Aesthetic value
- ☐ B. Functional value
- ☐ C. Historical and cultural values

8. How do you think stupas or traditional Chinese buildings should be positioned in the game? [Multiple choice]

- ☐ A. Random distribution
- ☐ B. Centralized distribution

☐ C. Arrange according to geographical location

9. What do you think should be the number of pagodas or traditional Chinese buildings in the game? [Multiple choice]

☐ A. Appear in small amounts

☐ B. A moderate number appears

☐ C. It appears in large numbers

10. What restrictions do you think should be placed on the use of pagodas or traditional Chinese buildings in games? [Multiple choice]

☐ A. Grade restrictions

☐ B. Task restrictions

☐ C. Time limit

☐ D. Quantity limitation

☐ E. Other restrictions _____

11. What rewards do you think should be given for the use of pagodas or traditional Chinese buildings in games? [Multiple choice]

☐ A. Gold coin reward

☐ B. Experience reward

☐ C. Item rewards

☐ D. Achievement rewards

12. Would you like to see cultural output in games? [Multiple choice]

☐ A. Yes

☐ B. No

13. Do you think there is a need for cultural communication in games? [Multiple choice]

☐ A. Necessary

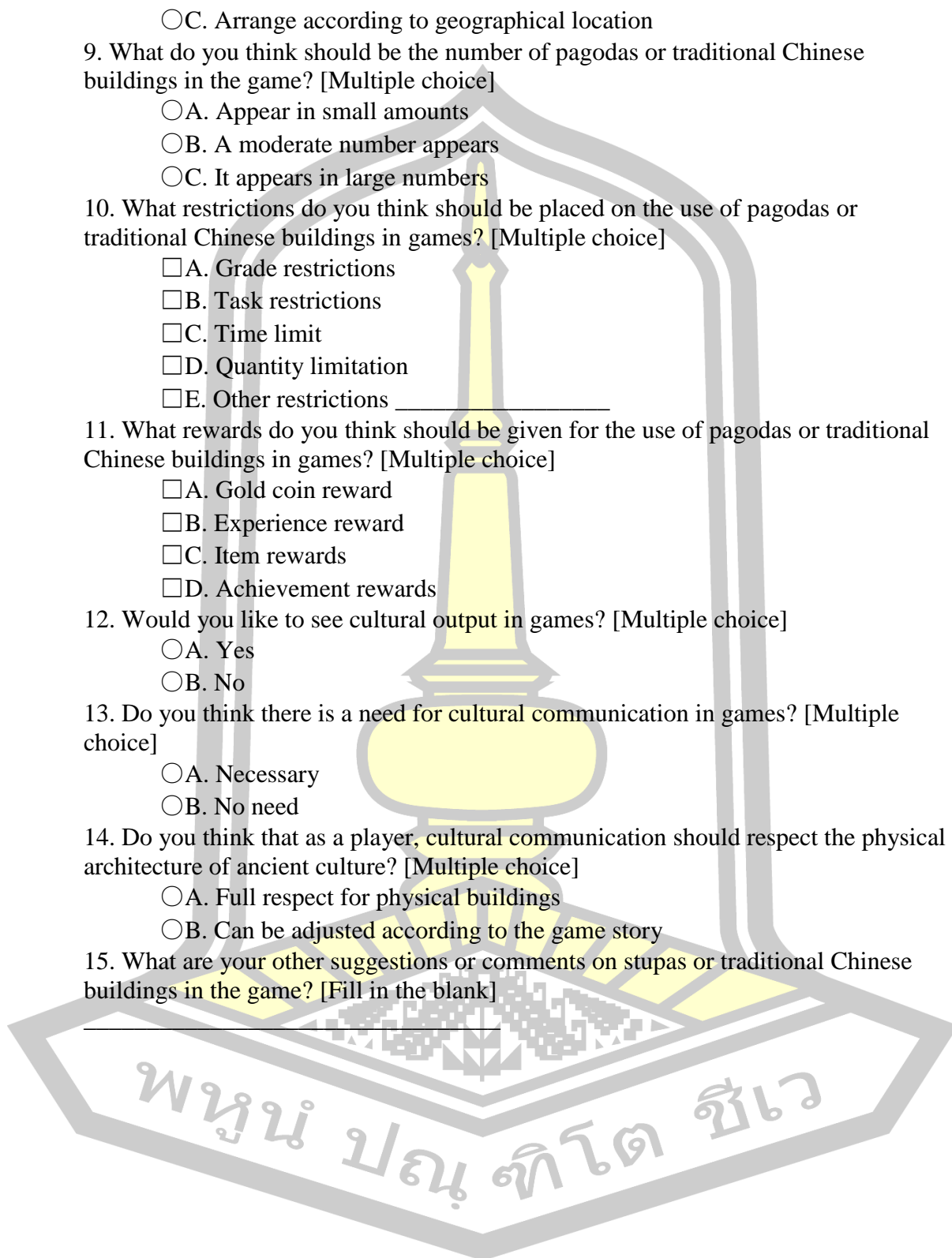
☐ B. No need

14. Do you think that as a player, cultural communication should respect the physical architecture of ancient culture? [Multiple choice]

☐ A. Full respect for physical buildings

☐ B. Can be adjusted according to the game story

15. What are your other suggestions or comments on stupas or traditional Chinese buildings in the game? [Fill in the blank]



QuestionnaireIV

As an employee of a game company, what do you think should be done to spread game culture from the perspective of the feasibility of clothing features, characters, props, weapons, etc?

1. What do you think of the importance of cultural communication in games?

[Multiple choice]

- ☐ A. Very important
- ☐ B. Important
- ☐ C. General
- ☐ D. Not important

2. What do you think are some ways to reflect cultural identity in games? [Multiple choice]

- ☐ A. Dress characteristics of game characters
- ☐ B. Architectural style of the game scene
- ☐ C. The setting of the game story
- ☐ D. Style of game music
- ☐ E. Design of game props

3. How much influence do you think clothing features in games have on cultural transmission? [Multiple choice]

- ☐ A. Very large
- ☐ B. It is large
- ☐ C. General
- ☐ D. Small
- ☐ E. It is small

4. How important do you think character design in games is for spreading game culture? [Multiple choice]

- ☐ A. Very important
- ☐ B. Important
- ☐ C. General
- ☐ D. Not important

5. What characteristics do you think the characters in the game should have in order to better spread the game culture? [Multiple choice]

- ☐ A. Unique appearance and image
- ☐ B. Rich backstory
- ☐ C. Strong skills and abilities
- ☐ D. Unique personality and character characteristics

6. How important do you think items in games are for spreading game culture? [Multiple choice]

- ☐ A. Very important
- ☐ B. Important
- ☐ C. General
- ☐ D. Not important

7. What characteristics do you think items in games should have in order to better spread game culture? [Multiple choice]

- ☐ A. Unique appearance and function
- ☐ B. Associated with the character or storyline
- ☐ C. Can improve the player's game experience

☐D. Have a collection or trading value

8. How important do you think weapons in games are for spreading game culture?

[Multiple choice]

- ☐A. Very important
- ☐B. Important
- ☐C. General
- ☐D. Not important

9. What characteristics do you think weapons in games should have in order to spread game culture? [Multiple choice]

- ☐A. Unique appearance and shape
- ☐B. Strong attack force and skills
- ☐C. Associated with the character or storyline
- ☐D. Can improve the player's game experience

10. How do you think clothing features in games should express cultural characteristics? [Multiple choice]

- A. By color and pattern
- B. Through accessories and details
- C. Through cultural symbols and symbols

11. How do you think the clothing features in the game should match the overall style and atmosphere of the game? [Multiple choice]

- A. Perfectly mirroring the overall style of the game
- B. Play the characteristics of the corresponding clothing individually
- C. Follow the atmosphere of the game scene
- D. Others, _____

12. How do you think clothing features in games should be communicated and displayed through social interaction? [Multiple choice]

- A. Show the appearance and details of clothing in the character's image in the game
- B. Game developers can create player communities where players can share their screenshots, videos, and insights
- C. It can hold some activities related to game clothing, such as showing in fashion shows and design competitions
- D. Others, _____

13. How do you think clothing features in games should relate to fashion trends in the real world? [Multiple choice]

- A. Integrate some popular fashion brands and styles into the dress features of the game in a joint way to increase the fashion sense and appeal of the game
- B. Display and sell through virtual stores. Players can buy their favorite game costumes in the virtual store to show their personality and style
- C. Cooperate with fashion bloggers to incorporate some fashion bloggers' dressing styles or fashion advice into the game

14. How do you think the characters, items and weapons in the game should be used together to better spread the game culture? [Multiple choice]

- A. Characters, items, and weapons should be integrated with the setting and storyline of the game to enhance immersion and continuity
- B. Characters, props, and weapons should have their own characteristics, highlighting their due advantages

C. Characters and weapons can be used without matching, and can be matched arbitrarily to highlight the DIY attributes of the game

D. Others, _____

15. How do you think in-game characters, items, and weapons should be promoted outside of the game in order to better spread game culture? [Multiple choice]

A. Make peripheral products, such as toys, clothing, stationery, etc., which can circulate among game players, increase the exposure and popularity of the game, and let more people understand the game culture

B. Transform the characters, props and weapons in the game into comics, novels, animations and other forms, so that more people can understand the game culture

C. Hold cosplay exhibitions to attract more players to participate in role-playing games

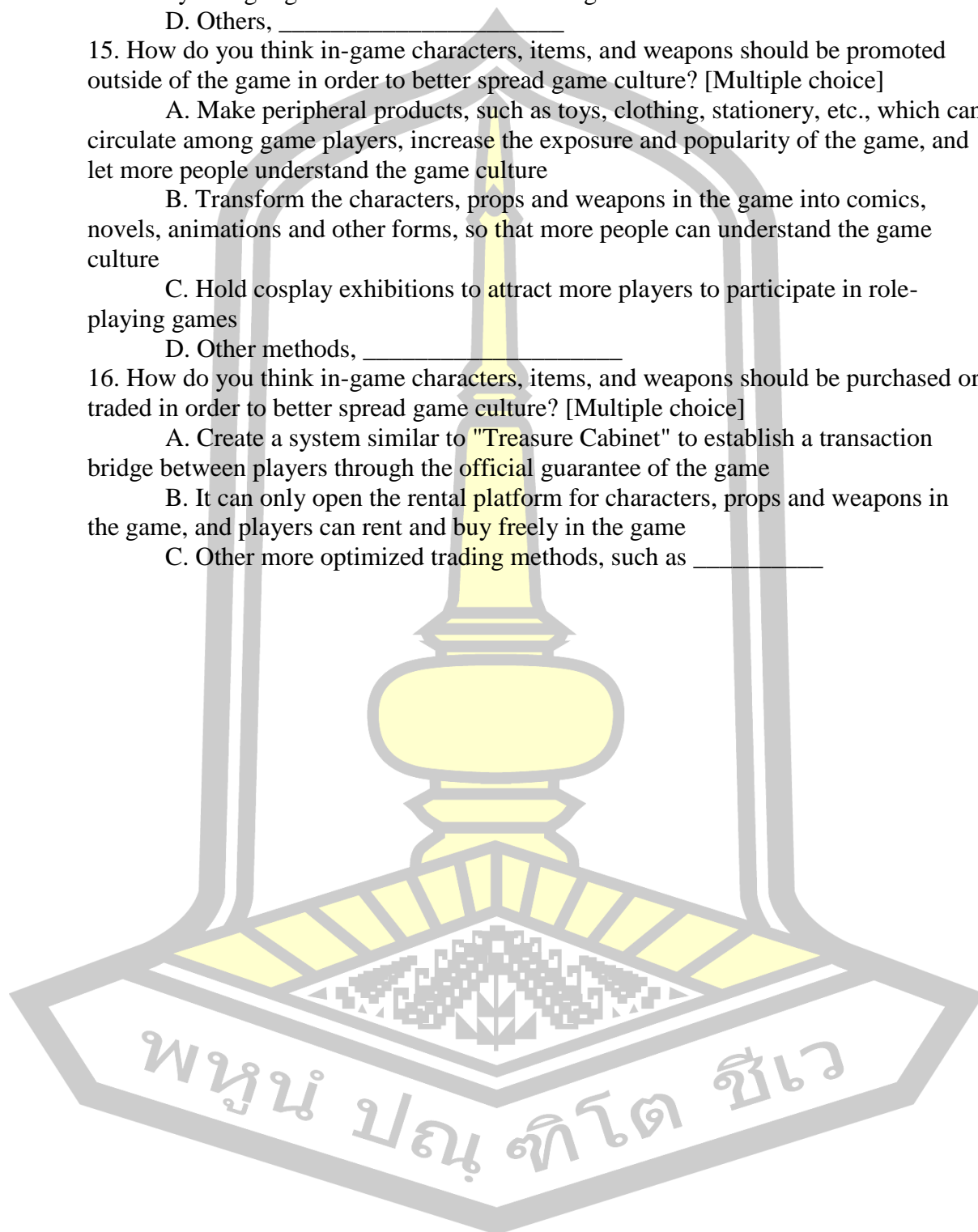
D. Other methods, _____

16. How do you think in-game characters, items, and weapons should be purchased or traded in order to better spread game culture? [Multiple choice]

A. Create a system similar to "Treasure Cabinet" to establish a transaction bridge between players through the official guarantee of the game

B. It can only open the rental platform for characters, props and weapons in the game, and players can rent and buy freely in the game

C. Other more optimized trading methods, such as _____



BIOGRAPHY

NAME	Zhao Xingbiao
DATE OF BIRTH	1985.02
PLACE OF BIRTH	Shijiazhuang, Hebei
ADDRESS	Xinle City, Shijiazhuang, Hebei, People's Republic of China
POSITION	Shijiazhuang, Hebei, China
PLACE OF WORK	Hebei Academy of Fine Arts, Xinle City, Shijiazhuang, Hebei, China
EDUCATION	2022 - 2024 Degree of Master of Arts in Fine and Applied Art Research and Creation, Faculty of Fine-Applied Arts and Cultural Science, Mahasarakham University, Thailand

