


Bridging ancient wisdom and modern management: Enhancing I Ching learning with ChatGPT



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ABSTRACT

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This study aims to investigate the integration of artificial intelligence, specifically ChatGPT, into the learning process of the I Ching, and its impact on students' understanding and application of this ancient Chinese wisdom in modern management practices. The research adopts a quantitative approach, utilizing surveys to collect data from students. ChatGPT, an artificial intelligence language model, is employed as a learning tool to assist students in applying the principles of the I Ching to solve business problems. The surveys evaluate students' perceptions of ChatGPT's usefulness, ease of use, and its effectiveness in practical applications of the I Ching. Additionally, the study examines ChatGPT's responses to determine its knowledge of the I Ching. The findings affirm that ChatGPT possesses a fundamental understanding of the I Ching and can effectively apply it to solve problems presented in textbook cases. Students perceive ChatGPT as user-friendly and highly beneficial in learning how to apply the I Ching in practical scenarios. The integration of ChatGPT as a learning tool has not only enhanced accessibility to the I Ching but also elicited increased interest and engagement among students. This integration serves as a valuable bridge between ancient Chinese wisdom and modern management approaches. By harnessing the power of artificial intelligence, students can dynamically and interactively explore the depths of the I Ching, thereby enhancing their comprehension and application of its principles. Consequently, this integration not only facilitates the learning of the I Ching but also fosters greater interest and engagement among students in business school.

Contribution/ Originality: This study provides confirmation that ChatGPT can effectively support the learning and application of the I Ching in the business context. By utilizing ChatGPT, students are able to experience greater flexibility and ease in understanding and appreciating this traditionally challenging ancient Chinese wisdom.

1. INTRODUCTION

Scholars in business have looked into the ancient Chinese wisdom for many years to improve contemporary business practices. For example, *The Art of War* is a military book written by ancient Chinese strategist – Sun Tzu and it has been translated to various languages worldwide. Its timeless principles on warfare and leadership have found applications in various fields beyond the military, including business, politics, and sports. Another ancient Chinese text with valuable insights is the *I Ching*, also known as *Book of Changes*. It helps people to gain insights about the future. This book covers all possible changes in the lifetime of a person. If one can fully understand cycles and patterns of change, better decisions can be made (Hsu & Chiu, 2008).

The *I Ching* consists of 64 hexagrams (see Figure 1). The first hexagram, for example, not only reveals the laws and processes of development in all things or in life, but also represents the rise and fall of personal endeavors, as well as crucial stages of success. This represents the six stages of growth for leaders or managers, including the initial stage of personal endeavours, the stage of seizing opportunities to showcase abilities, the stage of continuous self-improvement, the stage of striving for higher achievements, the stage of achieving great success in one's endeavours, and finally, the pinnacle stage in which leaders should understand the principle of 'when at the height of success, be cautious of decline; when full, be cautious of tipping over.' If one becomes stubborn, arrogant, and complacent, it will lead to failure, and regret will come too late.

The level of difficulty in understanding the *I Ching* and *The Art of War* can be varied depending on individual perspectives and backgrounds. *The Art of War* primarily focuses on military strategy and leadership principles. It contains profound insights and philosophical reflections. It focuses on the practical aspects of warfare. The content in *The Art of War* is generally straightforward and direct. It is relatively easy to grasp its main ideas. But the *I Ching* can be more challenging to be comprehended by people because it is a complex text that consists of both philosophy and symbolism. The *I Ching* is a system of 64 hexagrams and each provides insight into the patterns of change and guidance for decision-making. Interpretation of these hexagrams and their meanings requires knowledge of ancient Chinese cosmology, symbolism, and philosophical concepts such as yin (negative) and yang (positive). In addition, the content in the *I Ching* is metaphorical and abstract and it is, thus, more difficult to understand its content.

Now artificial intelligence (AI) can certainly assist in understanding the *I Ching* with analysis, interpretation, and access to a wealth of information. AI analyses the complex symbolism and philosophical concepts in the *I Ching*, based on vast amounts of data, including commentaries and interpretations by human experts. The aim of this paper is to study the flexibility of learning how to apply the *I Ching* to solve problems in the business context at the tertiary level with the aid of ChatGPT. This is an AI language model constructed by OpenAI and trained on a huge amount of textual data to understand and create human-like answers in natural language (Duha, 2023; Fergus, Botha, & Ostovar, 2023; Heaven, 2023). This paper will first briefly introduce both the *I Ching* and ChatGPT and provide the relevant background information on them. Then, the paper will present the results of tests on using ChatGPT to support teaching and learning the *I Ching* in the classroom. Relevant exemplars of teaching plans will be provided for reference. Finally, the paper will present the result of the survey collecting data about the students' opinion on learning the *I Ching* with ChatGPT.

2. THE I CHING APPLIED IN WESTERN MANAGEMENT

For a long time, Western management models have dominated the thinking of corporate management. However, in recent years, mainstream management thinking has begun to shift its focus towards the Eastern concepts of holistic wisdom and soft management, emphasizing human factors and valuing humanistic ideals and corporate culture. The *I Ching* is the root of Chinese culture. It primarily expounds on the principles of yin (negative) and yang (positive) and contains rich philosophical insights into existence. It teaches people to understand the principles of change and how to adapt to environmental transformations (Ningchuan & Chen, 2014).

When discussing management theories, it is important to mention insightful views on applying the wisdom of the *I Ching* to improve modern business management (Yao, Han, & Li, 2015). One of the essential qualities for becoming an outstanding business leader in today's society is the ability to accurately assess the situation and make correct decisions at the right time. For thousands of years, the *I Ching* has been regarded as a classic that provides wisdom for understanding the universe, guiding individuals in their lives, and assisting rulers in governing the people. In fact, when managers face various difficulties arising from an ever-changing situation, they can find guidance in the *I Ching* (Russon & Russon, 2010). The focus of the *I Ching* study and analysis is on change, emphasizing the need for management approaches to adapt to time, space, and circumstances. The *I Ching* does not

provide absolute or standard answers but rather trains managers to think from multiple perspectives, complementing and integrating with Western theories that emphasize calculation and execution (Xu, 2021).

In the *I Ching*, there are 64 hexagrams and each is made up of six stacked horizontal lines. A particular line represents the Chinese concept of Yin (negative represented by a broken line) or Yang (positive represented by a solid line). All these 64 hexagrams are supposed to represent possible situations that may be experienced in a life. A hexagram describes a situation and suggests a solution to the problem in it. The *I Ching* can be referenced when one is facing difficulties and uncertainties in the future. For example, because of the pandemic situation in recent years, crisis management has gained increasing attention in the business world. Some hexagrams from the *I Ching* can be useful in dealing with crises. The *Kun* hexagram (i.e., the 47th hexagram) means adversity and weariness and reminds people to remain optimistic in the face of failures and to cultivate inner strength amid adversity. The *Jian* hexagram (i.e., the 39th hexagram) means difficulties or obstruction and any difficulties encountered will contribute to personal growth and self-discovery. The *Kan* hexagram (i.e., the 29th hexagram) means dangers and indicates the need to take all possible precautions to avoid harm.

1 ☰ 乾 (qián) Force	2 ☷ 坤 (kūn) Field	3 ☳ 屯 (zhūn) Sprouting	4 ☶ 蒙 (méng) Enveloping	5 ☱ 需 (xū) Attending	6 ☵ 訟 (sòng) Arguing	7 ☲ 師 (shī) Leading	8 ☱☱ 比 (bǐ) Grouping	33 ☶☱ 遁 (dùn) Retiring	34 ☱☳ 大壯 (dà zhuàng) Great invigorating	35 ☳☱ 晉 (jìn) Prospering	36 ☱☵ 明夷 (míng yī) Darkening of the light	37 ☲☱ 家人 (jiā rén) Dwelling people	38 ☲☵ 睽 (kuī) Polarising	39 ☶☱ 蹇 (jiǎn) Limping	40 ☱☵ 解 (xiè) Taking-apart
9 ☱☳ 小畜 (xiǎo chù) Small accumulating	10 ☱☲ 履 (lǚ) Treading	11 ☳☱ 泰 (tài) Pervading	12 ☱☵ 否 (pǐ) Obstruction	13 ☱☲ 同人 (tóng rén) Concording people	14 ☲☱ 大有 (dà yǒu) Great possessing	15 ☱☵ 謙 (qiān) Humbling	16 ☱☲ 豫 (yù) Providing-for	41 ☱☵ 損 (sǔn) Diminishing	42 ☱☲ 益 (yì) Augmenting	43 ☱☵ 夬 (guài) Displacement	44 ☲☱ 夬 (gòu) Coupling	45 ☲☱ 萃 (cuì) Clustering	46 ☲☱ 升 (shēng) Ascending	47 ☶☱ 困 (kùn) Confining	48 ☱☵ 井 (jǐng) Welling
17 ☱☲ 隨 (suí) Following	18 ☱☲ 蠱 (gǔ) Correcting	19 ☳☱ 臨 (lín) Nearing	20 ☱☵ 觀 (guān) Viewing	21 ☱☲ 噬嗑 (shì kè) Gnawing bite	22 ☱☲ 賁 (bì) Adorning	23 ☱☲ 剝 (bō) Stripping	24 ☱☲ 復 (fù) Returning	49 ☱☲ 革 (gé) Skinning	50 ☱☲ 鼎 (dǐng) Holding	51 ☱☲ 震 (zhèn) Shake	52 ☱☲ 艮 (gèn) Bound	53 ☱☲ 漸 (jiàn) Infiltrating	54 ☱☲ 歸妹 (guī mèi) Covering the maiden	55 ☱☲ 豐 (fēng) Abounding	56 ☱☲ 旅 (lǚ) Sojourning
25 ☱☲ 無妄 (wú wàng) Without embroiling	26 ☱☲ 大畜 (dà chù) Great accumulating	27 ☱☲ 隨 (yí) Swallowing	28 ☱☲ 大過 (dà guò) Great exceeding	29 ☱☲ 坎 (kǎn) Gorge	30 ☱☲ 離 (lí) Radiance	31 ☱☲ 咸 (xián) Conjoining	32 ☱☲ 恆 (héng) Persevering	57 ☱☲ 巽 (xùn) Ground	58 ☱☲ 兌 (duì) Open	59 ☱☲ 渙 (huàn) Dispersing	60 ☱☲ 節 (jié) Articulating	61 ☱☲ 中孚 (zhōng fú) Center returning	62 ☱☲ 小過 (xiǎo guò) Small exceeding	63 ☱☲ 既濟 (jì jì) Already fording	64 ☱☲ 未濟 (wèi jì) Not yet fording

Figure 1. The 64 hexagrams of the I Ching.

Source: <https://www.omniglot.com/writing/yijing.htm>

Throughout ancient and modern history, it should not be difficult to analyse and discover a developmental pattern that any student who can find a way out of adversity and identify their correct path, making life decisions, will become successful individuals who rise to great heights. In the current industrial and commercial society, research in management is highly valued by businesses aiming to improve service quality and productivity. Effective management brings prosperity and progress to companies and contributes to the vigorous development of the economy. Broadly speaking, management can be categorized into scientific management and philosophical management. The former emphasizes systematic study of tangible facts, while the latter focuses on the humanistic exploration of intangible spiritual values. Chinese management involves creating life, developing human potential, and seeking certainty in life. It can be considered a typical form of humanistic management, distinct from Western scientific management.

The content of the *I Ching* and even its early English translation (Wilhelm, 1967) is difficult to be understood by ordinary readers. Recently, the graphical representation of the *I Ching* content is becoming popular, and this

pictorial format is helpful for people to comprehend the main content of each hexagram. For example, in Figure 2, there are two images describing the first hexagram of the *I Ching*.



Figure 2. Two examples of pictorial description of the first hexagram of the *I Ching*.

This pictorial format typically extracts the essence of the original hexagrams to provide concise interpretations or insights. They can serve as a foundation for study, reflection, or seeking guidance in specific situations. One advantage is its accessibility and ease of use. This can be particularly helpful for beginners who look for quick insights.

Nevertheless, the pictorial format does not provide the comprehensive details in the original text. The *I Ching* is a metaphysical and complex ancient Chinese divination system with a rich philosophical and cultural background. Its wisdom is derived from the intricate relationships between the hexagrams and the specific contexts. For a more complete and accurate interpretation, it is necessary to refer to the original *I Ching* text, consult with an experienced practitioner, or engage in a deeper study of the hexagrams and their associated commentaries.

In recent times, ChatGPT becomes a valuable tool to enhance teaching and learning experiences. This raises an interesting question: Can ChatGPT be utilized to teach students how to effectively apply the knowledge of the *I Ching*? If ChatGPT's capabilities can be leveraged, it will be feasible to provide students with access to the intense wisdom of the *I Ching*. This helps them to apply its principles in solving problems both in their daily lives and within the realm of business.

3. CHATGPT AND ITS APPLICATION IN EDUCATION

The research goal in the field of AI is to simulate human intelligence to empower machines to think and act like humans. Scientists have proposed the famous Turing test from the perspective of imitating human language

interaction. In the early stages of AI development, the focus was mainly on formalized knowledge representation and symbolic reasoning, but it has always been challenging to deal with the complex, diverse, and highly ambiguous nature of human natural language (Fraivan & Khasawneh, 2023; Ray, 2023).

In the 21st century, researchers focused on developing natural language processing models using statistical inference and machine learning techniques. While these models improved performance in language processing tasks, they still struggled with in-depth analysis and generating human-like language. Deep learning techniques, however, enabled high-dimensional distributed representations and implicit feature extraction, driving advancements in AI for natural language processing. Google's introduction of the Transformer model in 2017 expanded the parameters in language models. Pre-trained language models emerged, trained on large-scale data using self-supervised learning techniques to enhance natural language understanding (Kotei & Thirunavukarasu, 2023). OpenAI introduced GPT-1 in 2018, an autoregressive model employing 12 Transformer decoders. It was pre-trained and fine-tuned for downstream language processing tasks. Later, in 2018, Google introduced Bidirectional Encoder Representations from Transformers (BERT), utilizing bidirectional masking learning. OpenAI released GPT-2 in 2019, similar to GPT-1 but with more decoders and a larger training corpus (Yenduri et al., 2023). It performed well in various language processing tasks. Google proposed the T5 model in the same year, excelling in machine translation and question answering. OpenAI's GPT-3, introduced in 2020, had significantly increased parameters (175 billion) and achieved impressive performance in dialogue generation, summarization, and translation (Ray, 2023). In 2022, OpenAI introduced InstructGPT and later released ChatGPT, based on GPT-3, showing remarkable progress in text generation and natural language interaction. These models represented significant advancements in the field of language processing (Roumeliotis & Tselikas, 2023).

ChatGPT and similar systems can provide various forms of assistance and services for teachers in their teaching (Cooper, 2023). Based on their generative content capabilities, systems like ChatGPT can generate creative teaching materials according to teachers' instructional goals, assisting them in designing innovative teaching activities. With their understanding of dialogue contexts, systems like ChatGPT can act as teaching assistants in classroom instruction, providing interactive support to teachers based on the current instructional context. Leveraging their ability to perform sequence tasks, systems like ChatGPT can generate personalized teaching plans based on teaching scenarios and individual teachers' needs. In addition, systems like ChatGPT can parse programming languages and provide teachers with programming course examples. This supports the generation and explanation of exemplary code for typical problems and their variations (Benuyenah, 2023; Sullivan, Kelly, & McLaughlan, 2023).

Particularly, ChatGPT can generate multiple appropriate personalized teaching designs based on teachers' instructional needs. They provide teachers with inspirational ideas and alternative options during lesson preparation to enhance the efficiency and quality of lesson planning (Heimans, Biesta, Takayama, & Kettle, 2023). It can also provide excellent support and services for the learning process (Lo, 2023). ChatGPT can automatically generate sample paragraphs or provide inspirational prompts to offer creative writing materials to help students write through collaborative creation. It understands dialogue circumstances and recognizes students' learning contexts to provide specific knowledge-based question-and-answer interactions (Tlili et al., 2023). ChatGPT can offer dynamic instructional support and feedback to students based on their learning needs and optimize their learning paths (Rasul et al., 2023).

4. QUALITATIVE STUDY ON THE PERFORMANCE OF CHATGPT IN FACILITATING THE LEARNING OF THE I CHING

The purpose of ChatGPT is to provide helpful and informative responses based on its training. But it may not always provide completely accurate or up-to-date information (Perkins, 2023). Its responses are generated based the training data and may not have real-time awareness or access to specific external sources. While ChatGPT is

helpful, it is essential to critically evaluate its responses and verify information from reliable and authoritative sources.

The *I Ching* is the oldest classic text in China and the crystallization of wisdom for decision-making in ancient times. Through interpreting hexagrams, decisions were made. The process is similar to the strategic planning and business analysis in modern business operations. The *I Ching* has always played an important role in decision-making for future matters in China, until the Western civilization entered China, leading to the complete overturning of ancient civilization through westernization, gradually causing it to be forgotten by modern people. However, when many management experts with specialized knowledge approached the *I Ching* with a scientific and rational attitude, integrating it into their exploration, it sparked further exploration and utilization of the *I Ching* in general matters and business operations.

To investigate performance of ChatGPT assisting in the application of the *I Ching* in business problems, the relevant questions were asked and the answers from ChatGPT were examined. Table 1 presents the three types of these questions with examples for illustration.

Table 1. Types of the questions used in the qualitative study.

Question types	Nature of questions	Examples of questions
Type 1	Basic questions on the <i>I Ching</i> knowledge	20 questions such as <ul style="list-style-type: none"> List all 64 hexagrams of the <i>I Ching</i>. What is the first hexagram of the <i>I Ching</i>? Which hexagram of the <i>I Ching</i> is about being humble?
Type 2	Application of the <i>I Ching</i> in generic situations	20 questions such as <ul style="list-style-type: none"> Select a hexagram of the <i>I Ching</i> to improve customer relationship management. Describe with a hexagram of the <i>I Ching</i> to solve the conflict with business partners. Use a hexagram of the <i>I Ching</i> to suggest how to motivate employees to work harder.
Type 3	Application of the <i>I Ching</i> in complicated cases	10 cases selected from marketing textbooks.

First, ChatGPT was asked to answer some basic questions on the *I Ching* knowledge. For example, in Appendix 1, ChatGPT was asked to list all 64 hexagrams of the *I Ching* and it could answer correctly.

The second type of questions was generic and theoretical. For example, in Appendix 2, ChatGPT suggested how a new company with limited resources deals with a fierce competition in the market. It selected Hexagram 36 to describe the situation and provided relevant solutions to the problem. It is interesting to note that there is usually no absolute answer to a question in the business context. When the same question was asked again, ChatGPT selected Hexagram 43 and proposed other solutions. Based on different perspectives from the same context, alternative answers can be provided by ChatGPT for users' reference and consideration.

The third type of questions were more difficult. ChatGPT was given cases from marketing textbooks and asked how to solve the problems. For example, in Appendix 3, ChatGPT selected Hexagram 47 to depict the situation and suggested five solutions. Specifically, in the process of supporting question-and-answer interactions, ChatGPT can provide multi-level services to students based on multi-turn dialogues (Rospigliosi, 2023; Rusandi, Ahman, Saripah, Khairun, & Mutmainnah, 2023). For example, in Appendix 4, ChatGPT was asked to select a hexagram of the *I Ching* to further elaborate each of the five solutions in Appendix 3. The answers in both Appendix 3 and Appendix 4 are rational and inspirational to users.

In this qualitative study, all the answers from ChatGPT were acceptable and the insights obtained from the ChatGPT's answers indicate a high level of satisfaction with its performance. The ability to effectively utilize the

wisdom of the *I Ching* and provide relevant solutions demonstrates its usefulness and adaptability in a wide range of problems.

5. QUANTITATIVE SURVEY AND ITS RESULTS

A survey was conducted to gather feedback from business students in a university to assess the effectiveness of ChatGPT in facilitating students' learning of using the *I Ching* to solve practical problems in their studies. The survey focused on their experience of applying the *I Ching* to marketing cases found in their textbooks with the assistance of ChatGPT. A total of 134 students responded to the survey.

The fundamental concept of the *I Ching* and its hexagrams were initially introduced to the students. Then, the students were given various cases from their textbooks to study. They were asked to select appropriate hexagrams from the *I Ching* to describe the cases and propose corresponding solutions. When necessary, they were encouraged to utilize ChatGPT for assistance during this process.

Table 2 presents results of the survey that consists of questions modified from the Technology Acceptance Model (Davis, 1989).

Table 2. Results of the survey on students' attitudes to utilizing ChatGPT on the *I Ching* application.

Survey questions (1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly agree)	Mean
1. My study on the <i>I Ching</i> would be difficult to perform without ChatGPT.	4.3
2. Using ChatGPT gives me greater control over my application of the <i>I Ching</i> .	4.2
3. Using ChatGPT improves my performance of the application of the <i>I Ching</i> .	3.8
4. Using ChatGPT saves me time of the application of the <i>I Ching</i> .	4.2
5. ChatGPT supports critical aspects of the application of the <i>I Ching</i> .	3.5
6. Using ChatGPT allows me to accomplish more application of the <i>I Ching</i> than would otherwise be possible.	4.0
7. Using ChatGPT enhances my effectiveness on the application of the <i>I Ching</i> .	3.6
8. Using ChatGPT improves the quality of the application of the <i>I Ching</i> .	4.1
9. Using ChatGPT makes it easier for my application of the <i>I Ching</i> .	4.4
10. Overall, I find ChatGPT useful in my application of the <i>I Ching</i> .	4.2
11. I am not confused when I use ChatGPT on the <i>I Ching</i> .	3.7
12. I do not frequently make errors when using ChatGPT on the <i>I Ching</i> .	4.0
13. Interacting with ChatGPT on the <i>I Ching</i> is often satisfying.	3.8
14. Interacting with ChatGPT on the <i>I Ching</i> do not require a lot of my mental effort.	4.1
15. I find it easy to recover from errors encountered while using ChatGPT on the <i>I Ching</i> .	4.2
16. ChatGPT on the <i>I Ching</i> is easy and flexible to interact with.	3.6
17. ChatGPT on the <i>I Ching</i> often behaves in expected ways.	4.1
18. I find it straightforward to use ChatGPT on the <i>I Ching</i> .	3.9
19. My interaction with ChatGPT on the <i>I Ching</i> is easy for me to understand.	4.0
20. It is easy for me to remember how to perform tasks using ChatGPT on the <i>I Ching</i> .	4.4
21. ChatGPT provides helpful guidance in performing study on the <i>I Ching</i> .	3.6
22. Overall, I find ChatGPT on the <i>I Ching</i> easy to use.	4.0

According to the survey responses, it can be concluded that ChatGPT has received positive ratings from students regarding its usefulness and effectiveness. Most students agreed that ChatGPT has facilitated their study process, and it made their study on the *I Ching* easier. It could save their time, improve their performance and effectiveness, and provide helpful guidance. Students expressed satisfaction with the interaction and usability of ChatGPT. Using ChatGPT did not require excessive mental effort and recovering from errors was straightforward. On the whole, students found ChatGPT to be a useful tool in their study of the *I Ching*.

The positive ratings demonstrate that ChatGPT has been beneficial in supporting students' understanding, decision-making, and problem-solving regarding the *I Ching*. These suggest that integration of ChatGPT into the study of the *I Ching* has enriched students' learning experiences and provided valuable assistance.

6. CONCLUSION

The *I Ching* provides a widespread interpretation of China's history spanning thousands of years. It is an accumulation of experiential principles. It originated from ancient monarchical politics but still holds value as a reference for business operators (Yuduo, Yi, Donghua, & Yao, 2011). The *I Ching* is a dedicated text for both leaders and individuals, and it provides them with decision-making guidance and solutions to significant difficulties (Lin, Li, Shan, & Shi, 2017). It contains numerous specific strategies for management, encompassing leadership decisions, planning and forecasting, organizational personnel, and cooperative endeavours. It also addresses many of the concerns in modern business management. The *I Ching* serves as a simple and practical decision-making tool to make the most correct choices when faced with uncertainties.

From this perspective, the *I Ching* is a book that teaches people how to navigate through life. It provides a set of principles for survival and improvement of people's lives. It serves as a manual for survival and strategy and can be utilized by the managerial level to govern and benefit the people. One problem of studying *I Ching* is that people cannot understand the classical Chinese in the ancient texts and the interpretations of ancient Chinese cosmology, symbolism, and philosophical concepts are boring and hard to follow, and they do not know how to apply it to real life. To supplementing modern management concepts with traditional Chinese wisdom, everyone has creative potential, and the key is how to unleash it. With the aid of ChatGPT, it is possible to eliminate the difficulties, making the understanding the *I Ching* more accessible. This qualitative study and survey results highlight ChatGPT's potential as a valuable tool for seeking meaningful guidance and suggestions, aligning with the principles of the *I Ching* to offer valuable insights and recommendations to users.

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Appendix 1. An example of ChatGPT's response to a question on the I Ching knowledge

Question to ChatGPT

List all the 64 hexagrams in the I Ching.

Answer

Certainly! Here is a list of the 64 hexagrams in the I Ching along with their names:

1. Qian - The Creative
2. Kun - The Receptive
3. Zhun - Difficulty at the Beginning
4. Meng - Youthful Folly
5. Xu - Waiting (Nourishment)
6. Song - Conflict
7. Shi - The Army
8. Bi - Holding Together (Union)
9. Xiaoxu - The Taming Power of the Small
10. Lü - Treading (Conduct)
11. Tai - Peace
12. Pi - Standstill (Stagnation)
13. Tongren - Fellowship with Men
14. Da You - Great Possession (Possession in Great Measure)
15. Qian - Modesty
16. Yu - Enthusiasm
17. Sui - Following
18. Gu - Work on what has been spoiled (Decay)
19. Lin - Approach
20. Guan - Contemplation (View)
21. Shi Ke - Biting Through
22. Bi - Grace
23. Bo - Splitting Apart
24. Fu - Return (The Turning Point)
25. Wu Wang - Innocence (The Unexpected)
26. Da Chu - The Taming Power of the Great
27. Yi - Nourishment (Providing for)
28. Da Guo - Preponderance of the Great
29. Kan - The Abysmal (Water)
30. Li - The Clinging (Fire)
31. Xian - Influence (wooing)
32. Heng - Duration
33. Dun - Retreat
34. Da Zhuang - The Power of the Great
35. Jin - Progress
36. Ming Yi - Darkening of the Light
37. Jia Ren - The Family (The Clan)
38. Kui - Opposition
39. Jian - Obstruction
40. Ji - Deliverance
41. Sun - Decrease
42. Yi - Increase
43. Guai - Breakthrough (Resoluteness)
44. Gou - Coming to Meet
45. Cui - Gathering Together (Massing)
46. Sheng - Pushing Upward
47. Kun - Oppression (Exhaustion)
48. Jing - The Well
49. Ge - Revolution (Molting)
50. Ding - The Cauldron
51. Zhen - The Arousing (Shock, Thunder)
52. Gen - Keeping Still, Mountain
53. Jian - Development (Gradual Progress)
54. Gui Mei - The Marrying Maiden
55. Feng - Abundance (Fullness)

56. Lǚ - The Wanderer
57. Xiù - The Gentle (The Penetrating, Wind)
58. Dui - The Joyous, Lake
59. Huàn - Dispersion (Dissolution)
60. Jié - Limitation
61. Zhōng Fú - Inner Truth
62. Xiǎo Guó - Preponderance of the Small
63. Jì Jì - After Completion
64. Wèi Jì - Before Completion

Each hexagram represents a unique combination of yin and yang lines, and they offer insights into different aspects of life, situations, and human experience.

Appendix 2. An example of ChatGPT's response to a question on applying the I Ching in a generic situation.

Question to ChatGPT

With limited resources, a new company is facing a fierce competition in the market. Select a hexagram of the I Ching to describe this situation and explain its solution to the problem.

Answer 1

The hexagram that can describe the situation of a new company facing fierce competition in the market is Hexagram 36, Ming Yi or Darkening of the Light.

In Hexagram 36, the image is that of darkness overshadowing the light. It represents a challenging and difficult period where obstacles and setbacks may be encountered. This hexagram suggests that the company is facing strong competition and finding it difficult to gain visibility and success in the market. The solution offered by Hexagram 36 is to persevere and maintain inner clarity and integrity despite the challenges. It advises the company to remain focused, patient, and resilient during this dark phase. By maintaining a strong vision and adhering to ethical business practices, the company can navigate through the difficulties and ultimately emerge stronger.

The hexagram suggests that the company should evaluate its strategies, identify areas for improvement, and adapt to the changing market conditions. It encourages learning from failures and setbacks, using them as opportunities for growth and development. The company should also seek guidance from experienced individuals or mentors who can provide valuable insights and advice. Additionally, Hexagram 36 advises the company to be cautious of impulsive actions or desperate measures that may compromise its integrity. Instead, the focus should be on building a solid foundation, establishing a unique value proposition, and delivering high-quality products or services that differentiate the company from its competitors.

Ultimately, the solution lies in persevering through the dark period, maintaining integrity, adapting strategies, and continuously improving. By doing so, the company can overcome fierce competition, establish its presence in the market, and achieve long-term success.

Answer 2

The hexagram that can describe the situation of a new company facing fierce competition in the market and provide guidance is Hexagram 43, Guai or Breakthrough.

Hexagram 43 represents a situation where obstacles and challenges are prevalent. It signifies a competitive environment where the new company is struggling to make a breakthrough and gain a foothold in the market due to limited resources and intense competition.

The solution offered by Hexagram 43 is to embrace a strategic approach that focuses on innovation, creativity, and finding unconventional solutions. The hexagram suggests that the company needs to think outside the box and break through the barriers that are hindering its progress.

To overcome fierce competition with limited resources, the company can explore unique niches, identify untapped market segments, or develop innovative products or services that differentiate it from competitors. By offering something distinctive and valuable, the company can carve out its own space in the market.

Hexagram 43 also encourages the company to form strategic partnerships or alliances with other businesses or individuals who can complement its strengths and provide additional resources or expertise. Collaboration and synergy can help the company overcome resource limitations and enhance its competitive position.

Furthermore, the hexagram advises careful analysis of the market and competitors to identify weaknesses or gaps that can be exploited. By understanding the market dynamics and consumer needs, the company can tailor its offerings to meet specific demands and gain a competitive advantage.

Hexagram 43 emphasizes the importance of perseverance and determination. It suggests that even in the face of fierce competition, the company should not give up. Instead, it should maintain a resilient and positive mindset, constantly evolving its strategies, and learning from both successes and failures.

By embracing breakthrough thinking, seeking strategic collaborations, leveraging unique strengths, and adapting to changing market dynamics, the new company can navigate the challenges, overcome fierce competition, and establish a solid foundation for long-term success.

Appendix 3. An example of ChatGPT's response to a question on applying the I Ching in a textbook case.

Question to ChatGPT

The following is a business case. Select a hexagram of the I Ching to describe the situation and suggest solutions to the problems.

Joy Gresham was still at her desk at 6 p.m. trying to tie up some loose ends with the hope that tomorrow might be a more productive day. Joy is the western regional sales director (a middle management position) in the Wilson Company. Wilson is a manufacturer of a well-known line of sporting goods. As she reads the mail she still has to answer and stacks the phone messages she still has to return, she wonders if being a middle manager is really her kind of job. Selling products, traveling, and meeting with clients seemed much more to her liking than the routine of her present job.

Today is a good example. Joy went to the office early so she could call Lewis Jackson, the eastern regional sales director, to confer on a joint sales forecast they are trying to prepare. Working with Lewis isn't the easiest of tasks. Compromise just isn't a word in Lewis's vocabulary. She also needs to call the production managers of two of the company's eastern plants to find out what is causing the delay in the receipt of the new product lines. Those production people don't seem to realize that a large inventory is needed to keep up sales. The new product lines were promised two weeks ago and still aren't here. The phone calls take longer than expected, but by midmorning Joy is finally able to settle into the major project she has planned for the day. After several days of perusing sales reports of the past several years, she concluded that total sales, as well as productivity of individual salespersons, can be improved if the region is redesigned and the territories of each salesperson are adjusted. This is a major project, and she must present it to her district sales managers at her monthly meeting tomorrow afternoon.

Joy is away from the office a little longer than expected because of lunch. When she returns she finds a half dozen phone messages, including an urgent call from the corporate vice president of personnel, Wayne McDaniel. She returns Wayne's call, and, much to her dismay, she finds she is going to have to allocate a good portion of tomorrow's sales meeting to presenting the company's new benefits program. Wayne assures her that all the materials she needs will arrive late this afternoon and stresses the need for its immediate dissemination and explanation. After trying unsuccessfully to return several of the other phone calls, she returns to the territory redesign project. She finishes that project just before the 3 p.m. appointment she has with a candidate for district sales manager. Joy spends more than an hour with the candidate and is impressed enough with him to immediately make some follow-up phone calls.

Joy looks at her watch and realizes she hasn't enough time to make all the calls she'd planned. The whole day seems to have gotten away from her. She still has the materials from Wayne to review, and she has to prepare the agenda for tomorrow's meeting. She just has to figure a way to motivate better performance from those sales managers. The redesign of the territory

was only a partial solution. Joy wonders what else she can do. Oh, she thinks to herself. I better call and cancel my date for tonight. It has been over three weeks since I've had any life other than work, and it feels like the only time I ever leave this office is to eat lunch!

Answer

The hexagram that can describe the situation in the business case and provide guidance for solutions is Hexagram 47, Kun or Oppression (Exhaustion).

Hexagram 47 reflects a situation where one feels overwhelmed, exhausted, and oppressed by various responsibilities and demands. Joy, the western regional sales director, is facing multiple challenges, including communication issues with her colleague, delays in production, time constraints, and the need for improved performance in her team.

The solution offered by Hexagram 47 is to approach the situation with patience, perseverance, and a focus on regaining balance and harmony. It advises Joy to take a step back, reassess her priorities, and find ways to alleviate the sense of overwhelm and exhaustion.

To address the challenges, Joy can consider the following solutions:

1. Delegate and collaborate: Instead of trying to handle everything herself, Joy can delegate tasks to her team members or seek collaboration with colleagues. By sharing responsibilities, she can lighten her workload and create a more productive and supportive environment.
2. Effective communication: To deal with the communication issues with Lewis, Joy can approach the situation with empathy and seek to understand his perspective. Finding common ground and establishing open lines of communication can help in resolving conflicts and fostering better collaboration.
3. Streamline processes: Joy can analyze the production delays and work with the production managers to identify bottlenecks and find ways to streamline the processes. By improving coordination and efficiency, the company can ensure the timely delivery of new product lines.
4. Time management: Joy needs to prioritize her tasks and set realistic expectations. By allocating specific time slots for different activities and setting boundaries, she can create a more balanced schedule. This will allow her to focus on critical projects and still have time for personal life.
5. Motivating performance: Apart from the territory redesign project, Joy can explore additional strategies to motivate her sales managers. This may involve setting clear goals, providing training and development opportunities, recognizing achievements, and fostering a positive and supportive work environment.
6. Self-care: Joy should prioritize self-care and work-life balance. Taking breaks, finding time for activities outside of work, and maintaining personal relationships are essential for rejuvenation and maintaining overall well-being.

Hexagram 47 reminds Joy to approach the challenges with patience and perseverance. By addressing the issues step by step, seeking support, and maintaining a balanced approach, she can overcome the sense of oppression and find solutions to improve her team's performance and her own well-being.

Appendix 4. An example of ChatGPT's response to a follow-up question based on the answers in Appendix 3.

Question to ChatGPT

Select a hexagram of the I Ching to further elaborate each of the five solutions above.

Answer

Certainly! Here are the hexagrams that further elaborate each of the five solutions mentioned:

1. Delegation and collaboration: Hexagram 44, Gou or Coming to Meet. This hexagram represents the importance of teamwork and collaboration. It advises Joy to foster a spirit of cooperation within her team,

encouraging open communication and shared responsibilities. By coming together and supporting each other, they can overcome challenges more effectively.

2. Effective communication: Hexagram 27, Yi or Nourishment (Providing for). This hexagram emphasizes the need for nourishing relationships through effective communication. It suggests that Joy should approach communication with empathy, seeking to understand and address the needs and concerns of others. By nurturing healthy and open communication channels, conflicts can be resolved, and collaboration can be strengthened.

3. Streamline processes: Hexagram 41, Sun or Decrease. This hexagram signifies the need to decrease or eliminate excess and streamline processes for greater efficiency. It advises Joy to assess the production delays and identify areas where improvements can be made. By eliminating unnecessary steps, optimizing resources, and enhancing coordination, the company can decrease delays and improve productivity.

4. Time management: Hexagram 5, Xu or Waiting (Nourishment). This hexagram suggests the importance of patience and waiting for the right timing. It advises Joy to manage her time wisely by prioritizing tasks and being patient with the process. By waiting for opportunities and making conscious choices, she can create a more balanced schedule that allows for both work responsibilities and personal fulfillment.

5. Motivating performance: Hexagram 9, Xiao Chu or Small Accumulating. This hexagram represents the power of small, incremental steps towards progress. It encourages Joy to break down the goal of motivating performance into smaller, achievable steps. By setting clear and realistic goals, providing regular feedback and recognition, and nurturing a supportive environment, she can gradually accumulate improvements and foster a motivated team.

By incorporating the guidance from these hexagrams, Joy can further enhance her approach to addressing the challenges she faces, fostering a more collaborative and efficient work environment, improving communication, managing time effectively, and motivating her team towards better performance.

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