

Research on the Knowledge and Action Educational Concept from the Perspective of Chinese and Foreign Universities Mottos

Xu DING¹, Wenhan DENG¹, Zhangyi YE¹

¹School of International Studies, NingboTech University, Ningbo, Zhejiang, China,

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Corresponding Author

Xu DING

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Abstract

In today's globalized world, higher education institutions serve as the epicenters for nurturing top-tier talent, and their school motto culture encapsulates their core educational philosophies. *The Knowledge and Action educational concept* represents a dialectical approach that emphasizes the unity of knowledge, action, and belief, manifesting in diverse ways across the unique mottos of universities worldwide. This study collects school mottos from the official websites of both Chinese and foreign universities, generating keyword clouds for each group. Through this analysis, this study finds the distinct characteristics of university mottos across cultures and delves into how they collide and merge within the framework of *the Knowledge and Action educational concept* on an international stage.

1. Introduction

In the United Nations' Sustainable Development Goals for Quality Education (UNESCO, 2017), higher education is tasked with equipping students with knowledge, skills, and values such as human rights, peace, global citizenship, and cultural diversity. However, talent cultivation varies across different regions and times, and educational concepts have developed unique characteristics in the long history of universities worldwide. University mottos, which condenses educational philosophies, serves as a carrier and embodiment of institutional ideas, playing a pivotal role in higher education. The concept of "Knowledge and Action", emphasizing the unity of moral growth and practical education, is widely reflected in university mottos globally. However, research gaps remain. Current studies have explored the historical and cultural contexts of university mottos but have not fully addressed how "Knowledge and Action" manifests and evolves in different cultures, nor its practical impact in educational settings. This study aims to explore how the concept of "Knowledge and Action" is represented in university mottos across cultures.

2. Literature Review

The Knowledge and Action educational concept, rooted in the rich philosophical traditions of both Eastern and Western cultures, has garnered significant attention in the field of education. In recent years, scholars have explored this concept from various perspectives, including its historical origins, cultural significance, and practical applications in educational settings. Research on university mottos, which often encapsulate the core educational philosophies of institutions, has also contributed to the understanding of how *the Knowledge and Action educational concept* manifests in different cultural contexts. This section provides a comprehensive review of the existing literature related to *the Knowledge and Action educational concept*, focusing on its historical development, cultural interpretations, and the ways in which it is reflected in the mottos of universities in China and abroad.

2.1 Universities mottos in China and other counties

The research on the Chinese universities mottos involves many fields in China. Some scholars investigated the source, type, connotation and significance of Chinese and foreign universities mottos from different perspectives, for instance, from the origin, content, form and functions similarities and differences of the Chinese and foreign universities' mottos (Wang, 2007), from the attributes, types, and value objectives of the mottos culture (Han, 2019) and from the mottos' organizational culture (Zhang, 2020); Some used different research methods to explore the problems and solutions of Chinese-English translation of Chinese and foreign universities mottos (Fan, 2008; Zhang, 2019; Zhao, 2016); some delved into the educational concept of university mottos from the perspective of culture and ideology and politics, and its practical application in the classroom (You, 2021; Zhang, 2020); and others respectively traced the interrelationship between the Chinese and foreign university motto and Chinese Confucianism (Zhai, 2018; Zhang, 2017). However, there are relatively few literatures exploring the combination of the university motto and the *Knowledge and Action educational concept*.

The research on the "unity of knowledge and action" by foreign scholars is often limited to the concept itself. For example, American scholar Irene Bloom explored the definition of Wang Yangming's "unity of knowledge and action" (Bloom, 1983); Canadian scholar Richard Feist regarded the idea of "unity of knowledge and action" as a non-appearance epistemology (Feist, 2003); Korean scholar 황종원 used consciousness and physiological activities to define the concept of knowledge and action from the characteristics and significance of the new doctrine of "unity of knowledge and action" by the modern Chinese philosopher He Lin (황, 2017); American scholar Roger T. Ames analyzed Wang Yangming's "unity of knowledge and action" thought to promote the acquisition of human wisdom (Ames, 1977). However, there are few literatures exploring the *Knowledge and Action educational concept* from the angle of university motto.

2.2 The origin of the concept of knowledge and action

The concept of knowledge and action, is the idea of "unity of knowledge and action" in ancient China, has a rich historical tapestry, weaving through the teachings of various philosophers across diverse eras. From Confucius's "Now my way is to hear their words, and look at their conduct." (You, 2018, p. 65) to Lao Zi's "Sages hear the principles and act diligently." (Lao, 2012, p. 177) during the Spring and Autumn Period and Zhu Xi's "The clearer the understanding, the more solid the practice; the more solid the practice, the clearer the knowledge." (Zhu, 2017, p. 199) in the Song Dynasty, all these emphasize the development and change of cognition, and clarify the combination of cognition and practice, that is, the inherent connection between knowledge and

action. Their words not only highlight the dynamic nature of knowledge and action but also pave the way for a deeper understanding of their interconnected essence.

Wang Yangming's concept of "unity of knowledge and action" in the Ming Dynasty of China is different from that of his predecessors and has unique characteristics. Wang Yangming (2018) believes that "Action begins with knowledge, and ends in knowledge" (p. 15). He described the causal relationship of "knowledge and action" from a positive perspective, and proposed that the two are inseparable. "Those who do not act while acquiring knowledge, they are virtually unknown" (Wang, 2018, p. 13). He also demonstrated the universal law of "knowledge and action" from the opposite side. "The highest state of knowing is: knowing what is true, real and infallible, and this state is action. The highest state of action is: plain, clear and undisturbed, and this state is knowing. Thus, knowing and doing are inseparable" (Wang, 2015, p. 102). In this sense, he sublimated the interrelationship between "knowledge and action" in theory, and reckoned that only when the two are truly combined can they be applied in real life.

2.3 Theoretical Framework: the three-dimensional elements of the *Knowledge and Action educational concept*

To provide a comprehensive understanding of the Knowledge and Action educational concept as it manifests in university mottos across different cultures, this study constructs a theoretical framework that integrates multiple educational theories. The concept of "unity of knowledge and action" advocated by China today, does not simply copy the one of Neo-Confucianism in the Song and Ming Dynasties, but is designed to explore the dialectical unity of theory and practice, emphasizing the importance of moral development and practical education. It roots Marxist epistemology in the fertile soil of China's ideology of the unity of knowledge and action, and finds a construction path that is more suitable for China's national conditions. This is not only a creative transformation of the traditional view of knowledge and action, but also the enrichment and development of the scientific practice outlook (Zhang & Zhao, 2018). "Knowing and doing" is not only a cultural spirit of "integration of knowledge and action", which is endless and timeless, but also an educational concept in a broad sense, which constantly provides reference for people's daily study, work and life. Furthermore, the *Knowledge and Action educational concept*, a dialectical education framework of "the unity of knowledge, action, and belief", which is developed through our former research (Ding et al, 2022), attaches great importance to the unity of moral development and practical education. This framework, as shown in Figure 1, is based on three core dimensions: Knowledge, Action, and Belief, which together form a holistic educational approach.

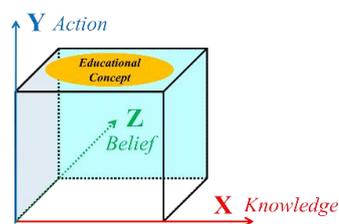


Figure 1: Three-dimensional framework of the Knowledge and Action educational concept

The volume in Figure 1. reflects the results of individual cultivation, which is determined by the length of the three vectors of "Knowledge, Action and Belief". The lengths of the vectors of different dimensions can show the quantitative results produced by the combination of knowledge and action and the educational concept. The longer the lengths of the three dimensions are, and their rates increase, which means that the larger the volume of the cube, the better the educating

effect. Among them, the Knowledge dimension represents the cognitive aspect of education, emphasizing the acquisition and understanding of information. The Action dimension focuses on the practical application of knowledge. It highlights the importance of translating theoretical understanding into concrete actions. The horizontal axis is "Knowledge" and the vertical axis is "Action". Knowledge and action intersect at the starting point, and theory and practice integrate together. This is similar to the requirements of knowledge and cognitive process dimension in Benjamin Bloom's taxonomy of educational goals revised by the famous American cognitive psychologist and educator L. W. Anderson (Sheng, 2008). The educational concept is inseparable from the development of cognitive science. Only by starting from the essence of individual growth of students can educators truly promote learners' study, work and future life.

The in-depth dimension is "Belief", that is, the concept of individual cultivation, the one of fostering virtue and promoting rounded growth of people, and contains the spirit of "virtue", "humility" and "self-improvement", which motivates learners to work hard, and learn for life. This is exactly the same as the famous American psychologist Robert J. Sternberg's *"Theory of Successful Intelligence"* (Robert, 2017). This theory advocates that education is for most students, and most students have the opportunity, and can succeed. Through "meaning learning" in analytical intelligence, practical intelligence and creative intelligence (Richard, 2016), the original aspiration of individual cultivation is realized, and it encourages learners of different classes and ages receive education. In the development report *"Learning to Realize Education's Promise"* released by the United Nations World Bank Organization in 2018, the two terms "learning" and "education" were used as the key words in the title for the first time, clearly revealing that "no learning, no education" (Ding et al, 2018). Therefore, the Belief dimension reflects the ideological and ethical foundation of education. It emphasizes the importance of values, ethics, and moral principles in guiding knowledge acquisition and practical actions.

The side of Figure 1 reflects the "internal" and "external" associations of knowledge and action education, that is, "internalized in the mind and externalized in behavior". From 2012 to 2014, UNESCO has successively released three related reports, developed an internationally common educational goal or learning-indicator system, and identified the most important seven areas and sub-areas related to learning outcomes, namely: physical health, social contact and emotion, culture and arts, literacy and communication, active learning and cognition, numbers and mathematics, science and technology (Ding et al, 2018). These areas involve the educational goals and requirements for learners' "internal" cognition and "external" learning. Therefore, they are the inevitable collision and active fusion of Chinese and foreign educational concepts, and also the orderly unity of the long-term goals of the entire human educational thought.

3. Methodology and Procedures

3.1 Methodology

This study employed a comparative and qualitative research design to investigate the manifestation of the Knowledge and Action educational concept in university mottos across different cultural contexts. The research was conducted over a period of nearly four years, during which a comprehensive collection and analysis of university mottos were performed.

3.1.1 Data Collection

A total of over 300 university mottos were systematically gathered from the official websites of higher education institutions located in America, Europe, Oceania, and Asia. The selection of universities was based on a random sampling method to ensure a diverse representation of

educational philosophies and cultural backgrounds. Among the collected mottos, 119 were identified as relevant to the Knowledge and Action educational concept, with 48 from Chinese universities and 71 from international institutions.

3.1.2 Data Sources

The data sources for this study included both primary and secondary information related to university mottos. For international universities, the mottos were primarily in English, and the data collected encompassed the content, source, meaning, and historical context, as well as their contemporary significance. For Chinese universities, the mottos were mainly in Chinese, and the analysis focused on their content, historical origins, cultural implications, and educational philosophies. Where available, English versions of Chinese university mottos were also included to facilitate cross-cultural comparison.

3.1.3 Analytical Approach

To analyze the collected data, the study utilized a combination of quantitative and qualitative methods. First, word clouds were generated using the cross-platform computer programming language Python (version 3.8.9) to visualize the frequency of keywords in the university mottos. This technique allowed for the identification of recurring themes and concepts related to *the Knowledge and Action educational concept*. Subsequently, a qualitative analysis was conducted to interpret the underlying educational philosophies and cultural values reflected in the mottos. This involved an in-depth examination of the historical and cultural contexts in which the mottos were developed, as well as their contemporary relevance in shaping educational practices and student development.

3.1.4 Validity and Reliability

To ensure the validity and reliability of the study, multiple sources of data were triangulated, and the analysis was cross-validated through peer review and consultation with experts in the field of educational philosophy. Additionally, the use of standardized data collection and analysis procedures minimized potential biases and ensured the consistency of the findings.

3.2 Procedures

3.2.1 Analysis of Word Cloud Characteristics in Chinese University Mottos

The sample of this study included 48 Chinese universities, covering national key universities (e.g., Tsinghua University, Fudan University, Zhejiang University), provincial key universities (e.g., Guangdong University of Foreign Studies, Sichuan Normal University), and universities in Hong Kong, Macao, and Taiwan (e.g., National Taiwan University, University of Hong Kong). These universities prominently displayed their mottos on their official websites, with some providing dedicated pages to explain the cultural and educational significance of their mottos.

The total number of Chinese characters in the mottos of these 48 universities was 374. A word cloud was generated to visualize the frequency of keywords in these mottos (see Figure 2).



Figure 2: Word cloud of key words in the 48 Chinese universities mottos

In the word cloud, larger font sizes indicate higher keyword frequencies. The most frequent keywords were "博学" (erudition), "求是" (seeking truth), and "明德" (pursuing virtue). These keywords reflect the core elements of the *Knowledge and Action educational concept* in Chinese universities, namely Knowledge, Action, and Belief.

3.2.2 Characteristics of Keyword Format in Chinese University Mottos

The mottos of the 48 Chinese universities predominantly used two-character or four-character structures, which are concise, comprehensive, and highly expressive. The mottos were categorized into several forms. "2+2" structure: For example, the motto of China University of Political Science and Law ("厚德，明法，格物，致公" Keeping integrity and law in mind and studying for the people, developing moral education, mastering the law, looking for truth and serving the public) and Communication University of China ("立德，敬业，博学，竞先" Integrity, Professionalism, Erudition and Competence). "4+4" structure: For example, Tsinghua University ("自强不息，厚德载物" Self-discipline and Social Commitment), Beijing Foreign Studies University ("兼容并蓄，博学笃行" Learn with an open mind; Serve a great cause), and Beihang University ("德才兼备，知行合一" Integrate Virtue with Brilliance and Combine Knowledge with Practice). The Chinese universities mottos are basically a single or multiple super-imposition of two or four characters, and the number of words varies from 2 to 16, as shown in Figure 3.

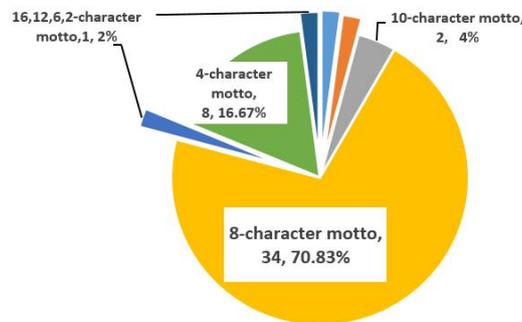


Figure 3. Statistics on the number of words in the 48 Chinese universities mottos

Among the 48 Chinese universities mottos, there are 34 universities with 8-character motto, accounting for 70.83%, and most of them are the repeated superposition of 2-character or the double repetition of 4-character; there are 8 universities with 4-character motto, accounting for 16.67%; there are fixed four-character collocations superimposed with two characters, such as "实事求是 (Seeking Truth from Facts)" of Renmin University of China, "知行合一 (Integrating Knowledge and Action)" of Ningbo University of Technology, "求是创新 (Seeking Truth and Pursuing Innovation)" of Zhejiang University, and "明德格物 (Sapientia et Virtus)" of University of Hong Kong; there are 2 universities with 10-character motto: Sun Yat-Sen University's "博学，审问，慎思，明辨，笃行 (Study Extensively, Enquire Accurately, Reflect Carefully, Discriminate Clearly, Practice Earnestly)" is composed of two-character repetitions, and Fudan University's "博学而笃志，切问而近思 (Rich in Knowledge and Tenacious of Purpose; Inquiring with Earnestness and Reflecting with Self-practice)". The conjunction "而 (and)" is added between the

two-character words, and forms two superpositions of 5-character. The regularity of the 5-character poetic style increases the readability of the language; there is only one university with 2-character motto, 6-character motto, 12-character motto, and 16-character motto respectively, and the repetition and superposition of 2-character or 4-character words all exist.

From the perspective of the form of motto, Chinese universities mostly use the superposition of 2-character or 4-character phrases, and some choose the sentences. From the perspective of the grammar of motto, Chinese universities mottos are balanced and orderly, usually displayed in juxtaposition, parallelism, and antithesis, including verbs, nouns, adjectives, and rarely conjunctions or adverbs.

3.2.3 Analysis of the Knowledge and Action educational elements in the foreign universities mottos

To delve deeper into the essence of the *Knowledge and Action educational concept*, this research has selected a diverse range of foreign universities for analysis. These institutions, spanning across America, Europe, Asia, and Australia, represent a broad spectrum of educational philosophies and practices. By meticulously collecting their school mottos and related information from their official websites, this research has compiled a comprehensive motto corpus that serves as the foundation for our analysis. These 71 foreign universities include: Massachusetts Institute of Technology, Harvard University, Stanford University, University of Ottawa, University of Toronto and other universities in Americas; University of Cambridge, University of Birmingham, Moscow State University, University of Paris, University of Munich, Ghent University, University of Copenhagen and other European universities; Seoul National University, National University of Singapore, Nanyang Technological University, Kyoto University, Hokkaido University, Chulalongkorn University and other Asian universities; University of Sydney, University of Melbourne, University of Auckland and other Australian universities. By collecting the school motto and related information on the official website of each university, a motto corpus of foreign universities is made.

The content of the foreign universities mottos uses Word Cloud in the Python software to perform simple word-segmentation, taking words as the basic unit, omitting some function words (articles, prepositions, pronouns, etc.), and drawing a word cloud revealing the keywords of the motto, as shown in Figure 4.



Figure 4: Word cloud of keywords in the 71 foreign universities mottos

The keywords that appear frequently in Figure 4. are mostly nouns and verbs. Words with larger font sizes mean that they appear more frequently, such as: "truth", "knowledge", "learn", "mind", "things", "science", "wisdom", "light", "know" and "seek" etc. The keywords "truth", "knowledge" and "science" reflect that the common goal in the educational concept of foreign universities is the pursuit of "truth", such as the Johns Hopkins University in the United States, California Institute of Technology, and Yonsei University in Korea, for "The truth shall/will make you free / Veritas vos liberabit (in Latin)" is chosen as the motto. This is the collision and fusion of the *Knowledge and Action educational concept*, and it is also the best embodiment of the first dimension of

"Knowledge". The exploration and unremitting pursuit of knowledge, science and truth is the top priority of universities. The keywords "learn", "know" and "seek" are also several verbs that appear frequently. In a sense, they emphasize learning, understanding and pursuit, which are exactly the international expressions of the second dimension of "Action". The keywords "mind", "wisdom" and "light" are also very obvious in the word cloud, which reflect another cultural value, highlighting the human mind, soul and wisdom. This is a collision with China's educational philosophy, but it is still the manifestation of an inner "Belief". Although the angle is slightly different, the inner implication is still the same, which is the belief of individual cultivation. Therefore, the foreign universities mottos still reflect the "Knowledge, Action and Belief" in the three-dimensional *Knowledge and Action educational concept*.

4. Results and Discussion

4.1 Word-selection and cultural implications in Chinese and foreign universities mottos

University mottos are not just slogans; they are cultural artifacts that reflect the values and educational philosophies of their institutions. The word selection in these mottos often draws from classical literature, religious texts, and philosophical traditions, embedding deep cultural meanings. Most of Chinese universities mottos frequently cite ancient classics, reflecting a deep respect for traditional wisdom. For example, Fudan University's motto "博学而笃志, 切问而近思 (Rich in Knowledge and Tenacious of Purpose; Inquiring with Earnestness and Reflecting with Self-practice)" is quoted from the book *The Analects of Confucius* in the Warring States Period; Heilongjiang University's motto "博学慎思, 参天尽物 (Study Extensively and Reflect Carefully, Towering Objects)" is quoted from *Doctrine of the Mean* in *The Book of Rites* in the Western Han Dynasty; the motto of the University of Hong Kong, "明德格物 (Latin: Sapiencia et Virtus; English: To manifest virtue and to investigate things)", is quoted from *Great Learning* in *The Book of Rites*; and the motto of Hunan University, "实事求是, 敢为人先 (Seeking truth from facts and daring to be the first)" is quoted from *Biographies of Liu De* in *The Book of Han* in the Eastern Han Dynasty. The use of classical Chinese phrases not only conveys a sense of historical continuity but also underscores the importance of virtue and intellectual rigor.

Foreign universities mottos are mainly in the form of a single sentence, and the selections of fixed words are fewer than the sentences. They often draw from the Bible, classical Western literature, and philosophical works, etc. For example, Emory University's motto "The wise heart seeks knowledge" and University of Miami's motto "Great truth" are all derived from *Bible*; London School of Economics and Political Science's motto "To understand the causes of things" is derived from "*Felix, qui potuit rerum cognoscere causas.*" in *Georgics* by the ancient Roman poet Virgil; Monash University's motto "I am still learning" is cited from the Latin dictum "*Ancorā impāro.*" by the Renaissance giant Michelangelo Buonarroti. This reflects a cultural emphasis on individual enlightenment and the pursuit of truth. The use of Latin and references to classical texts highlight a tradition of intellectual heritage and the pursuit of knowledge for its own sake.

As for the cultural implications, the word selection in Chinese university mottos often emphasizes collective values, such as social harmony and moral responsibility. In contrast, foreign university mottos tend to emphasize individual values, such as personal freedom and intellectual independence. Despite these differences, both traditions aim to cultivate individuals who contribute positively to society.

4.2 The expression and style of the *Knowledge and Action educational concept* in

Chinese and foreign universities mottos

The Chinese and foreign universities mottos convey *the Knowledge and Action educational concept* in various ways, some of which are clear and direct, and some of which have far-reaching implications, thus reflecting the understanding and pursuit of education in different historical cultures. In the motto of 48 Chinese universities, directly using the keyword "knowledge and action" as the core element, there are 7 universities that clearly put forward the educational concept and encourage students to carry the spirit of knowledge and action, including: Beijing Jiaotong University "知行 (To Know To Do)", Beihang University "德才兼备, 知行合一 (Integrate Virtue with Brilliance and Combine Knowledge with Practice)", Northeastern University "自强不息 知行合一 (Seeking unremitting self-improvement, integrating knowledge and action)", and Central South University "知行合一, 经世致用 (Create Knowledge and Serve Society)". This reflects a cultural belief that true knowledge must be accompanied by action to be meaningful.

Foreign university mottos may not explicitly mention the unity of knowledge and action, but they often imply it through the emphasis on practical application and experiential learning. There are also three-dimensional elements of *the Knowledge and Action educational concept* in the foreign universities mottos. For example, the motto of Loughborough University in the United Kingdom is "By truth, wisdom and labor", and the motto of University of Surrey in the United Kingdom is "Perseverance, excellence, commitment and knowledge", University of Greenwich's motto "To learn, to do, to achieve" and the motto of University of Queensland in Australia "By means of knowledge and hard work". This reflects a cultural emphasis on innovation and practical application as essential components of education.

While Chinese university mottos tend to emphasize moral and social responsibility, foreign university mottos often highlight individual achievement and intellectual freedom. However, both traditions recognize the importance of combining knowledge with action to achieve educational goals. This comparative analysis reveals the cultural nuances in how the Knowledge and Action educational concept is understood and implemented in different educational contexts.

The style of university mottos also reflects cultural differences in educational practice. Chinese university mottos are often concise and poetic, using parallelism and alliteration to convey their messages. This style reflects a cultural preference for simplicity and elegance, such as the motto of Zhejiang University "求是创新 (Seeking Truth and Pursuing Innovation)", the motto of Nanjing University "诚朴, 雄伟, 励学, 敦行 (Sincerity with Aspiration, Perseverance with Integrity)", and the motto of Yunnan University "自尊, 致知, 正义, 力行 (Self-esteem, Knowledge by Investigation, Justice, and Diligence)". They are concise and profound, emphasizing the pursuit of truth and innovation in education. Foreign university mottos often use metaphors and symbolic language to convey their messages, such as "light" in the motto of Yale University in the United States "Truth and light", "tree" in the motto of the University of Toronto in Canada "As a tree through the ages", "cornerstone" in the motto of the University of Paris in France "Suffering, is always the cornerstone of growth", "philosopher" in the motto of Humboldt University of Berlin in Germany "Philosopher should change the world", and "love" in the motto of Hanyang University in Korea "Practice of love", etc. This style reflects a cultural preference for imagery and abstraction.

4.3 Universities mottos reflecting the *Knowledge and Action educational concept*

4.3.1 Chinese universities mottos

Sun Yat-sen University's motto is "博学, 审问, 慎思, 明辨, 笃行 (Study Extensively, Enquire Accurately, Reflect Carefully, Discriminate Clearly, Practice Earnestly)", which is quoted from

Doctrine of the Mean in *The Book of Rites*. In the *Knowledge and Action* educational concept, this motto can clearly reflect the three-dimension educational elements. "博学" (Study Extensively) is the cognitive dimension, that is, learning from the past to the present; "笃行" (Practice Earnestly) is the dimension of "Action", which means the down-to-earth practice; "明辨" (Discriminate Clearly) is the dimension of "Belief", which is based on virtue, distinguishing right from wrong; "审问" (Reflect Carefully) and "慎思" (Discriminate Clearly) are related to internal and external dimensions of the knowledge and action concept, that is, seeking truth inward with self-prudence, and outward with deliberation and enquiry. In Nanjing Tech University's motto "明德, 厚学, 沉毅, 笃行" (Honor the moral integrity, Strive for excellence, Persist in fortitude, Combine learning and practice)", the "厚学" (Strive for excellence) and "笃行" (Combine learning and practice) are similar to those of Sun Yat-sen University, reflecting the requirements of the "Knowledge" and "Action" dimensions respectively; "明德" (Honor the moral integrity) and "沉毅" (Persist in fortitude) mean to demonstrate virtue, calmness and fortitude, that is, the inner core "Belief" of the third dimension. The "知行合一" in the motto of Central South University "知行合一, 经世致用" (Create Knowledge and Serve Society)" directly and clearly reflects the two-dimensional dialectical relationship between cognition and practice, which complement each other. The "经世致用" encourages learning for application, serving the world and the people, emphasizing that morality is a top priority, then establishing oneself, and finally making contributions to the era and society.

Through the discussion of the educational elements of knowledge and action in Chinese university mottos, this research has delved into the unique characteristics of these mottos in terms of word clouds and keyword formats. These characteristics not only expose the diversity in linguistic expression within mottos but also reflect the high regard that Chinese higher education institutions hold for the integration of knowledge and practice. Through specific case studies, it has further corroborated how university mottos embody the educational concept of knowledge and action, and the positive role they play in cultivating students' comprehensive qualities and guiding value orientations. In summary, Chinese university mottos are not only symbols of institutional spirit but also important carriers for the transmission and practice of the educational concept of knowledge and action.

4.3.2 Foreign universities mottos

The motto of the Massachusetts Institute of Technology "Mind and Hand" (Latin: *mens et manus*). It means the use of hand and brain, the unity of knowledge and action, aiming to cultivate the mind and strengthen practice. "Mind" is to refine the inner and enrich the soul. The interpretation of the motto on the official website of the MIT points out that knowledge should be continuously acquired from classroom and applied in practice. "Hand" refers to the practical level, doing real work, using both hands and brains, not being a "giant in thought, dwarf in action", internalized in the mind and externalized in action.

The motto of the University of Queensland in Australia "By means of knowledge and hard work" (Latin: *Scientia ac Labore*. It means relying on knowledge and diligence), which aims to exercise and revise oneself through hard work in study and life, and endow one's inner self-cultivation. The core word "knowledge" in the motto means learning all knowledge, and improving oneself; the core word "hard work" means real practice and diligence. "Knowledge" and "hard work" are the combination of theory and practice, seeking truth and being pragmatic. "Knowledge" is the foundation and premise, "Action (or hard work)" is the approach and key, and the two complement each other.

Stanford University's motto "The wind of freedom blows" is stemmed from the German "Die

Luft der Freiheit weht". As Gerhard Casper (1992), the ninth president of the university, mentioned in his inaugural speech, "The freedom of the university lies in the freedom to pursue knowledge, to question and challenge, the freedom of personal thought and speech, of the inner world, of study, teaching and research..." The educational philosophy of foreign universities emphasizes the free spirit of learning and research, because the free mind can stimulate inspiration and promote creativity, which brings a fierce cultural collision with China's virtue-oriented higher education. However, it can also be understood as an interaction of beliefs in individual cultivation, because both emphasize strengthening and improving learners' inner experience and self-cultivation.

5. Conclusion and Suggestion

5.1 Summary of findings

This study has explored the manifestation of the Knowledge and Action educational concept in university mottos across different cultural contexts. The analysis reveals that while both Chinese and foreign university mottos emphasize the importance of "Knowledge" and "Action", they differ significantly in their cultural emphasis. Chinese university mottos tend to focus on collective values, moral cultivation, and social responsibility, reflecting a deep-rooted Confucian tradition. In contrast, foreign university mottos often highlight individual growth, freedom, and belief, drawing from western philosophical and religious traditions. Despite these differences, both traditions ultimately aim to cultivate individuals who can contribute positively to society, thus reflecting a unified educational philosophy.

5.2 Innovative insights and contributions

This study contributes to the field by providing a comparative analysis of the Knowledge and Action educational concept across different cultures. By integrating multiple theoretical perspectives and analyzing a diverse range of university mottos, this research offers new insights into how educational philosophies are expressed and implemented in various cultural contexts. The study also highlights the importance of understanding cultural nuances in educational practices, which can inform cross-cultural educational exchanges and collaborations.

5.3 Future work: cross-cultural educational exchange and fusion

While this study has provided valuable insights into the cultural differences and similarities in university mottos, future research should focus on the practical implications of these findings. Specifically, future work could explore how the Knowledge and Action educational concept can be effectively integrated into cross-cultural educational programs and collaborations. This could involve investigating specific examples of how universities from different cultural backgrounds collaborate to implement the Knowledge and Action educational concept in joint degree programs, student exchange programs, and international research projects. Extending the comparative analysis to include a broader range of educational practices, such as teaching methods, assessment strategies, and student support services. This could provide a more comprehensive understanding of how the Knowledge and Action educational concept is translated into practice across different cultures.

By focusing on these areas, future research can build on the findings of this study to develop more effective strategies for cross-cultural educational exchange and fusion. This will not only enrich the educational experiences of students but also contribute to the global discourse on higher education and sustainable development.

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Visualization"*

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