What Should Students Learn and How Should Teachers Teach in the Age of Artificial Intelligence?

-- Take "Major in Economics and Management " as an Example

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Abstract: In the era of artificial intelligence, the traditional education model has been unable to meet the needs of students and society, and it is urgent to change and innovate. As an important branch of higher education, the traditional education model of the major in economics and management has some shortages, such as orientation in teachers, lack of individualized teaching, lack of practical ability, single evaluation system and lack of innovative thinking. Therefore, students of the major in economics and management should pay attention to improving technical literacy, innovative thinking, strategic analysis and practical ability. In order to realize the effective transformation of education, teachers of the major in economics and management should use artificial intelligence tools such as ChatGPT to enrich the teaching content and form, pay attention to students' individual needs and development goals, teach students in combination with their own knowledge and experience, to cultivate students' comprehensive quality and professional ability, taking students' actual employment needs into account, etc.

Keywords: Artificial Intelligence; ChatGPT; Economic Major; Management Major; Education.

1. Introduction

Artificial intelligence has become a key driving force and transformative force in today's society, and have been producing a profound impact on various fields and industries in society [1]. Among them, education, as an important field for cultivating talents and inheriting culture, facing great challenges and opportunities brought by artificial intelligence [2]. How to shape students and teachers in the era of artificial intelligence has become an urgent question to be answered. Recently, China's Education Modernization 2035 and the "new infrastructure" related policies of national ministries and commissions clearly point out that it is necessary to actively promote the development of AI-based educational tools, so as to improve the quality of education and teaching [3-4]. After ChatGPT was officially launched on November 30, 2022, it attracted more than one million users within a week [5], which not only redefined the way humans interact with machines, but more importantly, its utilization in the field of education challenged the traditional education model. ChatGPT is a deep learning-based natural language generation (NGL) technology that generates coherent, fluid, and logical text content based on a given text or topic. It has a strong language understanding and expression ability, can carry out natural, friendly and interesting dialogue with users, and can also provide users with various types of text content, such as news, stories, poems, lyrics, codes, etc. [6]. Although some scholars are concerned about the possible educational problems caused by ChatGPT, such as student cheating or academic over-dependence [7-8], most scholars have a positive view of the technology, arguing that its application can bring many benefits [9-11]. Much of the traditional approach to education has been based on a teacher-centered model, and today we are already seeing a shift from teacher-centered to student-centered, with technologies like ChatGPT playing a role. This makes access to information no longer limited to the classroom, but available anytime, anywhere, according to student needs.

As an important branch of higher education, major in economics and management has become an important support for social and economic development in the process of training and conveying a large number of high-quality management talents to the society. Its influence and status have become increasingly prominent, providing strategic thinking and decision-making support for various enterprises, government departments and non-profit organizations. In fact, education reform is not only a technical update, but also a forward-looking response to the needs of future talents. With the rapid development of social economy, enterprises and institutions are increasingly in need of management talents with digital thinking and ability. Digital technologies such as artificial intelligence, big data, virtual reality, etc., have brought personalized, flexible and efficient teaching methods to economic and management education, and greatly enriched educational resources, breaking geographical and time constraints. The rapid iteration of management knowledge, the diversification of practice and the integration of disciplines make major in economics and management education face unprecedented challenges. On the one hand, we need to think: in such a big background, students of the major in economics and management should learn what? On the other hand, for teachers, how to use technology to improve the teaching effect while retaining the humanistic care of education is also a very important issue.

Therefore, this paper hopes to further explore the future direction of the major in economics and management education in the era of artificial intelligence by combing the existing education model and combining the technical characteristics of ChatGPT, so as to provide useful references for educators and scholars.
2. The Impact of Artificial Intelligence on the Students' Value of the Major in Economics and Management

Under the traditional education mode, the learning mode of the major in economics and management students is mostly passive acceptance. In the classroom, teachers mainly teach and students mainly listen to the lecture, emphasizing the transfer and memory of knowledge, but not paying enough attention to the understanding and application of knowledge. Many students major in economics and management report that they are often "spoon-fed" objects in the classroom, needing to receive a lot of information, but the real grasp and understanding of these knowledge is very limited. This traditional teaching method often ignores students' subjectivity and lacks teaching strategies for individual differences, which leads many students to conflict with or lose interest in learning. More critically, the field of the major in economics and management emphasizes practical application and analytical skills, not just knowledge accumulation. Under the traditional education mode, too much attention is paid to knowledge impart, but not enough attention is paid to practice and case analysis, which undoubtedly limits the students' application ability in the future practical work. Therefore, the traditional education model not only can not meet the learning needs of the students major in economics and management, but also may cause the disconnect between their academic ability and practical ability. The following is a detailed explanation of the problems with the traditional education model:

Firstly, the teacher-centered classroom model. In the traditional mode of education, students of the major in economics and management are often placed in a passive position, which is mainly due to the unidirectional mode of education and excessive dependence on knowledge impart. In this environment, teachers are the sole source of information and knowledge, and students are expected to be the recipients of this knowledge. This model ignores the interactivity and two-way nature of education, emphasizing memorization and repetition over true understanding, critical thinking, and the application of knowledge. The role of the student is reduced to merely receiving and digesting information, rather than actively participating and contributing their own insights or questions. This not only results in students' lack of interest and motivation in learning, but also affects their ability to solve problems and think independently in the long run. In this mode of education, students often study only to cope with the exam, and lack the ability to deeply understand and apply what they have learned. This passive learning attitude will gradually affect students' ability to deeply understand and apply what they have learned. This kind of "spoon-feeding" education is easy to cause students to form a one-sided understanding of knowledge and lack of questioning and criticism of existing views. At the same time, this mode of teaching often does not encourage students to think outside the established framework, thus limiting their ability to innovate. In real working and living environments, innovation and critical thinking are key competencies to solve complex problems and respond to challenges. If these two points are ignored in the educational process, students may face difficulties in adaptation in the future, and it is difficult to meet the needs of social and professional development.

Secondly, personalized teaching is insufficient. Every student has their own learning speed, style, and point of interest, but in the traditional education system, these differences are often ignored, resulting in all students learning in the same way and at the same pace. This "one size fits all" approach may frustrate some students because they may need more time to understand certain concepts or may not be interested in certain knowledge points. For those students who have mastered the knowledge, they may find the class content boring and unchallenging. This lack of a personalized approach to teaching can lead to students losing interest in learning, feeling depressed and depressed.

Thirdly, lack of practice and application ability. In the traditional mode of the major in economics and management education, classroom teaching often lays too much emphasis on the inculcation of theoretical knowledge, while the training of practical operation and application ability is relatively insufficient. Many of the theoretical knowledge students learn in school is often difficult to directly apply in the real working environment, or the lack of application scenarios, resulting in students not combining what they learn with practice to form a real application ability. In addition, the lack of practical opportunities also means that it is difficult for students to find and correct their own understanding bias or operational errors in time, so that when facing real world challenges, they may seem inadequate and not be able to deal with problems. In the field of the major in economics and management, practical experience and application ability are very critical, because the knowledge in this field is not only for academic research, but more importantly for solving practical economic and management problems. Therefore, the lack of practical and application ability will undoubtedly limit the development and performance of students in their future careers.

Fourth, the evaluation system is single. At present, the evaluation of students major in economics and management often relies too much on the written test or standardized test, which ignores the multiple intelligence and practical operation ability of students. An excellent economic manager not only needs solid theoretical knowledge, but also needs excellent teamwork, communication, analysis and solving practical problems. The single evaluation system may cause students to pay too much attention to theoretical study in order to pursue high scores, while neglecting the cultivation of practical ability and soft skills. In addition, over-reliance on a single evaluation system can frustrate students who otherwise perform well but do so-so on standardized tests and thus lose interest in learning.

Fifth, innovation and critical thinking are lacking. Traditional teaching often does not pay enough attention to developing students' innovative and critical thinking skills. In the classroom, students are often required to memorize and repeat the knowledge in the textbook, and there are few opportunities for in-depth discussion and criticism of what they have learned. This kind of "spoon-feeding" education is easy to cause students to form a one-sided understanding of knowledge and lack of questioning and criticism of existing views. At the same time, this mode of teaching often does not encourage students to think outside the established framework, thus limiting their ability to innovate. In real working and living environments, innovation and critical thinking are key competencies to solve complex problems and respond to challenges. If these two points are ignored in the educational process, students may face difficulties in adaptation in the future, and it is difficult to meet the needs of social and professional development.

The artificial intelligence technology represented by ChatGPT, with its unique functions and advantages, is having a profound impact on the student group of the major in economics and management. The value of ChatGPT is not only reflected in its efficient information acquisition and sorting ability, but also in its ability to stimulate students' innovation ability, enhance students' learning motivation and sense of participation, and improve students' practical ability. The following is the specific performance of the impact of
ChatGPT on the students' value of the major in economics and management.

Firstly, need to promote information acquisition and collation. In the modern digital age, information acquisition and organization has become the core competence of the major in economics and management discipline. ChatGPT, as an advanced language processing tool, provides unprecedented convenience for students major in economics and management. First of all, ChatGPT enables students to quickly query and explore complex issue of the major in economics and management, and is no longer limited by traditional literature search or tutor guidance. The tool can quickly provide knowledge from multiple sources, thus ensuring comprehensiveness of the information. Secondly, compared with traditional information search, ChatGPT is more accurate and targeted, and can provide customized answers according to the specific needs of students. In addition, since ChatGPT can take context and relevance into account when collating information, students can also better understand and digest the information as they acquire it. For example, when conducting market analysis or strategy development, students can use ChatGPT to gain a comprehensive perspective and advice from a variety of perspectives, leading to more targeted research and decision-making.

Secondly, need to stimulate innovation. With the increasing progress of artificial intelligence technology, its application in the field of education is also more and more extensive. For students major in economics and management, ChatGPT is not only a tool to obtain and organize information, but more importantly, its unique value in inspiring students to innovate and provide inspiration. Because ChatGPT has a large amount of data and information, it is able to provide students with a wide variety of cases, theories and practical strategies, thereby expanding students' knowledge horizons. When students are having trouble completing a project or research, ChatGPT can provide them with different perspectives and suggestions that stimulate their thinking. In addition, through interaction with ChatGPT, students can constantly challenge their views, contrast and analyze different answers and approaches, and further develop their critical thinking and analytical skills. Finally, ChatGPT is able to provide a safe environment where students can try out new ideas or strategies without fear of being judged or failing, thereby enhancing their ability to innovate.

Thirdly, need to enhance learning motivation and participation. ChatGPT is not only an efficient information retrieval tool, but also has the ability to conduct in-depth communication and interaction with students major in economics and management. This interaction provides students with a real-time feedback mechanism, making the learning process more lively and interactive. When students are faced with complex theories or difficult concepts in the economics and management discipline, they can immediately communicate with ChatGPT for more intuitive and specific explanations. This kind of instant, targeted feedback can help them process and interpret large amounts of data more effectively, providing insightful recommendations to students about decision-making and problem-solving. What's more, ChatGPT can provide instant, targeted feedback through its role in maintaining students' learning enthusiasm and motivation in their long-term academic pursuit.

Fourth, need to improve practical ability. In the learning process of economics and management, the combination of theoretical knowledge and practical application plays a crucial role. ChatGPT, as an advanced language understanding and generation tool, provides a platform for students major in economics and management to simulate complex economic situations, helping them to practice and deepen their analytical and problem-solving skills. By creating diverse problems and scenarios, such as market competition, financial crisis, or global supply chain management, ChatGPT guides students through a step-by-step framework for problem solving. In these virtual scenarios, students not only need to apply the theoretical knowledge they have learned to identify and analyze the root causes of problems, but also to develop practical solutions. What's more, ChatGPT can provide instant, targeted feedback through its decision-making process. The tool can help students evaluate their decision-making processes and outcomes. This interactive learning experience not only deepens students' understanding of economic principles and management strategies, but also enables them to learn how to deal with the uncertainty and variability of the real world in a safe simulated environment. In addition, ChatGPT is able to encourage students to think about problems from multiple angles and latitudes, which is crucial in the real world decision-making process.

3. What do Students Major in Economics and Management Learn?

In academic and professional development, everyone's time and energy are very valuable. Especially in the era of information explosion, in the face of massive knowledge and information, if there is no clear direction, it is easy to feel confused and depressed. Identifying your own interests and direction of development means you can have a clearer idea of how to allocate your time and energy. In this way, students can avoid wasting time in areas that are not very helpful for their future, and instead focus on deepening their understanding and research in a certain field, thereby gaining a greater competitive advantage within that field. Specifically, in today's era of rapid technological development, the core competence requirements of the students major in economics and management can be summarized into five aspects: technical literacy, innovative thinking, strategic analysis, ethical responsibility and practical ability.

Firstly, need to improve technical literacy. In this era of rapid development of digitalization, big data and artificial intelligence, technical literacy has become the primary ability of students major in economics and management. They need not only basic data analytics skills, but also a deep understanding of digital transformation. First, they should master the basic concepts of data science, such as data mining, predictive analytics, and machine learning. This knowledge can help them process and interpret large amounts of data more effectively, providing insightful recommendations to the organization. Secondly, they need to be proficient in using various data analysis tools, such as Python, R and Excel, which can help them process and analyze data more efficiently in actual work. In addition, having basic programming knowledge is becoming increasingly important, as it helps students automate daily tasks and improve work...
efficiency. Secondly, need to learn innovative thinking. In today's competitive business environment, relying solely on traditional management concepts and strategies is not sustainable. Therefore, innovative thinking has become one of the essential abilities of the students major in economics and management. Innovation is not just about creating new products or services, it is more important to be able to look at problems in new ways and find non-traditional solutions to existing problems. Students should develop interdisciplinary learning and thinking habits, so that they can understand and analyze problems from different perspectives to come up with unique solutions. In practice, this means that they need to keep an eye on industry trends, be willing to try new approaches, not be afraid to fail, and learn from each attempt to constantly improve their mindset.

Thirdly, need to enhance the ability of strategic analysis. Strategic analysis ability is particularly critical in the current business environment, which determines the future development direction and sustainable competitiveness of the organization. Students major in economics and management should first have critical thinking, be able to identify key factors in a large amount of information, and have in-depth insight into the market environment from both the macro and micro levels. They should be familiar with analytical tools such as PESTEL, SWOT, and the Five Forces Model to ensure the comprehensiveness and depth of their analysis. In addition, strategic analysis requires students to be able to accurately evaluate internal resources and capabilities in order to develop a rational and enforceable strategic plan. In a constantly changing market environment, they should also have a keen market nose and be able to quickly catch new opportunities or potential risks.

Fourth, need to deepen practical ability. Practical competence refers to the ability to apply knowledge, skills and experience to solve practical problems in a real environment. For students major in economics and management, this ability is not only to absorb theoretical knowledge in the classroom. They need to be able to apply this knowledge, conduct in-depth analysis of real or simulated business cases, and combine business intuition and innovative thinking to come up with practical solutions. But theory alone is not enough, the modern working environment requires students to have excellent interpersonal communication and teamwork skills. They need to work with others to achieve common goals, and in this process, leadership development is particularly important. Students should be able to lead teams to ensure that projects are carried out efficiently. When it comes to project management, setting reasonable timelines, allocating resources and managing risk are all core skills they need to master. Of course, the cultivation of all these abilities cannot be separated from the support of practical work experience. Students should grasp every internship and job opportunity, practice what they have learned, and constantly improve themselves in practice. Finally, given the constant changes in the business environment and technology, continuous learning and self-improvement become particularly important, and students should ensure that they are up-to-date to meet the various challenges of the future workplace.

4. What should Teachers Major in Economics and Management Teach?

There are some defects in the current teaching of teachers major in economics and management. First of all, teachers tend to overemphasize theoretical knowledge, and the training of practical application scenarios and practical operation ability is insufficient, resulting in students may feel confused and uncomfortable in the real working environment. Second, despite the increasing integration of the technology and management fields, many teachers are still teaching before technological change and have not kept pace with it. This not only causes students to face a knowledge and skills gap after graduation, but can also cause them to miss out on opportunities to learn about and take advantage of new technologies. Moreover, the traditional way of economic and management education emphasizes too much on standardized and routine thinking, but neglects the cultivation of students' innovative thinking and critical thinking. At the same time, it is difficult for conventional tests and homework assessments to fully assess students' comprehensive abilities, especially their performance in solving practical problems, working in teams and communicating. In modern society, the rapid evolution of technology and changes in enterprise operation and management require students to have more practical operation and innovation ability. In addition, the popularity of the Internet and mobile technology has changed the learning habits of students, who are more eager for interactive and participatory learning. The modern work environment is also more focused on teamwork, interdisciplinary collaboration and innovation, while traditional teaching methods fail to prepare students to face these challenges. Finally, with the trend of globalization and diversification, students need to have the ability of cross-cultural communication and management, which is often ignored by traditional teaching methods. Therefore, teachers major in economics and management must reform and innovate their teaching methods to better meet the needs of modern students and society. The following are specific suggestions on how to teach in the era of artificial intelligence.

Firstly, need to use chatGPT and other artificial intelligence tools to enrich the content and form of teaching. In the era of artificial intelligence, the challenge facing teachers is not only to update teaching content to meet the needs of The Times, but also to innovate teaching methods to improve teaching effectiveness and attractiveness. Among them, artificial intelligence tools such as ChatGPT bring unprecedented opportunities for executive education. Using these tools, teachers can provide students with a more personalized learning experience. For example, by interacting with ChatGPT, students can get immediate feedback at any time, compensating for the limited time for teacher-student interaction in traditional classroom instruction. At the same time, artificial intelligence tools can make intelligent recommendations according to students' learning progress and abilities, and provide them with the most suitable learning resources and methods, so as to help students master knowledge more efficiently. In addition, with the data analysis ability of artificial intelligence, teachers can more accurately understand the learning status and needs of students, and provide them with more targeted guidance. More importantly, tools such as ChatGPT can simulate real business scenarios, allowing students to make decisions and operate in a simulated environment, cultivating their practical
ability and innovative thinking. At the same time, these tools can also bring more fun and interactive teaching activities, stimulate students’ interest in learning and enthusiasm.

Secondly, need to pay attention to students’ individual needs and development goals. In the era of artificial intelligence, teachers should plan and implement teaching activities closely around students’ individual needs and development goals in teaching design and implementation. First of all, AI should be recognized as a powerful tool and resource that can effectively assist teachers in more refined and personalized teaching. But at the same time, we should always be vigilant to avoid over-reliance on technology and neglect of students’ dominant position and their diversified learning needs. When designing the teaching plan, teachers should fully consider the needs of students in terms of basic knowledge, learning interests and future career development, and strive to make the teaching content and methods more in line with the actual situation of students, and stimulate students’ learning interest and enthusiasm. At the same time, in the design of the evaluation system, we should abandon the single and rigid assessment method, and should combine the characteristics and needs of students to design an evaluation method that can accurately reflect the learning situation of students and promote the self-development of students.

Thirdly, need to guide students how to use and apply technology. Economics and management teachers should not only impart knowledge, but also guide students to explore the underlying logic of knowledge and the thinking mode behind it. In combination with their extensive knowledge and experience, teachers should teach students how to skillfully use and apply technology to solve complex real-world problems. This is not only the simple use of technical tools, but also a deep understanding of the principles behind technology, so that students can choose and apply the most appropriate technical means to solve problems according to the actual situation. At the same time, students should be trained to have a historical mindset, so that they are better able to locate in the changing reality, evaluate information, make decisions, and understand the deeper reasons behind various phenomena.

Fourth, according to the characteristics of market employment, need to cultivate students’ comprehensive quality and professional ability. When training students, economic and management teachers must attach great importance to the cultivation of comprehensive quality and professional ability consistent with the characteristics of market employment. With the rapid development of technology, the tasks in the field of the major in economics and management are not limited to traditional business analysis and decision-making, but more involved in the interaction and integration with advanced technology, which requires students to have strong practical ability. Only when they can effectively apply technical tools and methods can they succeed in a real working environment. In addition, as organizational structures become decentralized and global, communication and collaboration become critical to success. Students not only need to learn to work with people from different cultural and professional backgrounds, but also need to master how to communicate effectively in a complex network environment. Similarly, in the face of changing markets and an uncertain future, innovation and entrepreneurship have become particularly important. Teachers should guide students to dare to challenge tradition, constantly seek new solutions, and cultivate their entrepreneurial awareness and adaptability.

Fifth, need to student-oriented, taking the actual employment needs of students into account. In the era of artificial intelligence, teachers should adopt a people-oriented approach in teaching to ensure that their teaching content and methods match the actual needs of students. With the popularization of AI technology, a large amount of information and knowledge can be easily accessed through various online platforms, and the role of teachers is gradually changing from pure knowledge transmitters to facilitators and designers of educational strategies. In this context, teachers need to have a deep understanding of students’ long-term career planning, such as postgraduate entrance examination, exam compilation, etc., so as to formulate teaching plans and contents. This requires teachers not only to have a deep understanding of the discipline of economics and management, but also to grasp the development trend of the market and the industry. By combining academic theory with practical application, teachers can help students build a solid theoretical foundation while developing their practical and applied abilities. In addition, the people-oriented approach also emphasizes respect for each student's uniqueness and difference, and teachers need to help students find the most suitable learning path and career development direction through personalized guidance and feedback. This teaching method can not only increase students’ interest and motivation in learning, but also help them achieve better results in their future careers.

Sixth, need to pay attention to humanistic care value appeal, advocate correct values. In the era of artificial intelligence, the teaching of major in economics and management not only needs to pay attention to the transfer of technology and skills, but also needs to emphasize the value appeal of humanistic care and the advocacy of correct values. Such teaching concepts and practices contribute to the all-round development of students, enabling them to understand and master professional knowledge while having a deep understanding and respect for human nature, ethics and social responsibility. In practice, teachers can embody and realize this concept by enriching teaching content and innovating teaching methods. For example, in the teaching of theory, they emphasize the social responsibility and ethics of enterprises through case discussions, guide students to think about the interrelationship between economic growth and social well-being, and encourage them to express their personal views on issues such as ethics and environmental protection. So that they can have a deeper understanding of social values and human concerns. Teachers should also set an example, teach through practice, show good qualities such as integrity, respect and sense of responsibility, and actively lead students to form an upright and just personality and professional ethics. They can also organize voluntary service and social practice activities to let students personally experience the value of serving the society and giving back to the community, so as to internalize these values into their personal values. In general, the teaching of the major in economics and management in the era of artificial intelligence should aim at cultivating comprehensive talents with professional knowledge, social responsibility and humanistic spirit. To achieve this goal, teachers should strive to achieve it through well-designed teaching activities, personal demonstrations and social activities full of practical significance.
5. Conclusion

In the current wave of artificial intelligence, especially the great changes led by tools such as ChatGPT, major in economics and management education has had a profound impact. This paper first gives an overview of the principle and function of ChatGPT, and then probes into its value and impact on students' learning and teachers' teaching of the major in economics and management. Through analysis, we realize that ChatGPT can not only help students quickly obtain and organize information, provide creativity and inspiration, but also cultivate students' practical application ability by simulating various problems of the major in economics and management. For students major in economics and management, the focus is not only to choose the right professional direction and courses, but also to find a balance between technology and practice, learn to think critically, and avoid over-reliance on technology. For teachers, in addition to using AI tools to enrich teaching content, they should pay more attention to cultivating students' comprehensive quality and professional ability. In this process, we should see the great potential and value of artificial intelligence tools such as ChatGPT for the major in economics and management education, which is both a right hand aid for educators and an effective tool for students to learn. Therefore, we call on all educators learners not only to pay attention to the learning and application of new technologies, but also to have forward-looking thinking and jointly explore and innovate learning and teaching models that adapt to the era of artificial intelligence. Hopefully, at the intersection of technology and education, we can work together to create a smarter, more efficient and just educational future.

Acknowledgments


References