



The Use of Artificial Intelligence to Enhance Teaching Effectiveness in Vocational Education

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ABSTRACT

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The development of information technology, including artificial intelligence, big data, cloud platforms, and intelligent terminals, have given the reform and development of vocational education teaching new impetus against the backdrop of "Internet + education" and the deep integration of education teaching and emerging technologies have reached a new level, promoting the continuous updating and upgrading of education. The ability to teach is a critical guarantee in the current environment for advancing the reform of teaching in higher vocational education, enhancing the standard of vocational

education and talent development, and carrying out the duty of developing applied talents for social and economic development. Accelerating the development of vocational education, encouraging higher vocational teachers to continuously update their education and teaching concepts, reshaping the role of teachers in the new era, and developing the practical ability of information-based teaching in building curriculum resources are all issues that require urgent attention and solutions in the education and teaching reform of h

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I. Background

The "Internet+Artificial Intelligence" was one of the 11 essential tasks included in the State Council's "Guiding Opinions on Actions to Actively Promote the "Internet+" document, which was published in July 2015. The country's 13th Five-Year Plan's draft includes the phrase "artificial intelligence" in March 2016, and in May 2016, the "Internet + In the government work report from March 2017, the term "artificial intelligence" was first used; in July 2017, the State Council published the "Development Plan for a New Generation of Artificial Intelligence," which strategically developed a new generation of AI. In December, the "Three-Year Action Plan for Promoting the Development of New Generation Artificial Intelligence Industry (2018-2020)" was released as a supplement to the "Development Plan for New Generation Artificial Intelligence." It planned in detail the key development directions and objectives of AI in the next three years from various aspects. AI was mentioned in the report of the 19th National Congress in October 2017 (Martin, 2000). In-depth quantification of the three-year primary development directions and targets for each direction through 2020 is adequate to demonstrate the significance the nation accords to the industrialization of artificial intelligence (He & Zhuang, 2016).

The above policies are supplemented by the State Council of the Central Committee of the Communist Party of China's Decision on Deepening Education Reform and Comprehensively Promoting Quality Education. It calls for education with the primary goal of improving human beings' fundamental qualities while respecting their subjectivity and positive spirit based on their uniqueness, concentrating on developing their intellectual potential, and forming morally responsible citizens (P. Liu, 2009). Quality education should enable people to face up to and appropriately cope with all objects and occurrences in their social context, as it is a real necessity and a practical need for social growth. The fundamental quality of education focuses on students' intellectual development and the formation of their sound personalities to increase students' fundamental qualities while respecting their subjectivity and active spirit based on their human character. The development of artificial intelligence will accelerate the advancement of high-quality education for all students.

The traditional classroom teaching model is a teacher-centred, book-centred, and classroom-centred teaching paradigm, contrasting with the information-based classroom with artificial intelligence. The traditional teaching approach can support the teacher's leadership role and the organization, management, and control of classroom instruction. Traditional education, however, does not adequately reflect the cognitive subject role of pupils and ignores their initiative and inventiveness. The typical classroom teaching method frequently results in passive pupil acceptance and one-way indoctrination by the teacher. The flaws in traditional teaching methods are extremely clear, and the main one is that students, who serve as the cognitive subjects, are always in a passive posture during the learning process, with their initiative neglected or even inhibited. The initiative of the students is disregarded and even muzzled. In addition, many emphasize that students must absorb and comprehend what their teachers have taught them, treating them as passive recipients of information from the outside world and the memories of prior experiences while neglecting that they are also free-thinking individuals.

	Advantages	Disadvantages
Traditional Teaching Model	Good control over the classroom; Guide students to conduct in-depth analysis and understanding.	Ignore students' requirements; Can not achieve personalized and accurate teaching.
Information-based Teaching Model	Turn students into the main body of the classroom; Students can achieve personalized teaching.	Difficult to change the teaching model and difficult to implement.

The old teaching paradigm cannot support the weight of developing highly competent creative abilities and is incompatible with the demands of contemporary society for the development of quality human resources. It is crucial to update the traditional teaching paradigm to build an effective classroom model that adheres to the demands of the new curriculum (Maharaj, 2014).

II. Introduction

Globalization has been a constant in recent years, mostly evident in the sharpening of competition in different regions of the nation. Each nation is now concentrating on developing highly skilled workers who can cope with the forthcoming intense rivalry (Chang & Ren, 2018). Therefore, a significant area of concern for the entire team working in the field of education is the reform and innovation of education to cultivate high-quality talents.

Impact on human development

Artificial intelligence has taken on a new life with the quick development of deep learning, large data, and hardware computing power, and it is continuously looking for the optimal blend of theory and practice. AI exploded in China in 2015 when the nation created several legislation and regulations for the technology. Currently, AI technology is permeating many spheres of life, including finance, education, healthcare, and transportation, and it has begun to exhibit some development tendencies in the education sector.

At this point, education can be implemented more effectively and produce greater effects. We must ensure pupils have access to quality education in the classroom. However, AI will impact schooling during the coming ten years. Artificial intelligence has been used in several industries under industry 4.0, and extensive study has been done in education. The research focuses on the use of AI in education for three reasons: first, it examines the advantages and significance of personalized guidance; second, it can help us further develop computer-based guidance; and third, it is a crucial technology for the future has to be planned now. Artificial intelligence will have a future impact on human development that cannot be disregarded if its use in education is gradually enhanced (Mandal & Shrivastava, 2010). For instance, using online teaching platforms, teaching resources, and other information-based means can help break the space, allowing students on vacation home to receive the most recent teaching materials.

Another example is that human social resources will be significantly diminished in the future, and land and space resources will be in short supply. By using information-based teaching techniques, it may be possible to develop "non-materialized" classrooms, academic buildings, and campuses, save "reducible" space for humanity and recognize the need for resource efficiency. Another illustration is how AI technology may aid nations in eliminating

poverty. I work as an instructor in artificial intelligence because I am highly interested in the advancement of education (Wang, 2012). The ability to give everyone a high-quality education has been made possible by applying technology, particularly artificial intelligence technology. This was formerly unachievable. Together, all students use hands-on, eye-movement, and technical engagement to solve issues and gather all data. To better analyze and interpret the data and improve the effectiveness of this learning model in the future, we will be able to determine how many of them cooperate during the interaction, whether they are equal, and how their internal differences affect the overall cooperation.

--The impact of artificial intelligence on the education economy

Benefits of expert systems

A successful expert system can offer its creators, owners, and users definite financial advantages. Labor expenditures and training costs can be greatly decreased by efficiently carrying out operations without requiring skilled professionals. Expert systems can spread expert knowledge and experience widely and encourage using a small, pricey pool of individuals and their knowledge because the software is easily replicable (Ogunniran, 2020). The software can be retained over time and in its entirety if protected appropriately. Expert systems can quickly update and preserve such recommendations for the benefit of end users, such as students, but education industry professionals find it challenging to keep a current understanding of educational theory simultaneously.

--Artificial intelligence drives computer technology

The study of artificial intelligence has had and will continue to influence every facet of computer technology significantly. Applications requiring intensive computation like artificial intelligence have made parallel processing and specialized integrated chips possible. Automated programming techniques will start to favour software development as algorithm generators and agile data structures advance. The advancement of computer technology has been accelerated by all these new technologies created through the study of artificial intelligence. At this point, the use of computers is a very important part of the information-based classroom instruction our nation is emphasizing and developing, and their broad usage is producing more economic benefits for human education.

--The impact of artificial intelligence on culture

Improving human language

Language, according to linguistics, is a manifestation and a tool of thinking, and linguistic approaches can be used to study the laws of thinking, yet human subconsciousness and subliminal consciousness are frequently "only comprehended, not conveyed." Syntactic, semantic, and formal knowledge representation approaches can be combined to enhance natural language representation while developing it into a useful type of artificial intelligence. This is made possible by the application of artificial intelligence techniques.

Teachers may use AI principles to depict students' daily lives and the steps taken to solve different challenges as AI principles become more commonly accepted. AI can broaden the vocabulary used to convey knowledge by giving educators and students new ways to think about certain circumstances, explain what they see and hear, and express their opinions.

Improving cultural life

Numerous new doors into human cultural life are now available thanks to artificial intelligence technologies. For instance, image processing technology will undoubtedly significantly impact the graphic arts, advertising, and social education industries. For instance, the current intellectual gaming technology will evolve into a more intelligent form of cultural entertainment.

In conclusion, it is well known that artificial intelligence technology significantly influences humankind's social, economic, and cultural advancement. This influence will be easier to see as technology develops and time goes on. Other effects may be hard for us to anticipate right now. AI will undoubtedly have a greater influence on human civilization's material and spiritual development.

--The impact of artificial intelligence on human society

Labor employment problem

Artificial intelligence (AI) has the potential to replace humans in a variety of mental tasks, which may require some people to change their line of work or even result in unemployment. For the education sector, using AI to teach requires changing the preconceived notions about what happens in a classroom and how it is done. Teachers must adapt their working practices, which is a significant challenge for both in-class instruction and preparation for after-class activities. The number of teachers unable to adjust to AI teaching will be reduced over time.

Changes in social structure

Humans are concerned that the advancement of artificial intelligence and intelligent machines may lead to new social issues, even if they expect to replace humans in all types of labor eventually. There has been a subtle change in the social structure over the past ten years. A "man-intelligent machine-machine" social structure will eventually take the place of the "man-machine" social structure. One of these intelligent machines is the robot. People will have to learn to coexist with intelligent machines and adjust to this new social structure because many of the work that people would have done in the past and present will be carried out by robots.

The background will produce problems

The impact and risk of artificial intelligence technology will also be educated about at the same time. More and more educators are starting to wonder whether traditional schools and classrooms will still exist in the future, whether teachers will be replaced by AI robots, and a host of other issues due to the expanding application of AI technology in education. We can better understand humanity's difficulties in the future thanks to these queries and reflections. For the time being, as AI technology is still being tried and tested in the educational space, it will have an impact on how we perceive and interpret education on a metaphysical level, and teachers, as the leaders of teaching, will undoubtedly enter a new era of opportunities and difficulties.

III. Innovation

Compared to the technological advancements of the earlier industrial and information eras, AI technology has had a more significant impact on education. The teacher served as the focal point of education during the preceding technological revolution, and exporting talent with an application-oriented focus was the primary goal. In the age of artificial intelligence, students have played a central role in education, and tailored instruction is now available thanks to technology. Instead, it is a return to the idea of "educating people," which is an improvement of the original technique of "teaching," rather than letting pupils learn through hard, theoretical knowledge and a lot of test-taking education, only to "become a human being" and receive a score on the paper. The development of a new generation of information technology, including artificial intelligence, with a focus on the development of big data-driven human-like intelligence technology methods, in the direction of big data-based analysis of human-like intelligence to make significant breakthroughs, was mentioned in China's "Thirteenth Five-Year Plan" national science and technology innovation plan from July 2016. A large portion of personalized education has been made possible by the development of artificial intelligence technology. This type of education requires analysis of a large amount of data, the results of which can precisely match students' abilities and the division of labor with teachers to achieve the goal of precise teaching and personalized education.

(i) *"Knowledge Graph" helps teachers to achieve "precision" in teaching content*

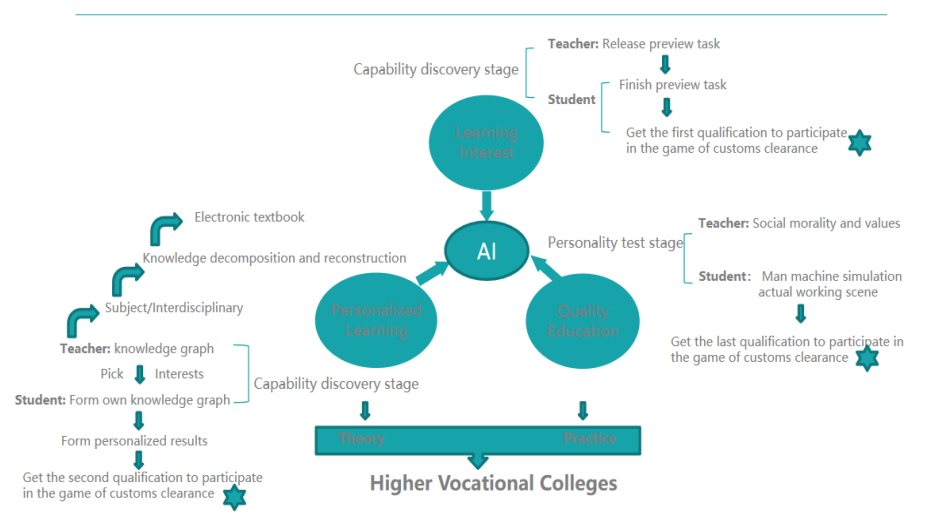
One of the core components of AI is data, and today's AI technology may be separated into three layers: perceptual, cognitive, and decision, each of which has its own set of data that has been chosen for study. AI's perception layer depends on physical and sensory data, including sight, sound, and motion, and it gathers this data using a variety of sensors. For instance, in education and instruction, teachers may set tasks, and students may upload their submissions to the platform in audio, video, or other media (Muhammad Talha et al). The data will undergo its analysis by the AI perception function, which will then assess whether the answers to the assignments are correct or incorrect and award the relevant scores. The more sophisticated cognitive and decision-making layers of AI require enough knowledge data input to create a "knowledge graph," and they largely rely on knowledge-based data.

The term "knowledge graph" was initially used by Google in 2012 to describe a web-like graph of information structures created by correlating various types of knowledge. For machines, a "knowledge graph" is a graph that is created by analyzing and synthesizing each person's knowledge and knowledge structure, expressing the strong relationships between knowledge points as "graphs," and correlating various types of knowledge to create a knowledge structure graph that resembles a web. The map's knowledge structure.

Precision education has always been limited in the realm of education by the state of the technology, the caliber of the teachers, and the control over the students. For instance, without the ability to follow each student over time, teachers are limited to reading from a textbook in the classroom and must rely on final paper scores to evaluate students' learning. The large population base and many school-age students in China, in particular, make it impossible to achieve "one-to-one" personalized teaching. For students, the classroom is full of knowledge, some students have understood but are still in the dark,

and issues like the gathering and collation of errors, the repetitive nature of training questions, and the low efficacy of practice are challenging to solve (Cheng & DeLany, 1999). The issues are complex and have existed for a while. In the era of artificial intelligence, "Knowledge Graph," which uses big data as support and applies precise technological analysis to education, enables teaching with accuracy and individuality. The "knowledge map" will let teachers deviate from the conventional educational paradigm and carry out truly accurate teaching, helping students create personalized learning programs and achieve independent learning.

Based on thorough data analysis, the system creates a new "knowledge map" that may be used repeatedly to create personalized learning programs. The continuously updated data drive the AI's continuous learning, and by utilizing a large number of deep learning algorithms throughout the learning process, it can predict student learning ability, analyze each student's learning situation in various ways, develop an appropriate stage learning program, and continuously adjust and optimize the next stage lesson. Regularization pattern data mining effectively improves student learning and teacher effectiveness. Thus, it is evident that the learning tools are changing with educational accuracy and not the learning habits.



Through the application of artificial intelligence in the education industry, it can be found that the "pain points" of artificial intelligence are reflected in 3 areas:

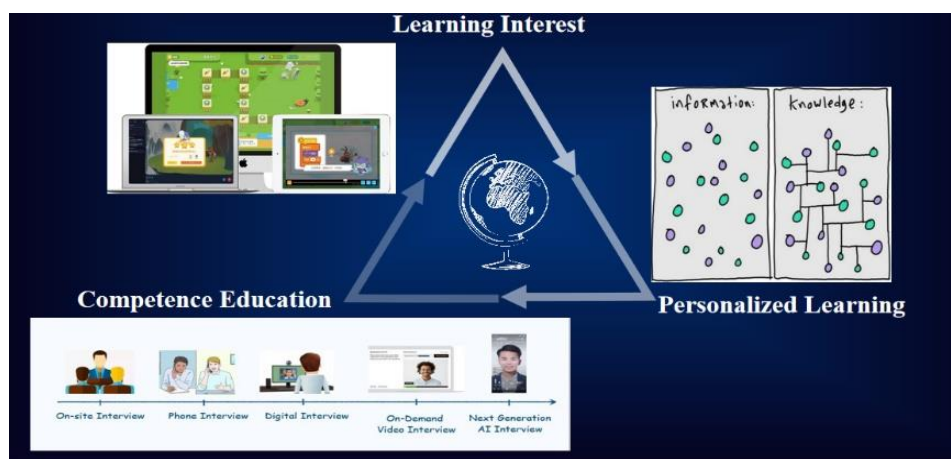
Interest in learning

Although it is a scientific and technological instrument, the first "pain point" of artificial intelligence is that it cannot address the issue of students' indolence and lack of motivation to study. Teachers can set up a passing game for each lesson using artificial intelligence. You must accomplish three stages of chores before, during, and after the lesson to play the passing game; for each stage you complete, you will receive a key to enter the game. Teachers can publish pre-lesson activities before the lesson, including microlessons, video animations, pre-lesson tests, and more. Students advance to the next level of personalized learning by

completing the assignments, earning points, and obtaining the relevant level keys.

Personalized learning

To meet the needs of students for a variety of knowledge, teachers must publish a "knowledge map" of their subject in the middle of the lesson. As innovative teachers, they should also build a "knowledge map" of cross-cutting subjects in addition to having a more complete "knowledge map" of their subject. Creating a cross-disciplinary "knowledge map" involves the formation of the teacher's distinctive and personalized knowledge framework and the incorporation of their own life and other experiences to provide the students with a new viewpoint. By disassembling and rebuilding teaching resources, this method dismantles the rigid, monolithic, prescriptive approach to teaching and learning and creates a new body of information that may be used as an electronic textbook.



Based on the teacher's provided "knowledge map," students can choose a knowledge node based on their interests and create a unique knowledge framework. At this point, artificial intelligence will gather and evaluate data on each student's learning condition and state so that subsequent consolidation and pushing may be done to create individualized teaching materials for unfamiliar knowledge areas and those of interest (Leidner & Jarvenpaa, 1993).

Human thought processes and conventional notions will change due to the advancement and marketing of artificial intelligence applications. For instance, unlike traditional knowledge, typically recorded in books, newspapers, or magazines and thus fixed, an AI system's knowledge base can be continuously updated, enlarged, and modified. Users of expert systems, for instance, may become unwilling to use their brains more, lazy, and lose responsibility and sensitivity to numerous problems and the tasks required to solve them once they start to trust the judgment and decisions of the system (intelligent machines). Students that use calculators excessively will also see a considerable deterioration in their ability to think critically and use numbers (Cai, 2017). Overly relying on the calculator's advice without more research will decrease the user's cognitive abilities and increase the likelihood of misunderstandings. The concerns mentioned above should be considered while building and creating intelligent systems, and the user's initiative in

problem-solving should be encouraged as much as possible to ensure that their intellect is actively engaged in the problem-solving process.

Quality education

Cold machines cannot replicate the endearing traits of people and the sum of thousands of years of culture. Teachers are essential to both human advancement and education. Artificial intelligence allows teachers to spend more time educating pupils about quality, imparting social ethics and values, and playing a crucial role in moulding and shaping their character after school by freeing them from the time-consuming process of correcting homework. Teachers have long neglected their students' holistic and all-encompassing growth by using "marks only" as the sole basis for evaluation. Students can improve their educational experience and learn more about the subject matter with artificial intelligence (Smith & Kubacka, 2017). After the lesson, AI can offer students human-computer simulations of real-world work processes, such as human-computer interviews that mimic real-life scenarios. This allows students to practice the scenarios they will encounter in job interviews in advance. After the simulated interviews, AI can grade students on various factors, including interview attire, reaction time, agility, and answer completeness; furthermore, it can offer specific suggestions. Students can become familiar with the problems they might encounter in the job and better prepare themselves for a complex and evolving society by doing this. Another example is the ability of AI to send a questionnaire to students after each class that includes fundamental inquiries about their current interests, pastimes, and knowledge of the subject matter. Then integrate and analyze the results with the data collected before and during the class to thoroughly assess the student's current career matches, including industry matches and job matches, to facilitate businesses' selection of talent for various in-house positions (Zheng, 2017).

The overall model successfully achieves the goal of higher education institutions to focus on theoretical knowledge while strengthening practical experience while interspersing humanistic education with it. This increases the opportunities for higher education institutions to cultivate high-quality practical and operational talents. Artificial intelligence is a technology that frees up a lot of time for teachers to focus on "educating people" while also giving pupils accurate, individualized instruction that sparks their interest and motivation in learning. Naturally, AI can only be used as a tool to increase productivity and teamwork; it cannot, however, replace teachers.

(ii) The reshaping and challenges of AI education for teachers

They should take up the difficulties presented by AI education as teachers and finish their reinvention. First and foremost, teachers should use AI technology to innovate teaching concepts and implement educational models like creative education, quality education, self-education, and lifelong education. Secondly, teachers should strive to have the capacity to learn in both directions with knowledge and technology, embrace technology with an active and open mind, and fully utilize the "teaching aid" function of AI technology so that AI technology can become a driving force for the progress of education. Finally, educators should go back to their original goals of educating students, educating them simultaneously, and reaffirming the importance of education (Tian-ping, 2011).

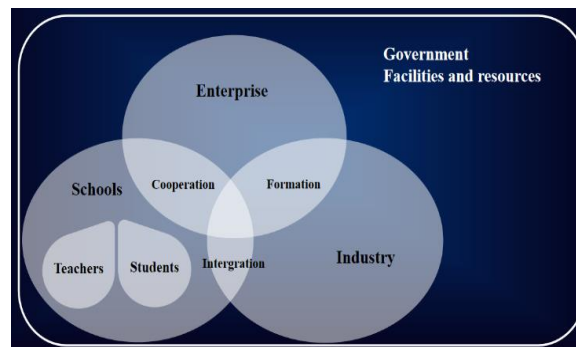
Teachers are under more pressure due to artificial intelligence, and to improve their "knowledge map" and the caliber of their instruction, they must learn more, develop their

teaching methods, broaden their horizons, and develop new talents. Teachers must have a particular level of knowledge and experience with AI because, on the one hand, it is an advanced technology that is not yet widely used at the grassroots level, and, on the other, educational technology is crucial to education. However, AI as a technology does not take the position of a teacher, who still needs to possess a deep understanding of the subject matter. Assume, for instance, that the teacher is aware of the pre-course circumstances in classes A and B, respectively, and discovers a significant difference in the average level. This issue, which cannot be resolved by artificial intelligence, necessitates that the teacher understand the causes of the difference between the two classes and promptly modify the teaching approach to close the gap.

IV. Educational Administration

Defining the objectives of talent development

Schools must specify talent development goals before they can officially begin. The demand for talent among businesses is shifting due to the development of technologies like big data and cloud sharing platforms. Higher vocational education is a field of the study strongly related to business and industry, and the demands of industry guide it. In the past, theory-based instruction from books has focused on talent development. Professional education must change along with the pace at which jobs are evolving today. Companies now look for composite talents. Therefore higher education institutions must adapt to train these individuals while focusing equally on theory and practice.



The development of artificial intelligence can offer businesses and educational institutions huge data analysis findings appropriate for the current sector stage. Using objective facts to demonstrate to schools and businesses the future direction most suitable for development and adjusting the corresponding talent training program, detailed data may better reflect the development and demands of society. In particular, AI needs to provide the following information: first, the dynamic needs of businesses, as a result of which the results of training students' ideas and thinking, learning to solve business problems in practice, dealing with business to have a professional vision, and continually improving the overall quality of students; second, the most used in the actual work of teamwork, communication with people, cultural literacy, and other abilities, in the training of professionals; and third, the most used in the actual work of problem-solving, critical thinking, and other The teaching process will foster high standards of education so that students graduate as actual professionals who meet industry standards as well as being

professionals who are skilled in business management and adaptive in business management. Artificial intelligence is a powerful instrument that excels at doing this.

A course's creation must start with the talent development program since it reflects the general direction in which students will be trained and because it significantly impacts all course components. Teachers create the proper course curriculum and materials based on the talent development program during the pre-course session, incorporating games and tasks to pique students' attention while also achieving the learning objectives. The course material is enhanced and developed in the in-class setting, and the teachers' "knowledge map" reflects their distinct perspectives on the talent development program. In the post-course session, the high-calibre instruction offered by the teachers reflects the humanistic approach to the training program, where students need to cultivate their talents in addition to a wealth of theoretical knowledge and practical experience.

Reconstructing the "three-in-one" curriculum system

We must rely on the curriculum to complete the talent-training process after establishing the goal. The traditional professional curriculum needs to be modified in light of integrating information technology, artificial intelligence, and other cutting-edge technologies. The curriculum should no longer be limited by its initial concentration on theoretical knowledge. It should be modified to a "three-in-one" curriculum system of professional knowledge and practical work, complemented by information technology courses, while also including the entirety of quality education, professional ethics, and other ideas in the context of the Internet. The following changes are made specifically using the unique "knowledge map" created by teachers and students: To be able to speak about business from the perspective of a manager and integrate into the workplace, the number of theoretical course hours is first reduced, and courses with similar content are integrated. Secondly, the number of practical course hours is increased, and attention is given to learning business processes and internal control of enterprises. The third is to add information management courses, teach students how to use big data for analysis, and enhance their information processing skills. The fourth is to increase the number of interdisciplinary courses so that students are not only limited to their work in the future but can also better collaborate across departments and have positive interpersonal relationships.

Teachers' professional, theoretical and informational knowledge is developed in parallel

First, adjustments are made to the number of teachers to maintain a specific "student to teacher" ratio as enrollment varies from year to year. The number of students enrolled affects the school's strategy and, as a result, changes the demand for teachers. Some professors must retire owing to old age, while some new faculties must hire many expert teachers.

Second, teacher preparation is essential for specialists. As an illustration, consider the teaching model under AI, which is now under development. In this model, the effectiveness of the classroom is influenced by the teachers' command of AI, understanding of AI, and degree of operation in the presence of a genuine AI classroom. As a result, the institution must create a regular training program for teachers and offer opportunities for practical experience in the business. As was seen in the preceding section, there are three parts to an AI-enhanced classroom: before, during, and after. In each section, the teacher's knowledge of AI is essential. A fun pass game should be created before the lesson, a "knowledge map" of original ideas should be created during the class, and students should

be taught about ethics and other virtues after the lesson. Teachers need a broad knowledge base in all situations. Hence teacher training is a crucial component of teacher growth.

Administrative teachers must have access to artificially intelligent office tools. For instance, a paper may need to go through multiple leaders layer by layer for clearance. A document is put online to remind the leader to review it if information-based office software is utilized. The efficiency has increased while the manual usage has significantly decreased. As a result, information technology's benefits are seen not only in the teaching process but also in the administration and running of the college.

School-enterprise cooperation

Self-imposed stagnation is the biggest barrier to development; real advancement can only be made through external interaction and ongoing learning. Training is a powerful tool for teachers' personal growth. Nevertheless, schools can only support each other, build on each other's strengths, utilize each other's resources, and jointly develop skilled workers by improving "school-school exchange" and "school-enterprise cooperation."

To improve the quality of talents and satisfy enterprises' consistent demand for talent, businesses can keep up with the needs of the industry and the talent market and promptly provide feedback to the institutions that train talent. Businesses can also actively participate in the entire process of training talent and collaborate with institutions to develop talent training programs, curriculum objectives, and teaching materials.

By working with businesses, educational institutions can build strong relationships with them, better understand their needs, and change the curriculum, majors, and courses as needed to make it easier for students to apply their skills in the workplace. The reform of the talent training mode is effectively supported by the "industry-academia integration" and "order-based training" of school-enterprise collaboration. The construction of off-campus practical training bases is simultaneously a comprehensive reform of the teaching paradigm. In addition, institutions can regularly send teachers on attachment to work in time to improve knowledge and skills, and experts and skilled personnel from enterprises can participate in teaching in institutions to improve students' practical working ability. School-enterprise cooperation is beneficial to strengthening the construction of teachers.

Facilities and Resources

The essential cornerstone of achieving talent training goals is practical teaching. To give students a realistic learning environment and improve the practical effect, all majors in higher vocational institutions should construct practical training bases under the requirements of contemporary businesses. To bring office culture into the classroom and lessen and relieve work pressure, students should be involved in setting up their favourite and preferred "desks" in the training room layout. Simulation resources should be strengthened in terms of practical training software, and a practical training platform that combines theory and practice should be developed and used. In terms of off-campus practical training bases, we'll strengthen and develop new models of school-enterprise cooperation, adopt the modern apprenticeship system as a carrier, invite skilled artisans from enterprises to participate in teaching, visit and practice in enterprises, and transfer new content outside the classroom to students, reserve knowledge in advance, truly solve the problem of the disconnect between theory and practice, and experience enterprise.

Additionally, the curriculum gives students the chance to practice enterprise management and learn how to apply professional practice integration.

Finance Support

Financial assistance is essential for implementing an AI-infused teaching style in the classroom. At this point, artificial intelligence is an expensive technology. If this technology is fully funded, schools must actively seek out investment and provide financial assistance. To raise money, the college must actively engage in educational activities like teaching ability competitions, get rankings, gradually build up the school's reputation, and then secure more financial assistance after the Department of Education has a positive reputation and is praised. Through collaboration between schools and businesses and the fusion of business and education, vocational high schools may become a reality. They can develop the skilled compound skills that the company needs following the talent training strategy. By agreeing to a training contract with the company, they may show the company the caliber of the students, the school's higher future potential, and their ability to collaborate and share resources.

V. Conclusion

There are context-specific educational changes every time there is a transition period. The use of artificial intelligence in education will undoubtedly have more significant long-term impacts as it develops as a new technical instrument. Humans enjoy learning new things, and AI's benefits will be enhanced by stunning, brilliant, and eye-catching AI technology. AI will increase quality education and lifelong learning while supporting students' individualized growth. However, as was stated in the introduction, AI is still in the early stages of research. Thus consideration must be given to the dangers and drawbacks it poses. We also need to consider the utility of AI as high technology, whose cost should not be understated, in terms of whether it would worsen educational inequalities when applied to education on a big scale. Teachers should therefore consider using AI to close the achievement gap and raise the bar of education for all people as they develop professionally. This needs to be thought of by merging humanism and emotion, not merely from the perspective of technology instruments (Song & Xu, 2019).

Industrial Revolution

--Policy

The strategic strategy of integrating information into the Internet Plus was highlighted in "2025 of the CCP" in 2015, placing occupation education in the context of society, economy, production, and governance. According to the World Economic Forum, the fourth industrial revolution is the combination of technologies like big data, robots, artificial intelligence, and 3D printing. The fusion of several technologies forms its basis.

--The demands of the fourth industrial revolution on talent training of vocational education have changed.

A. Changes in human resource demand structure.

Informatization and intelligence are the fourth industrial revolution's most unique characteristics. Industry growth depends more on the innovation and integration of knowledge and highly qualified individuals. China's human resources have structural flaws, and the number and caliber of highly skilled personnel are lacking. Finding

"satisfactory" talent can be challenging for businesses because the quality of skilled workers coming out of higher vocational colleges is lower than the rate of industrial change.

B. Changes in talent demand specifications

The traditional industrial chain has experienced drastically altering modifications due to science and technological advancement. The necessary traditional skills will be kept and integrated into innovation after transformation. The Internet of Things, 3D printing, robotics, big data, artificial intelligence, and other subjects are among the skills relevant to developing industries.

The fourth industrial revolution has significantly impacted education, transforming instructional methods, educational design, technology, and communication channels. The cutting-edge aspect of educational media has moved beyond computer-assisted teaching and has been supplanted by network classrooms, digital teaching resource libraries, virtual simulations, and other technologies. The use of learning theory has increased recently. Examples include the flipped classroom, mobile learning, micro classes, and Mu classes. The fourth industrial revolution has brought new concepts and technology that are disruptive to vocational education. First, new technology has an increasing influence and construction process on the communication channels used in vocational education. Involved modern technologies include 3D printing, artificial intelligence, etc. Second, the evolution of educational practices is brought about by incorporating new technologies, such as the natural fusion of virtual reality and hands-on instruction.

The usage and integration of high technology are what the fourth industrial revolution has done to education. This project aims to improve teaching effectiveness through the application of artificial intelligence.

Leadership

--Definition

The definition of school leadership style is how university administrators communicate their distinctive leadership temperament and exhibit a range of persuasive behaviors to inspire the teaching staff to band together, cooperate, and collaborate to accomplish the predetermined goals. Or leadership is the capacity to plan and coordinate a team's efforts to inspire and motivate followers to work together to accomplish predetermined objectives. The capacity that a university manager with leadership should possess may easily be found in our thorough understanding of the concept of leadership. The growth of social environments and times, as well as the passage of time, all affect this ability, and as the external environment changes, so does the meaning of leadership. Education today is different from education in the past. The fourth industrial revolution brought about major changes. Science and technology have a greater impact on education, which requires urgent transformation. Transformational leadership is, therefore, more appropriate for this endeavor.

--Transformational leadership

Transformational leadership is a style of leadership in which the leader, along with their team, can identify the challenges ahead and resources available and build a long-term vision for the team. The leader continually involves and engages the staff to perform to the

best of their abilities and grow professionally and personally in the process (H.-H. Liu et al., 2019).

A successful transformational leader should be able to inspire others, establish clear objectives, set high standards for performance and expectations, be fair and honest in his dealings with others, show appreciation for his team's efforts, encourage staff members to consider the company's overall success rather than just their interests, and challenge individuals to reach their full potential.

--Idealized Influence

According to the idealized influence theory of transformational leadership, followers' levels of respect and admiration for the leader are measured. Admiration and respect for the boss, as well as the knowledge that bosses frequently motivate their workers with excellent interpersonal skills and charm. Students are likelier to select teachers with significant personal charm in the modern classroom. They should pick an instructor who strongly resonates with them. Through rich information, fluid language, and humor, the instructor can deliver knowledge more effectively to their students, inspiring and motivating them. The teacher's amusing language changes the classroom's conventional monotonous indoctrination method. Student learning shifts from being passive to being active. The teacher fosters a democratic, peaceful, and quiet learning environment. In the classroom, the teacher fosters a democratic, kind, fair, and peaceful learning atmosphere. The teacher serves as a facilitator, participant, and transformational leader in the classroom. The teacher utilizes and changes the many classroom components into a cohesive whole. The teaching environment is harmonious because the teacher uses every element in the classroom to create a cohesive, cause-and-effect whole. The teacher uses all the components present to create a cause-and-effect coherent whole in the classroom. This improves the effectiveness and harmony of the classroom.

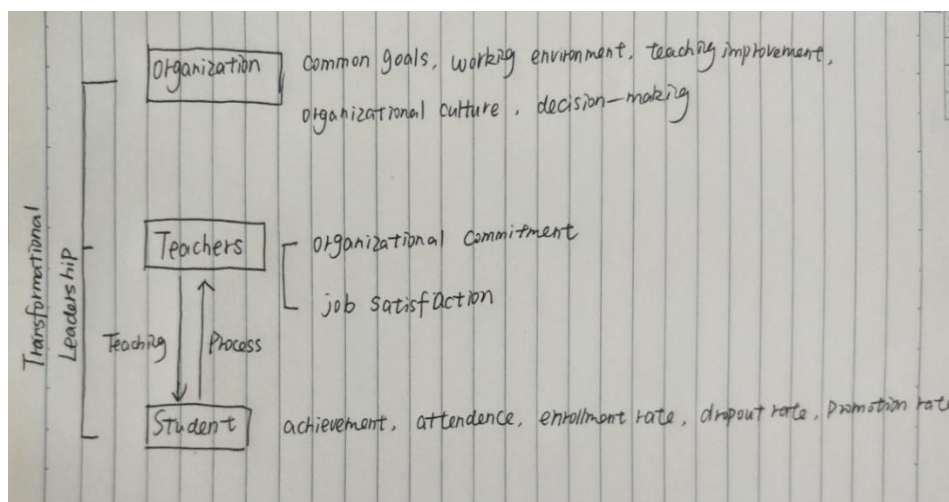
--Intellectual stimulation

The ability of a leader to teach followers how to think creatively is called intellectual stimulation. The leader can help his followers think creatively, develop original ideas, and be inspired to approach challenges from different angles. The intellectually stimulating instructor in the classroom, intellectually stimulating teachers employ several instructional strategies. In the classroom, they employ various teaching techniques, particularly multimedia tools like slides. The learning process in the classroom can be optimized by teachers who are transformational leaders and can inspire their students. Teachers that possess transformational leadership skills can optimize the teaching process and increase teaching effectiveness by inspiring their pupils to learn. Pupils think teachers can boost their students' learning by using various teaching techniques when posing problems. Students think that instructors who employ various instructional techniques to present learners with challenging scenarios are driven to learn. By simulating scenarios, multimedia instruction can assist students in understanding crucial concepts. Using multimedia in the classroom aids in students' understanding of crucial concepts. Additionally, transformational educators excel at "teaching people to fish" instead of "teaching people to fish." They frequently focus on individual inquiry, practical experience, collaborative learning, and collaborative learning.

--Inspirational motivation

According to transformational leadership theory, inspiring motivation occurs when leaders provide their employees with a vision and a feeling of purpose while instilling these qualities in them. It gives subordinates direction, and a feeling of purpose instills pride and strengthens their positive traits. According to the transformational leadership theory, teachers who exhibit these attributes frequently offer their pupils the time and space they need, returning their initiative and having faith in their students' talents. Creating an environment where students may investigate, apply, interact, and evaluate themselves is a key component of transformational teaching. The transformational teacher specializes in allowing students enough time and space to explore and the opportunity to apply, interact and self-evaluate. Focus is placed on giving students enough time to explore by enabling them to guess, observe, question, manipulate, and discuss. The transformative teacher also emphasizes giving students enough room to explore. The time allotted for exploration, speculating, observing, questioning, manipulating, and discussion allows students to develop their sense of originality and creativity.--Personalized care

A leader who can provide individualized care must be attentive, vigilant, persistent, and patient. A leader who can change work schedules to the various circumstances of their subordinates must be a good listener, observer, patient, and resilient to use the personalized method. To adjust their work plans to the various situations of their subordinates, leaders must first listen, watch, and have the patience and persistence to do so, according to the philosophy of transformational leadership. Therefore, the ability to tailor is paramount according to the philosophy of transformational leadership. The instructor must be able to impart the proper knowledge to the appropriate audience. Teachers must have the flexibility to adapt their lessons to the needs of each student. To teach students about their realities, the teacher must be able to adopt a flexible approach. Likewise, transformational educators. For pupils to experience achievement and feel the affection of their teachers, the teacher should be able to utilize motivating assessment language to help them develop their self-confidence. The teacher can also use positive words to inspire kids to succeed and build their confidence.



According to the philosophy of transformational leadership, an organization can

change through being led, motivated, and nurtured by its members. Education-specifically, the change in the school should have two meanings because the school organization is a relational system: the first layer is the change brought about by influencing the teaching practices in the classroom, and the second layer is the change brought about by directly influencing the employees. The change of the first layer is based on the change of the second layer. In particular, the school transformational leadership pays more attention to changes in teachers' internal psychological states in terms of teachers' ability, needs, and organizational identity than the teaching leadership, which concentrates on classroom instruction and students' academic performance, especially the impact of organizational culture, organizational atmosphere, and other factors on teachers.

A. Effectiveness to the organization

Five areas of the school are impacted by school transformational leadership: the shared objective, the working environment, teaching improvement, organizational culture, and decision-making. It demonstrates that school transformational leadership has a good effect on the entire school organization and, through this positive impact on the organization, supports teachers' teaching and students' learning. Additionally, the attributes of the school, such as its degree, type, and theoretical framework, will alter the efficacy of leadership inside the company. Establishing the vision and growing the workforce are the two aspects of school transformational leadership that are most important to the company.

B. Utility to teachers

Teachers play a significant role in advancing educational advancement. Teachers benefit from transformational leadership in numerous ways, including increased organizational commitment and job satisfaction. After some time, these improvements are ultimately shown in the abilities and behaviors of the teachers, who are now better at leading and teaching and exhibiting more cooperative conduct. Teachers are mostly impacted by personnel development, which includes setting a good example, providing individualized support, stimulating the mind, coming to a consensus, etc. The development of personnel and the creation of a shared vision are among the leadership behaviors that substantially favour teachers' overall commitment and job happiness. Continuous reward also has a significant good impact on teachers.

C. Utility to students

Five factors can be used to analyze the effect of transformational leadership on students' academic performance: accomplishment, attendance, enrolment rate, dropout rate, and promotion rate.

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