Metaverse New Media Digital Twin Assists the Construction of College Students' Educational Intelligence Platform

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Abstract:With the help of metaverse technology, the new media industry will undergo profound changes, and immersive media will become a new direction for the development of the new media industry, which will generate innovative reporting scenarios. The theoretical and technical foundations of learner portrait construction are expounded. And according to the data fields of the smart classroom learning platform and the characteristics of primary school science classrooms, a model for primary and secondary school science learners in the smart classroom is designed, and the students are determined around the "basic attribute characteristics-psychological attribute characteristics - behavior attribute characteristics - ability attribute characteristics. The five feature dimensions of "result attribute characteristics" are used to profile learners. Using big data mining technology and integrating artificial intelligence technology, the integration of multi-source information data is realized, and a five-dimensional digital twin system is constructed.

Keywords: Metaverse New Media, Digital Twin, College Students, Educational Intelligence Platform

1. INTRODUCTION

On October 29, 2021, Mark Elliot Zuckerberg announced at the FacebookConnect developer conference that the company name was changed to "Meta", and the stock code was changed from "FB" to "MVRS" from December 1, 2021 [1], indicating that it will transform into a "Metaverse" company in the next five years. However, the current power generation enterprise system architecture and information system construction are difficult to meet the needs of intelligent construction, and the system architecture and intelligent system construction of smart power plants have become urgent problems to be solved [2].

The fifth chapter of the "14th Five-Year Plan", "Accelerating Digital Development and Building a Digital China" proposes: In order to meet the digital age and activate the potential of data elements, it is necessary to promote the construction of a network power country and accelerate the digital economy with a production method driven by digital transformation as a whole [3]. A series of problems such as low data utilization, difficult data fusion, and incomplete data mining caused by different data formats, data types, and data storage methods bring inconvenience to the integrated control, overall management, and maintenance decisions of the platform [4].

The history of journalism shows that updates in media technology often have a crucial impact on international communication. However, in the face of the new technological conception of the Metaverse [5], some scholars believe that it is a "new-style utopia", a digital phantom of "drawing water from a bamboo basket". It is an opportunity to enhance the communication effect of mainstream media and accelerate the promotion of digital industrialization. It is also a challenge [6].

The purpose of this paper is to interpret the meaning of the metaverse from a triple perspective, and to expound the construction of a new multi-dimensional and cross-dimensional information dissemination pattern for the socialization of the human metaverse, thereby changing the passive position of mainstream media in industry competition [7]. Digital development builds digital China", giving full play to the advantages of massive data and rich application scenarios, giving birth to new industries, new formats and new models, and for the first time listing "virtual reality and augmented reality" as one of the key industries in the digital economy [8].

1] With the further development of the Internet, the next blue ocean of the digital information technology revolution is about to emerge. The literature of core journals can represent the highest level of research in this field. Therefore, in this study, CSSCI journals in the field of educational technology are mainly selected for the retrieval analysis of "Smart Classroom" [9], namely "Modern Educational Technology", "China Electronic Education", "Smart Classroom". "Electrical Education Research", "Distance Education Journal", "Open Education Research", the era of big data has come, and portrait is a term that is often mentioned in human-computer interaction. The earliest proposer [10], AlanCopper, defined "UserPersona" as "the virtual representative of real users". User portraits are used to connect real users and describe and describe various characteristic elements of real users in a visual way. "Modern Distance Education" Research" [11], "China Distance Education". Through the investigation, Professor Zhang Yi found that information attitude, electronic lesson preparation ability, network teaching and research ability, teacher-machine ratio, ability to use digital resources, information technology training content, and ability to use network communication will all have a greater impact [12].

On this basis, it puts forward suggestions for improving the application level of teachers' informatization. Many technology companies and social media, including GREE, have successively adopted various methods such as mergers and acquisitions, large-scale investment and registered trademarks to actively deploy the "Metaverse" [13]. There are various signs that 2021 has become the "Year of the Metaverse". , to guide or reduce part of human labor [14]. The essence of the Industrial Internet is to collect the data of industrial objects through digital twin technology, through the interconnection of industrial objects, and establish an industrial data analysis model for specific business needs [15].

As an intensive and compact urban development model, urban underground space includes underground transportation, commercial facilities, warehousing and logistics, municipal pipelines, underground garages and other fields [16]. The cyber-physical system CPS is a multi-dimensional complex system that integrates computing, network and physical environment. The advantages of reliability, safety, efficiency, and real-time collaboration have attracted widespread attention in various industries. As a new technology in the field of cyber-physical system fusion, digital twin [17].

2. THE PROPOSED METHODOLOGY

2.1 The Metaverse New Media

The Metaverse originated in science fiction. In 1992, science fiction writer Neil Stephenson first proposed the concept of Metaverse in the novel "Avalanche". On January 18, 2022, Microsoft Corporation announced that it is acquiring Activision Blizzard in an all-cash transaction valued at $68.7 billion, the largest deal ever in the gaming industry.

Microsoft is working on building an "enterprise metaverse," Chief Executive Satya Nadella said, noting that a metaverse where Microsoft's cloud computing service (Microsoft Azure) "shines into reality" is reaping the benefits At the same time of high attention, it has also triggered academic debates and theoretical assumptions about its concept, core, representation, content, technology and many other elements in academia and industry. Some scholars place the metaverse in the field of media studies, and continue McLuhan's assertion that "media is an extension of human beings", which is constructed by the interaction of human beings with other people's "digital embodiment" and system "virtual human" in multi-dimensional and cross-dimensional space. The audio-visual environment will become an important source of diversity and diversification in the "metaverse" multi-dimensional digital virtual space, and professional media organizations are organized. In 2018, Spielberg's sci-fi film "Ready Player One" is considered to be the most in line with the metaverse form. .

After the hero in the movie puts on the VR helmet, he instantly enters an extremely realistic virtual game world - "Oasis". Professor Yu Guoming believes that the Metaverse is the ultimate digital medium that integrates and integrates all digital technologies of the present and the future. It will connect the real world and the virtual world to form a future ecological picture of a mediated society. In addition to the above assertions, various theoretical concepts such as game theory, economic theory, and efficiency theory have been successively proposed for the metaverse from different perspectives and based on different theories. As time progresses, new concepts emerge in an endless stream, fully reflecting the dynamic vitality and infinite potential of the metaverse as a new thing. The formation of the "metaverse" multi-dimensional and cross-dimensional audio-visual communication ecology will break the existing new media audio-visual communication pattern, trigger the decline and disappearance of the control power of traditional social organizational units, and lead to the handover and reshuffle of old and new dominant forces.

2.2 The Construction of Intelligent Platform for College Students' Education

With the support of modern information technology and the development of relevant learning analysis theories, precision teaching has been given new vitality. Zhu Zhiting et al. proposed a breakthrough from the early precision classroom teaching based on the behaviorist learning theory that only focuses on the learning results to the accurate classroom teaching mode that focuses on the learners themselves with the support of information technology.

Digital twin refers to constructing digital objects corresponding to physical entities in the real world through digital means, and realizing the understanding, analysis and optimization design and integration of the corresponding physical entities through the research of digital objects. As a necessary part of teaching, kindergarten teachers need to design information-based teaching and plan how to integrate technology into teaching. The design and fusion dimension is composed of 7 factors, and the survey statistics are as follows in Table 3-9: Quantitative methods are used to combine multiple characteristic elements under each dimension. In this study, descriptive statistical analysis and quantification of cluster analysis are used. Methods The data were analyzed and processed, and the basic attribute dimension, learning style dimension, behavior attribute dimension, and inquiry ability dimension of learners were analyzed.

In contrast, colleges and universities have adopted a variety of methods to promote the generation of smart classrooms, such as the use of smart learning platforms such as Chaoxing Fanya Learning Platform and Rain Classroom, which have greatly improved classroom efficiency. However, smart classrooms in primary and secondary schools are often limited to smart classrooms. This equipment problem that cannot be solved in a short time has become an obstacle for primary and secondary schools to explore smart classroom teaching. Select the number of class notes recorded, the number of rush answers, the number of votes, the number of classroom test submissions, and the number of experimental operations within a month, and the K-means clustering method in SPSS19.0 software is used to model the deep-level behavioral attributes of learners. . Take visit statistics, check-in, number of group task participation, number of rush answers, and number of responses in discussion forums as independent variables, and test scores as dependent variables for stepwise regression analysis. After the model is automatically identified, the remaining visit statistics and the number of rush answers are a total of 2 items in the model.

3. CONCLUSIONS

Thinking from the development of the media itself and the steady development of the Metaverse, we will gather more technology enthusiasts and future experiencers to learn the application of advanced technology in the media, and give full play to the role of the main force of the media. The application analysis of life cycle management shows that digital twin technology can better simulate, monitor, diagnose, predict and control the formation process and behavior of power plants in the real environment. Focus on seeking the current rapid popularization of smart classroom construction models in most universities Therefore, the Chaoxing Fanya platform is used for teaching, paying attention to the dynamic learning data generated by it, and establishing an analysis model to study the teaching effect.

4. ACKNOWLEDGEMENT

5. REFERENCES

[1]Chen Hongye, Zhang Shixun. "Trinity" builds a platform for college students' moral education in the new media era [J]. Henan Education: Higher Education Edition (Middle), 2014(8):2.

[2] Hou Runze. Research on the Educational Approaches of College Students' League Members in the New Media Environment [J]. Shaanxi Education: Higher Education Edition, 2019(1):69-70.

[3] Peng Yixuan. Exploration of the construction mode of the new media practice education platform in colleges and universities based on \"Communist Youth League +\" [J]. Industry and Technology Forum, 2019(13):2.

[4] Liu Xiaoling, Liu Silin. Using new media to build a platform for college students to cultivate collaborative innovation ability [J]. Science and Technology Wizard, 2014(23):2.

[5] Chen Zhiwei. Research on the construction of ideological and political education system for college students based on new media platforms [J]. China Press, 2017(16):2.

[6] Yang Chuan. Exploring the opportunities brought by youth subculture in the new media era to the ideological and political education of college students [J]. People of the Times, 2022(23):3.

[7] Wei Yi, Feng Hanchao. The Enlightenment of the Rise of Short Videos for Medical Colleges to Build a New Media Ideological and Political Education Platform: Taking Youjiang Medical College for Nationalities as an Example [J]. 2021.

[8] Chen Yangming. Ideas for the construction of ideological and political education system for college students based on new media platforms [J]. Contemporary Educational Practice and Teaching Research (Electronic Journal), 2017(12).

[9] Chen Hongye, Zhang Shixun. "Trinity" builds a platform for college students' moral education in the new media era [J]. Henan Education (Higher Education), 2014.

[10] Li Chuang. Research on Political Belief Education of College Students in the New Media Environment [D]. Henan University, 2017.

[11] Wang Wei, Fu Xiangjun. An intelligent dual-screen interactive digital publishing content new media publishing platform: CN104348847A[P].

[12] Zhang Xiang, Wang Yunxia, Zhang Xinyi, et al. New Media: Opportunities and Challenges of Ideological and Political Education for College Students [J]. Invention and Innovation·Education Informatization, 2021, 000(004):35-36.

[13] Chu Leyang, Chen Weidong, Tan Yue, et al. Coexistence of virtual and real: digital twin (DT) technology and its educational application prospects--and on the reconstruction of ubiquitous smart learning space [J]. Distance Education Journal, 2019, 37(5): 10.

[14] Zhao Qiong. The expansion path of college students' mainstream ideological identity education in the new media era [J]. Journal of Lianyungang Teachers College, 2021, 038(001):69-72.

[15] Wang Yuejuan. Analysis of the impact of new media on the ideological and political education of college students [J]. New Campus (Theory Edition), 2017, 000(004):143.

[16] Wang Qianqian. Research on the application of new media in guiding the ideological and political education of college students [J]. New Campus (Theoretical Edition), 2016, 000(006):13.

 Ma Shuifeng. Countermeasures to strengthen the education of college students' national defense awareness from the perspective of new media [J]. School Party Building and Ideological Education (Higher Education Edition), 2015, 000(008):90-91.