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Research on the Cultivation of New Media Literacy among College Teachers from the Perspective of Smart Education

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Abstract: In the context of the profound integration of information technology and education, intelligent education is developing rapidly, reshaping traditional teaching models and redefining the professional competencies required of educators. New media literacy, as a crucial competency for teachers to adapt to the evolution of intelligent education, significantly influences the effectiveness of educational innovation and the enhancement of teaching quality. Currently, there exists a marked disparity in the awareness and practical application of new media literacy among university educators, particularly across different disciplines. Some educators have yet to fully harness emerging media for instructional purposes, lacking a systematic approach to cultivating media literacy. To elevate university teachers' new media literacy, measures such as curriculum and instructional reform, teacher training, technical support, and collaborative exchanges are increasingly recognized for their necessity and value. This paper will examine the current state of new media literacy among university educators from the perspective of intelligent education, analyze existing challenges, and propose multidimensional cultivation strategies to provide theoretical support and practical pathways for the advancement of university teachers within the framework of intelligent education.

1. Introduction

The emergence of intelligent education is not merely a byproduct of advancements in information technology; it also epitomizes the continual evolution of educational philosophies. As technology becomes increasingly pervasive in teaching, the pedagogical methods employed by university educators, their interactions with students, and their approaches to course management have undergone significant transformations. These shifts necessitate that educators not only possess traditional teaching competencies but also master and effectively utilize emerging media tools, a concept encapsulated in the notion of new media literacy. However, the stark reality is that many educators remain entrenched in superficial technological applications, failing to fully comprehend and integrate the principles of intelligent education. Particularly within the context of intelligent education, teachers' new media literacy is crucial for enhancing teaching efficacy and fostering educational innovation. Against this backdrop, cultivating university educators' new media literacy

emerges as a pressing issue within the realm of contemporary education. By analyzing the current state and challenges of new media literacy among university educators, we can gain a clearer understanding of the opportunities and challenges that intelligent education presents for their professional development.

2. Definition of Smart Education and New Media Literacy

2.1. Connotation of Intelligent Education

The essence of intelligent education transcends mere technological integration with pedagogy; it embodies a revolutionary educational ecosystem. In this paradigm, information technology is intricately woven into teaching and learning, facilitated by the advent of advanced technologies such as artificial intelligence, big data, and the Internet of Things. Intelligent education transcends the spatial and temporal constraints of traditional classrooms, cultivating a personalized, interactive, and adaptive learning environment. At its core lies a learner-centric approach, optimizing the distribution of educational resources and the intelligent regulation of the learning process through technological means. The objective of intelligent education is to enhance learning efficiency, bolster interactions between educators and students, and promote equity and accessibility within education. This paradigm not only transforms teaching methodologies but also instigates a reformation of educational philosophies, shifting the focus from “teacher-centered” to “learner-centered.” However, the advancement of intelligent education is not solely dependent on technology; it necessitates that educators possess corresponding competencies and skills, particularly in media literacy, to genuinely effectuate profound transformations in education. The potential of this educational model is boundless, yet its effective implementation requires the collaborative efforts of teachers, institutions, and policymakers [1].

2.2. Definition and Composition of New Media Literacy

New media literacy transcends mere proficiency in utilizing technological tools; it embodies a comprehensive ability to critically understand and creatively apply information within the context of the digital age. This multifaceted skill set encompasses familiarity with diverse media platforms, effective information filtering and processing, and the capacity to articulate thoughts through new media. The components of new media literacy are multidimensional. Firstly, educators must possess technological literacy, which entails mastering and adeptly using various digital tools and platforms. Secondly, critical thinking regarding media is of paramount importance, demanding that educators discern truth from falsehood in the vast ocean of information, analyze accurately, and selectively disseminate knowledge. Moreover, creativity is an indispensable aspect; educators should not only be consumers of information but also adept at employing new media for pedagogical innovation, vividly conveying knowledge to their students. Thus, new media literacy is not merely about technical operations; it encompasses an integrated quality that includes technology, critical thinking, and innovative expression. This proficiency determines educators' ability to truly unlock the potential of intelligent education, providing students with a more personalized and effective learning experience.

3. Analysis of the Current Situation of New Media Literacy among College Teachers

3.1. Overview of the current situation

3.1.1. General level of teachers' new media literacy

The current state of new media literacy among university educators exhibits a notable imbalance, characterized by considerable individual and disciplinary disparities. Some educators have achieved a commendable level of media literacy, adeptly utilizing various digital tools and platforms to integrate technology into their everyday teaching, thereby enhancing both efficiency and quality. These educators typically possess a strong sense of innovation and technological awareness, actively exploring the diverse pedagogical models afforded by smart education. However, the majority of educators remain at a preliminary or intermediate level of new media literacy, often struggling with the use of complex technological tools and digital teaching platforms, relying predominantly on basic multimedia resources and failing to harness the multidimensional interactivity and data analytics capabilities of smart education platforms. This issue is particularly pronounced in certain traditional disciplines, where educators exhibit relatively low receptiveness to technology and a sluggish advancement in media literacy. The reasons for this predicament are twofold: differing levels of demand and dependency on new media technologies across various disciplines, and a direct correlation with the training and support systems provided by higher education institutions. Many universities still emphasize traditional modes of faculty training, which have proven insufficient in effectively enhancing educators' media literacy in practice. Consequently, despite the expanding application scenarios of smart education, the overall level of new media literacy among educators remains in need of significant improvement, necessitating a more systematic cultivation mechanism and accompanying support [2].

3.1.2. Differences in teachers' literacy in different disciplines

The disparity among teachers from various disciplines regarding media literacy is pronounced. This distinction is not merely reflected in the frequency and proficiency of technology tool usage but is also evident in the depth and breadth of their media literacy. Teachers in the STEM fields, having long been immersed in computer programming and data analysis tools, typically exhibit a notable adeptness in technical applications. They can swiftly adapt to the demands of smart education, utilizing digital tools for instructional design, experimental simulations, and data feedback, thus demonstrating a strong capacity for media adaptation and innovation. In contrast, humanities teachers often gravitate towards traditional pedagogical methods when confronted with the complexities of new media technologies. While they possess a certain level of media usage skills, their capabilities are largely confined to creating presentations and multimedia playback, lacking a profound understanding and application of new media technologies, which hinders their ability to fully harness the potential of smart education. This disparity is not only linked to the nature of the disciplines but is also closely intertwined with teachers' professional development paths and academic backgrounds. STEM educators generally undergo more systematic technical training, and their academic research often relies on technological means, making the enhancement of media literacy a more organic process. Conversely, humanities educators, whose scholarly pursuits primarily focus on theoretical discussions and text analysis, experience a diminished need for technology, resulting in less motivation to enhance their media literacy. Nevertheless, the comprehensive promotion of smart education necessitates that teachers across all disciplines possess a certain level of media literacy, presenting new challenges for humanities educators while simultaneously offering fresh opportunities for instructional innovation.

3.2. Problems

3.2.1. The manifestations of insufficient new media literacy

The inadequacy of new media literacy among university faculty manifests in numerous issues, directly impacting the efficacy of smart education implementation. On one hand, some educators confine their understanding of new media technologies to rudimentary applications, such as basic PowerPoint presentations or video playback, lacking mastery over more sophisticated digital tools and platforms. Smart education demands not merely the utilization of technology but also emphasizes innovation and optimization within the teaching process. However, certain instructors exhibit an inability to adapt to intelligent teaching platforms, failing to effectively leverage data analysis and learning behavior tracking features, which ultimately hinders the full realization of smart education's potential value. On the other hand, insufficient new media literacy is also evident in the lack of information processing capabilities. In today's educational landscape, educators are required not only to access diverse information resources but also to possess the ability to filter, integrate, and critically utilize such information. Yet, many instructors struggle to navigate the overwhelming volume of digital information, finding it challenging to discern the quality and reliability of the data, thus compromising the accuracy and scientific integrity of their teaching content [3]. This deficiency in information processing capabilities restricts educators from fully exploiting smart education resources, adversely affecting students' learning experiences and cognitive development. Lastly, a notable lack of innovative awareness further underscores the deficiency in new media literacy. In the context of smart education, educators must not only impart knowledge but also guide students in autonomous exploration and collaborative learning through technological means. Nevertheless, many instructors persist with traditional "transmission-based" teaching models, failing to fully harness the interactivity and diverse resources that new media offer. This conservative approach significantly undermines the advantages of smart education, preventing a genuine transformation and innovation in teaching methodologies.

3.2.2. Factors Affecting the Improvement of Teachers' Literacy

The factors influencing the enhancement of new media literacy among university educators are intricate and diverse, encompassing constraints from the external environment as well as closely intertwined subjective elements related to the individuals themselves. A pivotal issue lies in the insufficient technical support and training resources within higher education institutions. Many universities, in their pursuit of advancing smart education, have failed to provide systematic training and ongoing technical assistance to faculty, resulting in a lack of effective avenues for learning and practical experience with new media tools. This absence of technological support leaves educators feeling disoriented in their quest for new media literacy, hindering their ability to proficiently master the latest teaching tools and platform functionalities. Furthermore, the burdensome workload and time constraints significantly diminish educators' motivation and capacity to enhance their skills. University faculty not only grapple with demanding teaching responsibilities but also engage in research and administrative duties, leaving minimal time for acquiring new technologies. This challenge is particularly pronounced for more seasoned educators, whose entrenched teaching methods and experiences diminish their drive to embrace new technologies, fostering a reluctance to adapt and change, often leading to a passive or even resistant attitude towards the enhancement of media literacy. Additionally, the inertia within institutional culture and assessment mechanisms partially obstructs the advancement of new media literacy. In some universities, performance evaluations and promotion systems remain predominantly focused on traditional research outputs, lacking adequate recognition and incentives for faculty efforts in teaching innovation and media

literacy. This singular evaluative framework diminishes faculty engagement with new media literacy, adversely impacting the overall development of educators' competencies within the context of smart education.

4. Effective Measures to Cultivate New Media Literacy

4.1. Curriculum and teaching reform

In the context of intelligent education, enhancing the media literacy of university educators and reforming curricula and teaching methods is an essential endeavor. This process transcends mere technological updates; it embodies a profound transformation in educational philosophy. In curriculum design, it is imperative to integrate media literacy into the dissemination of specialized knowledge, moving beyond the confines of single-discipline instruction. By fostering interdisciplinary integration, educators can cultivate a versatile application of new media technologies across various knowledge systems. Such reform empowers educators not only to impart traditional knowledge but also to ignite students' understanding and enthusiasm for emerging technologies, nurturing their critical thinking and innovative capacities. Equally vital is the innovation of teaching methodologies. Presently, intelligent education offers a wealth of tools and platforms, urging educators to transcend traditional didactic teaching models. They should seamlessly incorporate digital means into the classroom, utilizing interactive platforms and data analysis tools to monitor students' learning processes in real time, thereby enabling personalized instructional adjustments based on data insights. The essence of teaching evolves from a one-directional transfer of knowledge to a multidimensional interaction and feedback loop. This paradigm not only enhances student engagement and interest in learning but also facilitates educators in progressively elevating their media literacy. Furthermore, in the realm of educational reform, the role of educators must shift from mere knowledge providers to facilitators of learning and integrators of resources. In this journey, educators must not only master the operational skills of new media but also learn how to harness these technologies to advance educational objectives and achieve more effective teaching outcomes [4].

4.2. Teacher training and development

In the context of intelligent education, the enhancement of new media literacy among university faculty is inextricably linked to systematic training and professional development support. Effective teacher training should not only focus on the elevation of skills but also emphasize the profound integration of educational philosophy with technological application. Traditional training models often prioritize the mechanics of tools and technical details; however, such superficial training falls short of addressing the multifaceted needs of educators within intelligent education. It is imperative to design targeted, practice-oriented training programs that align with actual teaching scenarios, allowing educators to apply new media technologies in authentic classroom settings, thus fostering continuous reflection and improvement in their teaching practices. Particularly vital is the shift in training content from "technical operation" to "educational innovation." Educators must not only master the use of intelligent teaching platforms but also learn how to effectively organize classrooms, design interactive experiences, and analyze learning data through these technological means. This deeper understanding and mastery will enable educators to utilize technology more flexibly, enhancing the relevance and efficacy of their teaching. Moreover, training should prioritize the enhancement of teachers' information processing and critical thinking skills, equipping them to efficiently filter and integrate digital resources from diverse channels, thereby improving the scientific rigor and foresight of their instructional content. Furthermore, universities should

establish long-term support mechanisms that provide ongoing professional development opportunities, rather than confining efforts to transient training activities.

4.3. Technical support and resource building

In the promotion of smart education, the cultivation of new media literacy among university educators relies heavily on robust technical support and resource development. Smart education transcends mere updates to teaching tools; it embodies a comprehensive transformation of the educational ecosystem. As a crucial foundation for this change, technical support is directly linked to the enhancement of new media literacy and the optimization of teaching outcomes. For higher education institutions, establishing a well-rounded technical support system involves not only improving infrastructure—such as efficient and stable network environments, intelligent teaching platforms, and equipment—but also providing round-the-clock, personalized technical support services to assist educators in overcoming technological challenges encountered in practical applications. Furthermore, resource development is an essential facet in enhancing new media literacy. Merely supplying technological equipment is insufficient; universities must establish a multidimensional, open digital resource repository that enables educators to apply materials flexibly across diverse teaching contexts. This repository should encompass not only basic resources such as instructional videos and presentation templates, but also intelligent teaching analysis tools and interactive platforms that allow educators to tailor their teaching strategies to the varying needs of students. The development of this resource repository should be progressive, continually updated and optimized to ensure that educators have access to the most cutting-edge and high-quality educational resources, thereby enhancing their teaching quality. Simultaneously, technical support and resource development should not be a unidirectional "supply" process; rather, it should emphasize the participation of educators. By engaging in the development and feedback of resources, teachers can deepen their understanding of new media technologies through practical use and facilitate the localization and personalization of educational resources [5].

4.4. Promotion of teacher cooperation and exchange

In the context of intelligent education, the new media literacy of university educators hinges not solely on individual efforts and training; it is equally essential to foster collaboration and communication among teachers. Educators from diverse disciplines and backgrounds, through cooperation, can share their experiences and insights regarding the application of new media. This confluence of varied perspectives can ignite more innovative teaching models and methodologies. Intelligent education necessitates that teachers not only master technology but also adapt to the ever-evolving educational landscape, with collaboration and communication serving as effective pathways to dismantle cognitive barriers. Collaboration can take the form of interdisciplinary teaching seminars, team teaching projects, or the co-creation and sharing of teaching resources. Through these avenues, educators can not only learn about the application of new media in other fields but also reflect upon and enhance their own pedagogical approaches. In such interactions, teachers can seamlessly integrate different technological tools with educational philosophies, thereby augmenting their comprehensive application skills. For instance, a literature instructor might collaborate with an information technology educator to explore the incorporation of digital storytelling tools into the curriculum, thus facilitating innovative cross-disciplinary applications. This reciprocal learning process significantly broadens the horizons and skill sets of educators. Furthermore, universities should actively establish more mechanisms to promote faculty collaboration, such as instituting awards for teaching innovation in new media literacy, encouraging educators to collaboratively develop novel courses and teaching resources. Such initiatives not only

strengthen the bonds among faculty members but also provide them with greater opportunities to showcase and disseminate their teaching achievements.

4.5. Evaluation and incentive mechanism

In the context of intelligent education, the cultivation of new media literacy among university educators is not solely dependent on training and resource investment; a scientifically sound and rational evaluation and incentive mechanism is equally indispensable. The establishment of such a mechanism pertains not only to the individual professional development of educators but also directly influences the advancement of intelligent education and the enhancement of educational quality. Traditional teacher evaluation systems often emphasize academic achievements and teaching quality, while the assessment of new media literacy lacks systematic and comprehensive consideration. The deepening development of intelligent education necessitates an evaluation framework that comprehensively covers educators' performance in the application of new media technologies. This assessment should not merely gauge whether teachers have mastered a particular technology but should also encompass considerations of their teaching innovation, student interaction, and curriculum design across various dimensions. For instance, the evaluation system should focus on how educators leverage new media tools to enhance students' learning experiences, how they adjust teaching strategies through data analysis, and their adaptability in diverse teaching contexts. These evaluative criteria should prioritize the actual performance of teachers in real teaching scenarios rather than confining assessments to superficial technological proficiency. The design of the incentive mechanism must also transcend traditional frameworks; it should not rely solely on material rewards or promotion opportunities, but should also place significant emphasis on spiritual motivation and the enhancement of professional identity. Universities can establish special reward funds to encourage educators to explore and apply new media technologies within intelligent education, bestowing honors and recognition upon those who excel in this realm. For example, institutions might confer titles such as "Pioneers of Intelligent Education" or other accolades to teachers who successfully integrate new media technologies into their teaching with remarkable results. This not only boosts teachers' enthusiasm but also sets a precedent, inspiring more educators to engage in the cultivation of new media literacy. Furthermore, the incentive mechanism should include support for teachers' continuous development, such as opportunities to attend advanced educational technology conferences domestically and internationally or channels for in-depth collaboration with leading experts in the field.

5. Conclusion

In the context of intelligent education, the enhancement of higher education teachers' new media literacy is not only a reflection of individual capability development but also a necessary requirement to adapt to the impending transformations in education. Although universities have implemented certain measures to cultivate teachers' new media literacy, the execution of these initiatives still exhibits deficiencies. A comprehensive approach that encompasses educational reform, professional development, and technological support can effectively bridge the existing literacy gap. However, the cultivation of media literacy is not an instantaneous achievement; rather, it is a prolonged process involving a shift in educators' perspectives, the continual evolution of technology, and the ongoing optimization of the educational environment. Higher education institutions should persistently amplify their emphasis on new media literacy, creating more opportunities and resources to assist teachers in deeply understanding and applying the core values of media literacy within their teaching practices.

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