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Postprint: A Study on “Micro-video + Immersive Experience” Information Literacy Education for Freshmen

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Abstract

[Purpose/Significance] Drawing on constructivist learning theory and the advanced concepts of the flipped classroom, this study investigates and analyzes the personality characteristics, information behaviors, and educational preferences of beginners aiming to enhance their personal information literacy capabilities.

[Method/Process] Through investigation and analysis, this study identifies the root causes of contradictions between educational methods and student needs, proposes an innovative “micro-video + immersive experience” information literacy education model for freshmen, with focused analysis on the model’s characteristics, construction strategies, implementation plans, and feasible organizational strategies.

[Results/Conclusion] The new “micro-video + immersive experience” information literacy education model leverages the unique visual impact of micro-videos to overcome the limitations of abstract teacher language, while facilitating knowledge absorption, internalization, and high-level cognitive thinking through immersive situational experiences, thereby effectively enhancing students’ comprehensive information literacy capabilities.

Full Text

Preamble

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Research on Information Literacy Education for Freshmen through “Micro-video + Immersive Experience”

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Abstract

[Purpose/Significance] Based on constructivist learning theory and drawing on the advanced concepts of the flipped classroom, this study takes beginners seeking to improve their personal information literacy as the primary research subjects, investigating and analyzing their personality characteristics, information behaviors, and educational preferences. **[Method/Process]** Through investigation and analysis, this paper summarizes the causes of contradictions between traditional educational methods and student needs, proposes an innovative “micro-video + immersive experience” information literacy education model for freshmen, focuses on analyzing the model’s characteristics, construction strategies, and implementation plans, and puts forward feasible organizational strategies. **[Result/Conclusion]** The new “micro-video + immersive experience” information literacy education model comprehensively leverages the unique visual impact of micro-videos to overcome the abstractness of teachers’ language, while simultaneously completing knowledge absorption and internalization and higher-level cognitive thinking through immersive situational experiences, thereby effectively enhancing students’ comprehensive information literacy abilities.

1 Analysis of College Students’ Personality Characteristics and Educational Preference

1.1 Information Literacy Education Goals for Freshmen

This paper collectively refers to beginners who wish to improve their personal information literacy as “freshmen,” including first-year university students, new graduate students who have not received information literacy education, and students from various grades with weak information literacy skills. The goal of information literacy education for freshmen is to enable these curious and knowledge-hungry students to initially establish a dialectical thinking mode, effectively recognize, query, acquire, utilize, and communicate information, and thereby enhance their learning, research, and innovation abilities. Freshmen-oriented information literacy education focuses more on integrating dialectical thinking and innovative thinking with information literacy concepts, knowledge, and skills. It changes the past malpractice of focusing solely on mastering information retrieval methods and improving retrieval abilities, breaks through previous teaching ideas that only emphasized linear logical problem-solving according to specific needs, and avoids restraining thinking and abilities with fixed standards or reducing learning interest with dull teaching models. Instead, it emphasizes innovation, discovery, exploration, communication, and research, stimulating students’ thirst for knowledge and cultivating their preliminary ability to coordinate and utilize knowledge, enabling them to draw inferences and achieve mastery through comprehensive understanding, gradually forming their own academic knowledge system.

1.2 Personality Characteristics of College Students

Business strategist and psychologist Don Tapscott first coined the term “Net Generation” in his book *Growing Up Digital: The Rise of the Net Generation*. The Net Generation, also known as the “N Generation,” refers to those who grew up in the digital age and center their lives on the Internet. They are proficient in all fashionable digital devices, capable of multitasking, and in the flattened world built by networks, computers and high technology have become as indispensable to their lives as oxygen and sunshine. Today’s college students are typical representatives of the N Generation, possessing distinct personality characteristics: (1) they value freedom and dislike constraints; (2) they crave meaningful, challenging, and diverse tasks, believing that hands-on practice and accepting challenges constitute real contributions; (3) they hope to be treated as independent “individuals” rather than a uniform “group,” receiving “tailor-made” management that fits their current life situations; (4) in a hierarchical world, they prefer collaborative problem-solving and resist top-down command; (5) for the N Generation, learning and entertainment are inseparable—they can learn while playing, as long as the learning itself is interesting; (6) innovation is the hallmark of N Generation culture, as they enjoy seeking new methods, exercising creativity, and hope to do different things to challenge the status quo and enhance value.

Therefore, for college students, traditional rigid and dull didactic, 灌输式 (transmission-based), and monolithic educational approaches can no longer meet their inner needs. They require personalized services tailored to them, engaging in task-based challenging learning, collaborative interactive learning, and autonomous network multimedia learning.

1.3 Analysis of College Students’ Information Behavior and Educational Preference Characteristics

With the increasing number of college graduates, the employment situation for college students has become increasingly severe. Surveys from Sino-British entrepreneurial university forums and various recruitment websites show the types of college students least welcomed by enterprises, including those lacking distinctive personalities, those poor at getting along with others, and those who are overly specialized but inflexible. This demonstrates that universities should cultivate college students with distinctive personality traits and teamwork abilities, making them both specialists and versatile talents. While each college student’s personality is unique, their unique learning experiences and practical activities leave deep imprints on their personality formation. Higher education bears the sacred responsibility of cultivating students’ comprehensive qualities and enhancing their innovation and practical abilities. Understanding college students’ preferences for educational methods enables more targeted education that meets their learning needs. In March 2018, the author surveyed 109 students from Shenyang Normal University to understand their educational preferences. The results are shown in .

Survey Results on Educational Preferences of Shenyang Normal University Students

The survey shows that college students possess certain autonomous analysis and judgment abilities, do not blindly follow teachers' instruction, prefer active participation and task-based challenging learning, and eagerly desire opportunities to demonstrate their abilities and become the focus of attention. Although they do not reject the traditional blackboard + PPT teaching model, they prefer innovative educational forms that combine challenge and fun and are willing to actively participate and undertake organizational planning roles. At the same time, we cannot ignore that college students tend to significantly overestimate their information literacy abilities. In actual teaching practice, they often expose problems such as single retrieval approaches, insufficient professional retrieval strategies, weak information quality evaluation abilities, and poor awareness of academic information norms.

1.4 Investigation on the Effectiveness of Traditional Library Information Literacy Education

In July 2019, the author conducted a survey on the effectiveness of library information literacy education among 140 students from Shenyang Normal University to indirectly understand the effects of traditional information literacy education. Partial results are shown in .

Partial Survey on the Effectiveness of Information Literacy Education at Shenyang Normal University Library

The survey shows that among the diverse information literacy education courses and activities offered by our university, the most widely participated is the freshman library orientation, followed by the free resource retrieval and utilization training courses offered by the library each spring and autumn, as well as the literature information retrieval general education elective courses. Other activities including embedded teaching, short-term intensive training, and retrieval competitions also attract considerable student participation. This reflects that our university's information literacy education activities are diverse and cover readers at all levels, meeting different reader needs to a certain extent. But how effective is such rich information literacy education? Only 32.14% of students truly understand what information literacy is, while 49.29% have some understanding but not deep comprehension, showing that most students still possess some awareness of information literacy. Regarding academic information retrieval approaches, 69.29% of students choose general search engines, 22.14% use the library's Chinese and foreign academic databases, and less than 10% utilize academic search engines. When asked about specific information retrieval knowledge and skills, such as whether they are proficient in at least one specialized database covering Chinese and foreign academic literature in their major, only 27.14% answered affirmatively; only 17.14% understand core journals in their field. The proportion of affirmative answers to comprehen-

sive information literacy ability questions is also not high. For instance, only 42.14% can effectively narrow down and select from large amounts of retrieval results; only 32.86% can quickly extract main points from acquired academic information; and only 30.71% believe they can judge the authority and reliability of information. Just 39.29% of students can analyze retrieval results and adjust retrieval strategies as needed. These results indicate that while students possess certain network information retrieval abilities and can master single information retrieval tools and methods taught by teachers, their professional information retrieval abilities are relatively weak, and their comprehensive abilities to use information to solve problems are very weak. The vast majority of students still hope to improve their information literacy through participating in library-related education courses or activities, but they do not exclude using online courses or team-based mutual assistance for learning. In summary, although Shenyang Normal University Library's information literacy education has achieved some results, the effects are not entirely satisfactory, and there remains a disconnect with students' needs and personal learning interests and trends.

2 Characteristics of the “Micro-video + Immersive Experience” Education Model

2.1 Flowing Light and Shadow, “Instant Understanding” of Knowledge

In recent years, with the rise of massive MOOCs, college students have become accustomed to using fragmented time for online learning. However, after several years of MOOC development, the model has gradually revealed a series of unavoidable problems, with dropout rates as high as 95% causing people to gradually adopt a more rational view of MOOCs. Although college students have course learning needs, they lack specific learning objectives and often act on impulse. Moreover, the long learning cycle and fixed enrollment periods of MOOCs mean that learning initiative can be disrupted by various factors over several months, making completion uncertain. Additionally, the high-quality requirements and high production costs of MOOCs make them unsuitable for all universities to develop. Compared with MOOCs, micro-videos have lower technical thresholds for production, mature software and hardware conditions, and are more popular among students as they focus on specific knowledge points. Micro-videos break down difficult and profound professional knowledge into smaller, more digestible pieces, presenting knowledge in an accessible, vivid video format. They redefine knowledge through short videos, breaking the abstractness of language instruction and overcoming the flatness of text and image-based materials, transforming knowledge into dynamic visuals that cater to young N Generation college students' habit of watching short videos. They shorten the time required to acquire knowledge, enabling “instant understanding” through flowing light and shadow, accelerating the cycle of knowledge absorption, internalization, and reuse, and providing more college students with new learning

experiences. Technological innovation makes knowledge presentation more rich and interesting, effectively improving the effectiveness of knowledge dissemination and allowing the content ecosystem to better serve students.

2.2 Immersive Situational Experience

Social constructivism holds that learning is a process of cultural participation, where learners construct knowledge by participating in practical activities within a community. Learning is not only an individual's active processing of learning content but also requires learners to cooperate and help each other. Although language gives knowledge a certain external form and gains relatively universal recognition, this does not mean that learners have the same understanding of this knowledge, because understanding knowledge requires individuals to construct it based on their own knowledge and experience, and also depends on the learning process in specific contexts.

Micro-videos can eliminate some of students' resistance to traditional rigid and dull didactic education, effectively packaging information literacy knowledge and content within an entertaining, narrative, and educational exterior, delivering it to students in a way they are more willing and able to accept, greatly enhancing immersion and susceptibility. Through micro-video education, students gradually master information retrieval skills and knowledge imperceptibly. The internalization of knowledge is achieved through immersive experiences that students find more acceptable. Immersive experience involves using forms such as online games, guided tours, classroom games, competitions, typical case-based situational teaching, and themed activities to immerse students in physically or virtually constructed situations, allowing them to engage in experiential learning of information literacy in fun and interactive contexts. Immersive experiential learning occurs when learners involuntarily develop a sense of being personally on the scene in a constructed situation, and as the experience process unfolds with its ups and downs, they develop certain emotional projections, thereby learning knowledge and skills and gaining deeper ideological insights.

The “micro-video + immersive experience” information literacy education model presents and experiences knowledge learning and internalization through novel and dreamlike forms. In rich contexts, it endows students with meaningful role identities and missions, stimulates their learning interest in exploration and discovery, improves comprehensive information literacy abilities, cultivates teamwork spirit, and enlightens innovative thinking.

3 Implementation Plan of the “Micro-video + Immersive Experience” Information Literacy Education Model

3.1 Reconstruction of Information Literacy Learning Spaces

The transformation of the new teaching model requires the redesign of library information literacy teaching and activity spaces. With the rise of concepts such

as active learning, autonomous learning, and collaborative learning spaces, the traditional “one-to-many” uniform lecture-oriented spatial layout is gradually being replaced by mobile podiums and adjustable-height desks and chairs that can be freely rearranged. The classroom is surrounded by whiteboards that can be written on at any time, with full network coverage. The space is no longer limited to the “old three” of projectors, desktop computers, and desks and chairs; new technological teaching equipment such as smart classroom teaching interaction software, intelligent student behavior analysis systems, digital multifunctional teaching whiteboards, and intelligent network televisions are gradually being introduced. In the mobile era, the Bring Your Own Device (BYOD) learning model enhances student engagement and promotes interactive participation. Teachers no longer just stand at the podium but move actively throughout the entire learning space. According to new educational requirements and the development trends of network information technology, we must construct new learning spaces centered on student development, with deep integration of teaching concepts, content, methods, and equipment. We advocate for students’ autonomous learning and free exploration in real contexts. The reconstruction of new learning spaces places higher demands on teachers’ comprehensive abilities in lesson preparation, teaching, and interdisciplinary integration. The challenge teachers face is not necessarily using technology in a “dazzling” way, but truly integrating teaching with technology.

3.2 Model Research Design

This study takes a series of trainings and courses such as freshman library orientation, the general elective course “Literature Information Retrieval,” thematic training, and embedded teaching as pilot programs, conducting specific model research based on constructivist teaching concepts.

3.2.1 Freshman Initial Experience When people enter a completely new environment, they first focus on surface-level impressions. Only when the content is rich enough can it attract deeper interest and willingness to access more profound information and experience diverse pleasures at different levels. The library is the first stop for “micro-video + immersive experience,” and freshman library orientation is an important way to establish emotional connections with freshmen. During the orientation season, the theme “The First Lesson of University Starts from the Library” can be used to create the most beautiful encounter between students and the library. Under the guidance of volunteers, students can tour the library, with recommended reading lists and classic films; an online orientation micro-site can be launched, featuring the “Falling in Love with the Library” micro-video series; activities such as knowledge-based red envelope giveaways and QR code quizzes can be organized. Through these online and offline activities, the library can showcase its rich resources and comfortable learning spaces, allowing freshmen to feel the warmth of the library and establish a good first impression that makes them emotionally receptive to the library, thereby enhancing immersion and acceptance imperceptibly. However, merely

showing freshmen rich resources and spaces is insufficient; the library must also consider how to effectively convey these resources to them and think about how to “teach them to fish.” For example, National Taiwan University’s freshman education adopts an “exploration amusement park” game format, using three characters—senior students, junior students, and librarians—to explain library utilization knowledge in a friendly, vivid, and interesting way that is deeply loved by students.

3.2.2 Novice Advancement Most young people of the new generation greatly enjoy using creative short-video social software and have strong acceptance of micro-videos. They can learn various small knowledge and skills by watching micro-videos, enhancing their wisdom through entertainment. Information literacy education, which is primarily practical and operational, is very suitable for implementation through the micro-video model. Micro-video recording has low costs, mature software and hardware conditions, and is easily popularized and applied, with significant immersive qualities that transform abstraction into imagery, enabling students to learn easily through self-service. Micro-videos are short and concise, effectively reducing students’ cognitive load while creating a relaxed learning atmosphere of “instant understanding, the world is so simple.” The simple form and short, compact “physique” meet young readers’ “fragmented” needs in terms of time and dissemination; readers can watch a micro-video in their spare time, experiencing a youth struggle story or embarking on a journey to find wisdom treasures. The library focuses on disseminating information literacy-related knowledge and information retrieval skills, fragmenting professional knowledge through micro-videos and presenting it in concrete and vivid video formats. The micro-video teaching model should include not only a certain number of information literacy professional knowledge micro-videos but also various skill instruction videos related to student learning, such as Office operations and tips for commonly used software. The micro-video teaching model emphasizes students’ autonomous learning abilities, transforming them from passive recipients of classroom education to self-directed learners who utilize fragmented spare time. However, we cannot ignore that there are also cases where insufficient willpower, motivation, and enthusiasm prevent achieving expected goals. Therefore, it is also necessary to reward freshmen who persist in learning through forms such as points, rankings, sign-ins, and check-ins. At the same time, group learning should be encouraged, and learning efficiency should be improved through online and offline interactive Q&A to form a good peer learning model. The micro-video website is an open platform where students can also share their own recorded knowledge micro-videos, satisfying modern young people’s desire to share knowledge, experience, and insights with each other.

Micro-videos serve as the carrier for freshmen to learn information literacy knowledge, while deeper knowledge mastery and internalization consolidation require more interactive and interesting immersive experiences in practice. In traditional thematic training, embedded teaching, information literacy credit

courses, and other educational classrooms, immersive experience plans should be designed according to teaching objectives and tasks. Immersive experience design follows seven principles: (1) Strong sense of immersion: making freshmen feel personally on the scene and emotionally fully integrated into the set situation, assuming a certain role identity. (2) Sense of mission: making even novice freshmen feel their importance and value. (3) Simple and clear rules: requiring only simple exploration to become familiar with the rules and form high identification. (4) Task design from easy to difficult: designing the difficulty of each task segment properly—it should not be too easy to complete, yet not unattainably high, allowing freshmen to “reach it with a jump.” This creates step-by-step depth that captivates attention. (5) Sense of rarity: incentives and rewards should be particularly rare, using hunger marketing to make freshmen look forward to goals and work hard for them. (6) Social nature: peer teamwork and mutual encouragement are guarantees for common progress, preventing freshmen from feeling they are fighting alone; companion learning provides greater motivation. (7) Immediate feedback: freshmen’s willpower is relatively weak, their learning and research abilities are insufficient, and they are prone to frustration. We should follow their innate desire for immediate feedback, allowing them to receive encouragement and build confidence. For example, National Taiwan University Library designed a “Monopoly group competition” classroom game in the teaching objective of learning literature management software. Using a flipped classroom format, students first self-studied EndNote through videos provided by database vendors, then consolidated their learning through a Monopoly group competition in class, achieving the “immersive experience” information literacy education innovation model. Another example is Central China Normal University Library’s “Knowledge Classification” game when teaching Chinese Library Classification knowledge. Through the game, students are given an explorer role, assigned challenging task requirements, and immersed in a magical scenario to experience the game story setting firsthand. The “immersive experience” teaching design can be diverse and can also be localized by borrowing established projects. In teaching the use of well-known academic databases, libraries can directly introduce promotion activities from various database companies, such as CNKI’s retrieval competitions, research and learning essay contests, and “I Know, I Show” micro-video competitions; the Video Library database’s video review and quiz games; Wanfang Data’s treasure hunt games; and ScienceDirect’s data mining competitions. Teachers can use these games and competitions to guide students in participatory experiences, truly achieving education through entertainment and combining competition with teaching, promoting learning through competition and internalizing it in the heart, while promoting practice through learning and externalizing it in action.

3.2.3 Becoming Information Experts The cultivation of information literacy abilities is a continuous iterative, progressive, and spiraling upward process. After series of learning, freshmen can skillfully use major academic retrieval

tools and database resources. However, in massive and complex information systems, freshmen still feel at a loss and cannot flexibly exert subjective initiative to integrate the learned information retrieval knowledge into their own knowledge systems. They lack systematic coordination and knowledge utilization abilities and find it difficult to construct their own academic ecosystems and autonomous knowledge systems. Therefore, comprehensive application and practical testing are needed to enhance information literacy abilities. For example, Shenyang Normal University Library organized the “Finding the Lost Code” retrieval competition, immersing the new generation in the historical context of the Anti-Japanese War and national defense, assigning them the role of passionate youth, allowing them to fully utilize various physical and virtual resources such as library spaces, academic databases, books and journals, and mobile libraries to find clues and solve puzzles. Peking University Library’s “Escape Room” themed game activities set a story scenario each season, such as searching for a missing professor or a mysterious girlfriend. In these distinctive contexts, students comprehensively apply information retrieval knowledge to find answers. National Taiwan University Library’s “Finding the Cat” activity also tests participants’ comprehensive information literacy abilities.

3.3 Implementation Plan of “Micro-video + Immersive Experience” Information Literacy Education in the Classroom

3.3.1 Comparison of Implementation Plans Between “Micro-video + Immersive Experience” Classrooms and Traditional Classrooms The “micro-video + immersive experience” information literacy education model can be applied in various educational pathways led by libraries, such as freshman library orientation, embedded teaching, thematic training, innovation and entrepreneurship training, themed cultural activities, and information literacy credit courses. Taking information literacy credit courses as an example, the differences between traditional classrooms and “micro-video + immersive experience” classrooms are compared in .

Comparison of Implementation Plans Between “Micro-video + Immersive Experience” Information Literacy Education Classrooms and Traditional Classrooms

Compared with traditional classrooms, the “micro-video + immersive experience” information literacy education model places greater emphasis on cultivating students’ autonomous learning, innovation, teamwork, and organizational planning abilities. Teachers follow the seven principles of immersive experience design, encourage freshmen to innovate independently, grant them the right to participate in design and organization, and enable them to learn through organizing and planning, thereby enhancing their abilities in the learning process.

3.3.2 Practical Case of “Micro-video + Immersive Experience” Information Literacy Education In the second semester of the 2017-2018 academic year, the “Literature Information Retrieval” course for first-year undergraduates attempted to apply the “micro-video + immersive experience” infor-

mation literacy education model for curriculum reform. The course selected the chapter “Chinese Book Information Retrieval” for innovative education model implementation.

Before class: Students formed five groups of eight members each through voluntary combination. Teachers established WeChat groups for convenient guidance and consultation at any time. The library’s “Micro-Knowledge·Power” micro-lecture column released 19 related micro-videos, including library catalog retrieval, Superstar Digital Library, and Duxiu Academic Search System. Each student received a library user manual, Superstar Digital Library manual, and Duxiu Academic Search System manual.

During class: Thirty minutes were used to explain key knowledge and introduce the immersive experience activity—a “Cracking the Battlefield Code” live 通关 (clearance) game. Five groups were assigned the same task, with each group needing to complete a total of six interlocking checkpoint tasks. Task completion required using the library catalog system, Superstar Digital Library, Duxiu Academic Search System, and network information retrieval to obtain clues, and based on each clue, find paper slips with 明文 (plaintext) written on them in the library. The final step was to obtain the cracked plaintext to successfully clear the game. Only the intelligence group that cracked the code fastest could obtain the sole 通关 (clearance) opportunity. Each student in the winning group received a water cup sponsored by the Duxiu Academic Search System.

After class: The complete solution process for all questions was posted in the WeChat group to guide students in self-summary, reflection, and improvement. Photos and short videos captured during the game were shared, allowing students to relive the joyful classroom moments. Students who had not mastered the knowledge proficiently were required to re-watch the “Chinese Book Information Retrieval” micro-videos. Q&A and tutoring were provided to students.

Grading: Group overall grades were given based on 通关 (clearance) time, while individual grades were anonymously assessed by group members.

This innovative attempt was based on the seven principles of immersive experience, assigning each person a role and specific tasks with difficulty progressing from easy to hard. Through rewards, it made freshmen look forward to goals, and peer collaboration made learning more motivated, with immediate feedback provided on performance and grades.

In the final exam, the accuracy rate for questions related to “Chinese Book Information” retrieval knowledge was 96.25%, while the accuracy rate for other chapters ranged from a minimum of 54.1% to a maximum of only 92.3%. This demonstrates that the teaching effect of the “micro-video + immersive experience” information literacy education model has been significantly improved.

4 Organizational Strategy Considerations for “Micro-video + Immersive Experience” Information Literacy Education

4.1 Enriching the Micro-video Media Repository

A dedicated “Micro-video Media Repository” column should be established on the library’s main website or official WeChat public account, collecting micro-videos independently designed and recorded by the library according to its information literacy teaching needs, usage help micro-videos provided by major academic databases, open micro-lectures related to information literacy on the Internet, micro-videos contributed by freshmen, as well as supporting courseware and test question banks. The column can feature functions such as liking, interactive commenting, forwarding and sharing, and consulting, providing freshmen with a smooth learning and interaction platform. Micro-videos in the column can be grouped according to teaching knowledge points, teaching objects (majors, disciplines), teaching processes, and teaching methods. For example, according to the main teaching stages or processes, they can be divided into pre-class review, new lesson introduction, knowledge understanding, practice consolidation, and summary expansion categories. According to teaching methods, they can be divided into lecture, Q&A, heuristic, discussion, demonstration, practice, autonomous learning, cooperative learning, and inquiry learning categories. Detailed categorization of micro-videos can better meet students’ personalized learning and on-demand selection needs at different stages, allowing for both preview and review to fill gaps and strengthen consolidation.

4.2 Enhancing Teachers’ Organizational Capacity for Information Literacy Education

The innovative “micro-video + immersive experience” teaching model places higher demands on teachers’ teaching levels and organizational planning abilities. Teachers must have a clear understanding of teaching objectives, be able to clarify the entire teaching content, conduct reasonable overall planning of micro-video construction content, and formulate micro-video construction plans, processes, standards, and systems to avoid disorderly and repetitive development. Teachers need to master micro-video production software and tools. Although micro-videos are only a few minutes long, they require familiarity with the entire production process from topic selection, lesson plan writing, courseware production, script writing, filming and recording to post-production editing, thereby enabling efficient instructional design. Teachers should become facilitators of freshmen’s knowledge system construction, skillfully managing the entire teaching process, creating situations that align with teaching content, making situational experiences both authentically meaningful and vividly interesting. Only through learning experiences in specific contexts can freshmen achieve deeper understanding of knowledge and gradually complete the construction of their own knowledge systems.

4.3 Emphasizing Teaching Reflection and Information Feedback

Collecting teaching feedback information is more conducive to the improvement and perfection of innovative teaching models. Information collection includes students' comments and interactions on the micro-video media repository platform, as well as their actual performance and feedback in immersive experience situations. Freshmen's opinions and suggestions can be widely collected through multiple channels such as their participation enthusiasm, completion effectiveness, and follow-up feedback. After each teaching session, timely teaching reflection should be conducted to summarize experiences, identify deficiencies, and adjust subsequent teaching plans. Teaching effects between the new and traditional teaching models should be compared and analyzed, and pre-class, in-class, and post-class surveys should be distributed to students for real-time monitoring of teaching effectiveness and timely adjustments. In addition to teachers' self-reflection and feedback from students, peer feedback among teachers is also a specific application of information feedback in the teaching field. Different from teacher-student feedback and student-student peer feedback, it focuses on teachers' classroom teaching behaviors and their effectiveness as feedback content, representing information exchange among teacher peers about teaching behaviors and their effectiveness. Peer feedback among teachers can help teachers recognize whether their teaching behaviors meet standards, are effective, and how to improve from a professional educational perspective. Furthermore, comprehensive assessments should be conducted on the information literacy abilities of freshmen who have received the "micro-video + immersive experience" innovative education. Based on assessment results and combined with freshmen's personality characteristics and disciplines, targeted advanced tutorials and subsequent cultivation plans should be proposed.

The "micro-video + immersive experience" innovative teaching model aligns with the learning preferences of young students in the new era and has efficient guiding effects on cultivating students' autonomous learning and innovation abilities. At the same time, the "micro-video + immersive experience" innovative teaching model is also a complex project requiring substantial human, material, and financial resources. In the specific teaching design and implementation process, many factors need to be considered, including the construction of collaborative learning environments in both network and physical spaces, the updating and maintenance of micro-videos, the design and construction of diverse situations, and the improvement of smart interactive teaching and incentive measures. The application of this model awaits further research and practical summarization.

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