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Development of management guideline to improve classroom teaching by using modern media technology at Macau University of Science and Technology

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ABSTRACT
This article aimed 1) to investigate the types of modern media technology in classrooms at Macau University of Science and Technology, 2) to study the influence of modern media technology on teaching classrooms at Macau University of Science and Technology, and 3) to develop the management guideline on classroom teaching improvement by using modern media technology at Macau University of Science and Technology. The respondents were 333 students. The research instrument employed in this study was a questionnaire with 40 questions. The information and data collected were analyzed through the content analysis method and then presented in terms of frequency, mean, and standard deviation. The findings from the research indicated that: 1) types of applications of Modern Media Technology in the classroom was in middle level, and it is used in all aspects of students' learning and life, but it is not sufficient in the deep application, 2) the influence of application of Modern Media Technology in University classroom was in middle level, and 3) the management guideline on classroom teaching improvement by using Modern Media Technology at Macau University of Science and Technology consists of five units, namely: 1) Optimization of technical facilities and resources, 2) Establishment of evaluation and feedback mechanism, 3) Student participation and feedback mechanisms, 4) Teacher training and support, and 5) Resource integration and sharing.

Introduction

The application of network technology in educational classrooms has become increasingly important, and the popularity of the Internet is gradually changing people's lifestyles, as well as teaching methods and methods. Network technology has been continuously developing, particularly in educational settings. With the continuous development and application of network technology, people's lifestyles are becoming increasingly information-based, and various fields of life are related to network technology, especially in the field of education. Due to the continuous establishment and improvement of network education technology, many universities will add some network technology to assist teachers in their teaching work when carrying out daily courses, To further stimulate students' learning enthusiasm and improve the quality and level of teaching in universities (Chen, 2019) with the rise of the Internet and the advancement of digital technology, the education field has begun to adopt more of these technologies to improve teaching and learning experiences.

As is well known, in the past few decades, many students have been able to only receive knowledge through offline classrooms and face- to- face with teachers. The scope of knowledge acceptance depends on the teacher's knowledge range, and the knowledge information received is limited to textbook knowledge. If the textbook does not have it or the teacher's knowledge range is insufficient, additional knowledge cannot be obtained. However, students can only complete their homework, and the teacher can grade it manually by printing paper, which, on the one hand, causes waste of paper resources. On the other hand, teachers have limited energy and often require one or even more days to grade homework, and constantly have Modern assignments, which can lead to a large amount of homework not being completed and corrected. However, the application of network technology has effectively addressed this issue. With the use of modern media technology, students can acquire knowledge through various channels such as online classrooms and online information searches, thereby increasing the depth and breadth of the acquired knowledge. They can also complete assignments online without the need for printing. Teachers can also improve the efficiency of communication with students by correcting homework online and transmitting information. Therefore, the popularization of network technology in educational classrooms is urgent.

At present, network technology has been widely applied in universities, but in some regions, it is only used for projectors. Information transmission still relies on school bulletin boards, rather than on email or school websites.

At the beginning of 2020, with the development of COVID-19, the Ministry of Education also requested that various universities actively carry out online education, and network technology software began to develop rapidly, such as Tencent Video, Zoom, and Ding Talk Classroom. Over the past three years, various software has actively developed and provided a technological foundation for the application of network technology in the classroom.

Online education is a modern educational method that utilizes modern information technologies, such as the Internet and artificial intelligence, for teaching and learning interactions. It is an important component of educational services. The Beijing Ministry of Education also proposes to promote the deep integration of technology and education to promote the application of information technology in the field of education.

The application of a large amount of network technology in educational classrooms has improved educational efficiency and quality. I hope to showcase the application of modern technologies in educational classrooms more clearly so that schools can more readily recognize the importance of modern technologies in improving education quality and enhancing learning efficiency.

Objectives

1. To investigate the types of applications of modern media technology in classrooms at Macau University of Science and Technology.
2. To study the influence of modern media technology on teaching classroom at Macau University of Science and Technology.
3. To develop the management guideline on classroom teaching improvement by using modern media technology at Macau University of Science and Technology.

Literature review

The concepts of modern media technology

Modern media technology in this article mainly refers to modern technologies based on network technology and applied to educational classrooms. Modern media technology includes the use of network resources and information technology to provide students with a three-dimensional and diversified learning environment and improve teachers' teaching ability. The flexibility and pertinence in the process have advantages that traditional teaching models cannot match (Zhou, 2022).

Compared with traditional media, modern media technology is based on Internet technology. The media of today can fully utilize its technological strengths and information- gathering abilities, and it can also encourage the merging of network technology with different fields (Li, 2023). Based on network technology, schools can use terminals such as computers and mobile phones to provide information services, website services, and real-time dissemination services, thereby promoting changes in the teaching mode and students' learning methods.

The concepts of teaching improvement

Teaching improvement primarily utilizes modern media technology to enhance the quality of instruction. This includes the construction of multimedia classrooms, the online correction of homework, the development of learning and communication platforms, among other measures, to foster a more conducive learning environment for students.

The improvement of teaching quality has been proposed, and a document has been issued calling for deepening education and teaching reform and comprehensively improving the quality of personnel training. At the same time, comprehensively improve the quality of courses, optimize course design, deepen educational reform through various channels, and promote education quality improvement, including enhancing curriculum design, credit systems, and professional settings. The most important thing is to keep up with the modern media technology based on the Internet, develop Internet + education, and promote the improvement of education and teaching.

The concepts of the influence

Modern media technology has a significant impact on improving the quality of teaching, which includes implementing changes in classroom settings and students' learning methods. The impact of modern media technology is mainly due to the following aspects: massive data, sharing, and timeliness, which makes people more willing to use modern media technology for learning (Lu & Zhang, 2015).

Conceptual framework

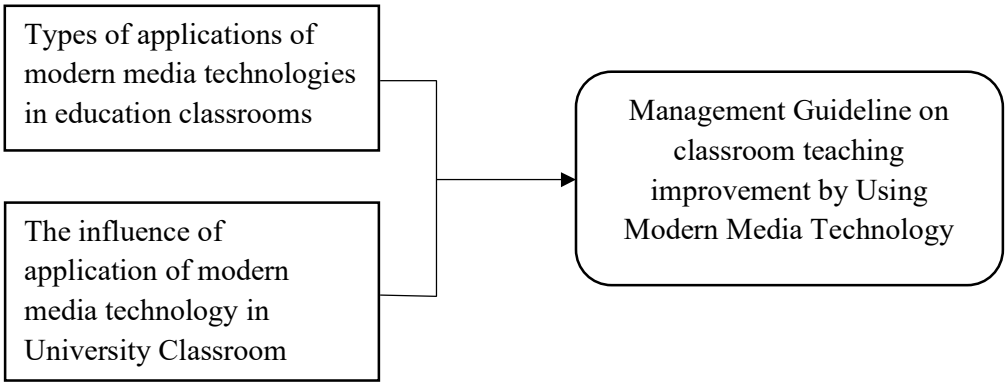

Figure 1. Conceptual framework

Methods

1. Populations and samples

The population in this research project, Macau University of Science and Technology will use as a case study. In this research project the population was 2000 students participated in Modern Media Technology teaching in 2023.

The sample group in this research project was 333 students, who participated in Modern Media Technology teaching. The sample groups will be derived from Taro Yamane formula (Yamane, 1973). The respondents will collect through the stratified random sampling technique.

2. Research tools

2.1 Questionnaire

In this research project, a questionnaire was employed for the data collection. The questionnaire will be divided into 3 parts sections, 1) general information 2) types of applications of Modern technologies in university classrooms 3) influence of applications of Modern technologies in university classrooms. The questionnaire was evaluated for the Index of Congruence scores (IOC scores) by the three specialists. Each question in the questionnaire evaluated with the range of IOC 0.67 to 1.00 was employed meeting for this research.

2.2 Focus group meeting

A set of questions was used to obtain the opinion through a focus group discussion meeting with three specialists (teacher who work in Macau University of Science and Technology) to develop management guidelines to integrate Modern technologies into the teaching improvement in university classroom.

3. Data collection

For this research project, the researcher himself will collect the data and information from the sample groups. The sample groups will be informed the purposes of the data collection, made an appointment. The researcher will be submitted a letter of permission to the school director in advance to ask a permission to collect the data and information from the samples group at Macau University of Science and Technology.

4. Data analysis

The data and information collected will be analyzed, interpreted and then presented in terms of frequency, percentage, mean ($\bar{x}$), standard deviation (S.D.). The five point Likert rating scale will be used to evaluate the respondents' needs and types of applications of Modern technologies in education classrooms.

Results

1. Types of applications of modern media technology in education classrooms.

Table 1. Types of applications of modern media technology in education classroom

Questions	$\overline{X}$	S.D.	Level of opinion
Q1 You know a lot about modern media technologies.	3.41	1.17	Middle
Q2 The application of modern media technology in the teaching classrooms is increasing.	3.42	1.17	Middle
Q3 Online education platforms are often used in the classroom.	3.90	1.43	High
Q4 You conduct course evaluations or submit papers through the online platforms.	3.83	1.45	High
Q5 You test frequently on online platforms.	3.80	1.44	High
Q6 You frequently leave messages or give feedback on classroom experiences and express needs through online platforms.	3.37	1.20	Middle
Q7 You regularly uses social media for class discussions.	3.37	1.21	Middle
Q8 You contact more with teachers or classmates through social media.	3.90	1.47	High
Q9 You frequently participated in cross-regional cooperation projects via video conferencing.	2.96	1.09	Middle
Q10 You regularly review learning knowledge by watching video conferences.	3.02	1.06	Middle
Q11 You more participated in classes via live video.	3.42	1.17	Middle
Q12 You frequently access classroom content, such as homework and courseware through mobile devices.	3.40	1.16	Middle
Q13 You increased your use of e-books and online learning resources.	3.45	1.17	Middle

Q14 You often check the information stored through cloud platforms, such as the school's official website, educational and teaching materials.	3.01	1.07	Middle
Q15 You exposed to virtual reality technology in class.	2.99	1.07	Middle
Q16 You use online data analysis tools to help complete assignments.	3.36	1.23	Middle
Q17 You frequently contact with teachers using online classroom interactive tools such as random question tools and fun quizzes.	3.37	1.17	Middle
Q18 You exposed to game-based learning and participated in integrating game elements into the classroom.	3.39	1.18	Middle
Q19 You opened an online lab to simulate an experiment.	3.08	1.02	Middle
Q20 You will use artificial intelligence to evaluate learning to understand learning progress.	3.02	1.11	Middle
Total	3.37	1.20	Middle

According to Table 1., the total average was 3.37; the level of agreement was middle. The total standard deviation was 1.20. The top three were Q8, You contact more teachers or classmates through social media, the average was 3.90; the level of agreement is high. Q4: You conduct course evaluations or submit papers through the online platforms, the average was 3.83, the level of agreement was high. Q5: You test frequently on online platforms, the average was 3.80, the level of agreement is high.

2. The influence of the application of modern media technology in university classrooms.

Table 2. The influence of application of Modern Media Technology in University classroom

Questions	$\overline{X}$	S.D.	Level of needs
Q1 You have encountered problems when using modern media technology to participate in class.	3.40	1.16	Middle
Q2 You have no problem using modern media.	2.61	1.18	Middle
Q3 You think it is more convenient to use modern media technology to participate in university classroom learning.	2.62	1.20	Middle
Q4 You are unwilling to use modern media technology to participate in university classroom learning.	3.39	1.19	Middle
Q5 You prefer to take tests and exams through online platforms.	2.60	1.18	Middle
Q6 You would prefer to take a written test.	3.44	1.14	Middle
Q7 You think learning in video classes is more efficient.	2.61	1.21	Middle
Q8 You prefer to participate in offline classes.	3.37	1.23	Middle
Q9 You think it would be easier to review by watching video replays.	2.58	1.17	Middle
Q10 You would rather ask the teacher offline.	2.97	1.05	Middle
Q11 You think it would be more convenient to use online data analysis tools to do homework and research.	2.65	1.23	Middle
Q12 You would rather calculate it yourself.	2.13	1.44	Low
Q13 You think game-based learning is more attractive for you to learn.	3.92	1.46	High
Q14 You would rather participate in traditional classroom teaching.	3.40	1.18	Middle
Q15 You think e-books and online learning materials are more cost-effective and convenient.	2.63	1.18	Middle
Q16 You think reading physical books is more helpful for learning.	3.34	1.21	Middle
Q17 You think it is faster to contact teachers through social media.	3.56	1.46	High

Q18 You think it would be easier to ask questions face-to-face with the teacher offline	3.02	1.05	Middle
Q19 You find it more convenient to submit papers and assess online.	3.63	1.43	High
Q20 You would rather communicate and submit with the teacher offline.	3.38	1.23	Middle
Total	3.01	1.23	Middle

According to Table 2., the total average is 3.01, the level of acceptance is middle, the standard deviation was 1.23. The top 3 were Q13, you think game-based learning was more attractive for you to learn. The average was 3.92; the level of acceptance was high. Q19: You find it more convenient to submit papers and assess online? The average was 3.63, the level of acceptance was high. Q17: You think it was faster to contact teachers through social media? The average was3.56, the level of acceptance is high.

3. Management Guideline of Modern Media Technology in University Classroom on Teaching Improvement

Management guidelines are made for the application of modern media technology in university teaching and classroom from the perspective of educational administrators consist of five units.

1. Optimization of technical facilities and resources
2. Establishment of evaluation and feedback mechanism
3. Student participation and feedback mechanisms
4. Teacher training and support
5. Resource integration and sharing

Discussion

Types of applications of modern media technology technologies in education classrooms

With the development of science and technology, modern media technology has begun to surge forward, began to penetrate every aspect of people's lives, university students are no exception, there have been a lot of basic applications to facilitate students' learning and life, but there are still some problems, mainly due to the lack of deeper applications. Social media tools have become ubiquitous. The advancement of modern technologies tries its best to accommodate the needs from people, especially the younger generation. Liu (2010) the technology of modern media is more stuck in socializing and completing the homework and does not play the modern media technology to improve learning and management efficiency, reduce labor consumption management efficiency and reduce labor consumption.

Insufficient deep application of modern media technology in the university classroom. Cuban et al. (2001) found that access to equipment and software seldom led to widespread teacher and student use. Most teachers were occasional users or nonusers should be strengthened for schools to provide professional training for teachers to help them learn how to effectively use modern media technology to support teaching and learning. This includes how to use instructional software, multimedia resources, and online collaboration tools; promote pedagogical innovation and encourage teachers to experiment with new teaching methods and technologies in the classroom, including online interaction, multimedia content creation, and virtual labs. Provide support and resources to encourage teachers to engage in hands-on exploration; improve course design and redesign courses to better integrate modern media technologies. Design courses with interactive and multimedia content to enable students to participate in learning through various means, including online discussions, real-time polling, virtual labs, etc.; Provide technical support and facilities to ensure that schools are provided with adequate technological facilities and resources, including network connections, computer labs, multimedia classrooms, etc. Also provide a professional technical support team to help teachers and students solve technical problems; Encourage student participation by introducing students to the potential of modern media technologies and encouraging their active participation in the classroom. Training and support are provided to help students acquire the skills to use technology and understand how to apply it to their learning.

The benefits of these measures include increased student engagement, the use of modern media technologies can increase the interactivity and attractiveness of the classroom, stimulating students' interest

and engagement and facilitating their deeper learning. Sadik (2008) findings revealed that students enjoyed the use of digital cameras, searching Web resources, authoring by Photo Story, and playing with other non-linear editing tools to create short stories about what they really think and later to watch them. Enriching the learning experience, multimedia content and online interactive tools can enrich the learning experience, help students better understand and apply what they have learned, and develop their creative thinking and problem-solving skills. Improve teaching effect, effective use of modern media technology can improve teaching efficiency and quality, help teachers better meet students' learning needs, and enhance their teaching effect and satisfaction. Enhance employment competitiveness; mastering modern media technologies is crucial to students' future employment and career development. Through the in-depth application of these technologies in university classrooms, students can be helped to acquire the necessary skills and experience in advance, enhancing their competitiveness in the job market.

In response to the fact that students seldom participate in inter-regional cooperation projects through remote video, like competitive competition projects, where they get to know each other and discuss tactics through teleconferencing, the necessary technical facilities and resources should be provided, including remote video conferencing equipment, network support, and training, in order to enhance the students' technological literacy and communication skills; to promote teachers' and students' awareness and knowledge, to enhance the publicity and promotion of inter-regional cooperation projects, and to encourage students to participate actively; design and implement relevant courses and training to develop students' cross-cultural communication and cooperation skills, and enhance their motivation and effectiveness in participating in the inter-regional cooperation projects; and strengthen cooperation and exchanges among schools, and set up cooperation mechanisms and platforms for the inter-regional cooperation projects, so as to provide more opportunities for students' participation and resources to support them.

Benefits of doing so: expanding students' horizons and experiences: through participating in the inter-regional cooperation projects, students will have the opportunity to work with people from different regions and cultural backgrounds, and learn about the ways of working, ways of thinking and cultural characteristics of different regions, so as to expand their horizons and experiences; Meng (2021) The cross-regional vocational education alliance has become an efficient platform for integrating high-quality corporate resources to participate in vocational education, Help coordinate cross-regional collaborative education development. Enhancing students' technical and communication skills: participating in the tele-videoconferencing and inter-regional cooperation projects requires students to have good technical Students participating in tele-video conferencing and inter-regional cooperation projects need to have good technical literacy and communication skills. Through such practice, students will enhance their technical skills and acquire remote collaboration and communication skills to prepare for their future career development; Promote teamwork and collaboration skills: In the cross-regional cooperation projects, students are required to work with people from different backgrounds to solve problems and accomplish tasks. This will promote their teamwork and collaboration skills and develop problem-solving skills and innovative thinking.

In response to the fact that students use e-books relatively less and more offline books, policies and regulations to support e-books should be formulated to encourage teachers to incorporate e-books into their teaching resources to provide students with more choices and convenience; and to provide students with the necessary equipment and technical support, for example, by providing an e-reader or offering free Wi-Fi coverage in the campus to facilitate students' easy access to e-books; Conducting publicity and training activities to introduce the advantages and usage of e-books to teachers and students, so as to enhance their acceptance of e-books and willingness to use them; and providing subscription services or rental services for e-books to reduce the financial burden of students in purchasing e-books and to increase their motivation to use e-books.

The benefits of these measures are to promote students' learning experience and effectiveness. Providing e-books can make it more convenient for students to access and read teaching materials and learning resources, which will help them learn and master knowledge more efficiently. Alhammad & Ku (2016) Students value using e-books for social interaction and sharing and learning anytime, anywhere, saying e-books provide better information processing opportunities. E-books can provide more interactive

functions and multimedia resources to enrich students' learning experience and stimulate their interest in learning. Enhancement of teaching efficiency and flexibility: Teachers can personalize and differentiate their teaching by e-books, and tailor the design of teaching according to the learning needs and levels of students. E-books can facilitate teachers to update and adjust the content of teaching materials at any time, keeping the teaching content timely and adaptable.

For students' participation in game-based teaching, provide teacher training and support to help them understand and master the principles and methods of game-based teaching, and enhance their ability to design and implement game-based teaching; strengthen the publicity and promotion of game-based teaching, and enhance students' and parents' awareness and acceptance of game-based teaching; and provide the necessary technical support and resources, including game-based teaching platforms and software applications, so that students and teachers can participate in game-based teaching more conveniently. Provide the necessary technical support and resources, including game-based teaching platforms and software applications, so that students and teachers can participate in game-based teaching more conveniently.

The benefits of doing so are to enhance students' motivation and enthusiasm for learning (Buckley & Doyle, 2016). Gamified learning interventions can increase student engagement and enhance learning outcomes. Gamified teaching can stimulate students' interest and enthusiasm for learning through the introduction of gamified elements, such as competition and reward mechanisms, to enhance their commitment and participation in learning tasks; to promote students' independent learning and problem-solving ability, gamified teaching focuses on students' independent inquiry and problem-solving ability, and through setting various challenges and tasks, encourages students to actively participate and cultivate their independent learning and problem-solving ability. Gamification teaching focuses on students' independent inquiry and problem solving ability, and by setting various challenges and tasks, it encourages students to actively participate and cultivate their independent learning and problem solving ability; it enriches the learning experience and enhances the learning effect; gamification teaching usually combines a variety of media and interactive elements, such as animation, sound effects, virtual scenes, etc., which can enrich the learning experience and enhance the learning effect and the depth of memory of the students.

Students seldom can use online laboratories. This can be achieved by providing the necessary technical facilities and resources, including advanced online laboratory platforms and corresponding experimental equipment, so that students can make full use of the online laboratories to conduct experimental learning; strengthening the training and guidance of teachers and students to help them master the skills of using the online laboratory platforms and the operation methods, and enhancing their knowledge and understanding of the online laboratories; Adjusting the curriculum and teaching arrangements to gradually incorporate online laboratories into the course design and teaching plans to provide students with more online experimental learning opportunities.

Benefits of doing so: Provide a more flexible learning experience, the use of online laboratories can provide students with a more flexible learning experience, they can participate in experiments at any time and any place via the Internet, and are no longer subject to the time and space constraints of the traditional laboratories; Enhance the experimental capabilities of students: online laboratories can provide more diverse and rich experimental content and experimental projects, help students master more experimental skills and experimental methods, and enhance their experimental ability and practical ability.

The influence of application of modern media technology in university classroom

Modern media technologies have become an integral part of students' lives and their role in university life and learning is becoming increasingly significant. Especially in terms of changing teaching methods, assignment and paper completion and socialization, the application of modern media technology is bringing great changes and convenience.

First, modern media technologies have changed the traditional teaching methods and provided students with more flexible and diversified learning paths. Through online learning platforms, distance learning tools and multimedia teaching materials, students can access course content and resources anytime and anywhere, and the time and place for independent learning are more flexible. This personalized learning mode helps to meet the learning needs and rhythms of different students and improve the efficiency and effectiveness of learning.

Secondly, modern media technology provides a more convenient and efficient way for students to complete assignments and papers. Students can make use of electronic document editing software, online resource libraries and Internet search engines to quickly obtain and organize relevant information and complete their academic assignments and papers. Meanwhile, through the online assignment submission system and e-mail, students can conveniently submit assignments and ask questions to professors, receive timely feedback and guidance, and improve their academic performance and grades.

In addition, modern media technologies have greatly facilitated social interaction and communication among students. Through social media platforms, online forums and virtual communities, students can share their learning experiences, discuss problems and organize activities with their classmates, establishing a close learning network and social circle. This kind of social interaction not only helps students support and cooperate with each other, but also promotes the collision of ideas and the generation of innovative inspiration, enriching students' university life and academic experience.

In summary, the application of modern media technology provides students with a more convenient and enriched learning experience, changes their learning styles and socialization patterns, and promotes academic growth and personal development. With the continuous development and deeper application of technology, modern media technology will continue to play an important role in bringing more convenience and opportunities to students' learning and life.

Gamified instruction is more popular with students, and enhancing gamified instruction should Teacher training and support. Gómez-Carrasco et al. (2020) the teachers in training acquired specific competences in the proposal of training activities for teaching social sciences. Provide teacher training and support so that they understand the principles, methods, and best practices of gamified instruction. The training may include gamification instructional design, use of gamification tools, and assessment methods to help teachers better design and implement gamified lessons. Resources and technical support: Provide necessary resources and technical support, including teaching platforms, gamification tools and software, etc., so that teachers can easily create and manage gamified teaching activities. Also, provide technical support and training to help teachers overcome technical barriers that they may encounter when using gamification tools.

Doing so can increase learning motivation and engagement: gamified teaching stimulates students' interest and motivation. Topîrceanu (2017) Gamification is indeed This is a powerful tool that, when used correctly, can increase educational satisfaction, and bring students together in the classroom. in learning by setting challenges, goals, and reward mechanisms, which enhances their motivation to learn, thus increasing participation and engagement in learning; enhance learning experience and memorization effect: gamified teaching presents teaching content in the form of games, which makes the learning process more vivid and interesting, and enhances students' learning experience. At the same time, game-based activities are usually designed to be challenging and interactive, which can help deepen students' understanding and memory of knowledge.

Modern media technologies help students to complete assignments and essays more easily, and this can be enhanced by providing technical training and support. Miangah, & Nezarat (2012) Mobile learning allows for a clear shift from teacher-led learning to student-led learning, resulting in students feel that using the technology is more effective and more interesting than before. Schools can organize relevant technical training courses or seminars to teach students how to effectively use modern media technologies to complete assignments and essays. At the same time, schools can also provide specialized technical support teams to help students solve problems and difficulties encountered in the use of media technologies. Promoting high-quality academic resources: Schools and libraries can actively promote and provide high-quality academic resources and tools, such as academic databases, online libraries, and citation management software, etc., to make it easier for students to access and manage academic materials and to support their research and dissertation writing.

Benefits of doing so: Increased efficiency and effectiveness: The use of modern media technologies can help students access information, organize materials, and write assignments and essays more efficiently, saving a great deal of time and effort. This helps to improve students' learning efficiency and outcomes, enabling them to better master the content of their studies and enhance their academic level; Expanding Academic Resources and Channels: Modern media technologies provide students with a rich

variety of academic resources and channels, such as online databases, online journals and digital libraries, which enable them to access and utilize academic materials more extensively, expanding their academic horizons and fields of study.

Modern media technology helps students to contact their professors and classmates more conveniently. Gikas & Grant (2013). The use of mobile computing devices and social media creates opportunities for interaction, provides opportunities for collaboration, and allows students to engage in content creation and communication using social media and Web 2.0 tools with the help of constant connectivity. it can be used in the following ways to better help students practice their professors and classmates, educational trainings, schools can conduct educational trainings on modern media technology to teach students how to effectively utilize tools such as emails, instant messaging apps, online forums, and so on, to connect with their classmates and professors. These trainings can include instruction on technology operation, communication skill development, etc. Providing support platforms, schools can establish online platforms or specialized learning communities to provide students with a convenient platform for communication and connection. This platform can include features such as course discussion forums, professor's office schedules, student groups, etc. to facilitate students' communication and interaction with their peers and professors.

Management guideline of modern media technology

Based on the research and investigation, the deep application of modern media technology in college classrooms is insufficient, and suggestions are made for different aspects. The main approaches are divided into several aspects.

Provide technical support, teacher training, supplement the technical equipment of the school, train teachers and supplement their technical knowledge, and solve the technical defects in the application of modern media technology.

Use modern media technology to enrich university teaching methods, use modern media technology to update teaching methods, including video teaching, game teaching, online laboratory, etc., improve teachers' teaching methods and improve students' learning enthusiasm.

Encourage cross-regional cooperation, different regions, joint enterprises, the use of online social media technology, to promote cooperation between students in different regions, different enterprises, and schools. Increase student learning opportunities for the university by combining classroom teaching and practical activities.

It provides advice on different aspects of university teaching, helps to make better use of social media technology in university classrooms, and hopes that more research will explore related practices.

Body of knowledge

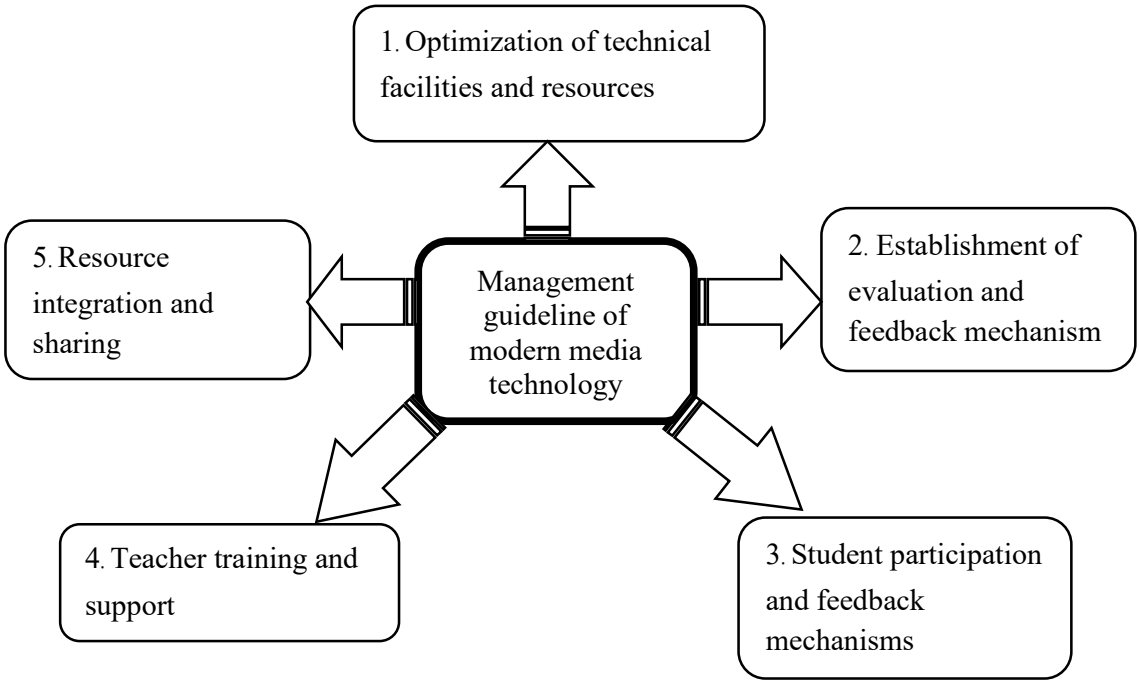

Figure 2. Body of knowledge

Management guideline of Modern Media Technology divided into five parts: 1. Optimization of technical facilities and resources; 2. Establishment of evaluation and feedback mechanism; 3. Student participation and feedback mechanisms; 4. Teacher training and support, and 5. Resource integration and sharing.

1. The types of applications of Modern Media technology in classrooms at Macau University of Science and Technology

According to the research findings, the application of modern media technology in the university classroom is very popular, and it is used in all aspects of students' learning and life, but it is not sufficient in the deep application, and the application of modern media technology in the university classroom is insufficient, and it does not sufficiently utilize the superiority of modern media technology that can save labor costs, increase the convenience of learning, and enhance the efficiency of management.

The basic application of modern media technology in universities has been very popular: for example, online education platforms, and social media, etc. According to the analysis of the research data, students use online education platforms to submit essays, daily assignments, and tests instead of submitting essays and assignments offline, and they also use social media more than face-to-face communication with professors and classmates in their daily contact with professors and classmates' offline.

2. The influence of Modern Media technology on Teaching Classroom at Macau University of Science and Technology. Modern media technologies have permeated all aspects of students' lives to help them live and learn at university, with feedback particularly evident in terms of changes in teaching styles, help with assignments and essays, and easier socialization, and not so much in terms of how modern media technologies can help students better participate in class and take tests.

3. The Management Guideline on classroom teaching improvement by Using Modern Media Technology at Macau University of Science and Technology

Against the background of insufficient improvement of modern media technology in college classroom teaching, based on the survey results, this paper puts forward suggestions on the better application of modern media technology in college classroom Management guideline, divided into the

following parts: 1. Optimization of technical facilities and resources; 2. Establishment of evaluation and feedback mechanism; 3. Student participation and feedback mechanisms; 4. Teacher training and support, and 5. Resource integration and sharing.

Suggestions

The application of modern media to the university classroom stays on the surface and lacks deep application. I believe that teacher training and support should be provided: training courses for teachers are provided to help them understand and skillfully use modern media technology. The training can cover the selection and use of teaching tools, online course design, multimedia teaching methods, etc., to help teachers better integrates modern media technologies into classroom teaching; Provide resources and technical support: the university can invest in the construction of advanced digital classrooms and online learning platforms and provide teachers with the technical equipment and support they need. At the same time, establish a specialized technical support team to promptly solve problems and difficulties encountered by teachers in the process of using modern media technologies; Encourage innovative practices: schools can set up an incentive mechanism to encourage teachers to actively explore and try out new teaching methods and technological tools. By sharing successful cases and experiences, more teachers will be inspired to be innovative and promote the deep application of modern media technology in the classroom.

I believe that the future application of modern media technology in university classrooms and management will be more comprehensive and deeper, including the possibility of personalized learning experiences: personalized learning platforms based on modern media technology will become mainstream. Students will be able to customize their learning paths according to their own learning pace, interests, and levels, and gain a learning experience that is more relevant to their needs. Augmented reality and virtual reality applications: With augmented reality (AR) and virtual reality (VR) technologies, students will be able to conduct experiments and simulate scenarios in virtual environments, experiencing a more immersive learning experience that promotes the understanding and application of abstract concepts. Establish data-driven instructional decision-making: Using big data and AI technologies, educational institutions can better analyze student learning data and behavioral patterns to provide data support for instructional decision-making. Teachers can provide personalized instruction and feedback based on students' learning and needs to improve teaching effectiveness and student learning outcomes. I think there should be more discussion on the development of virtual reality technology, which has tremendous promise for remote participation in courses, surgeries, and simulations for teaching and experimentation.

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