

# Digital Media Technology-Based Internet Teaching Culture Education Concept Dissemination

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**Keywords:** Digital Media Technology, Internet Teaching Culture, Nurturing Function, Virtual Reality Technology.

**Abstract:** With the impetus of digital technology and media technology, the dissemination of pedagogical concepts has inevitably become digitally infiltrated and has become a development trend. The expressions and communication forms of Internet teaching culture are constantly being expanded, extending from the real field to virtual space and multimedia integrated communication methods. In order to solve the shortcomings of the existing research on the dissemination of the nurturing concept of Internet teaching culture, this paper discusses the integration of the nurturing function of Internet teaching culture and digital image processing technology and digital media communication, and briefly discusses the design of the questionnaire and virtual reality engine for the communication strategy proposed in this paper. In addition, the design of the communication strategy for the integration of digital media technology is discussed, and the final experimental analysis of the satisfaction of teachers and students with the communication of the concept of education through the virtual reality technology platform is conducted. The experimental data showed that the satisfaction level of students and teachers with the dissemination of the concept of teaching culture on the Internet with the integration of the virtual reality technology platform reached an average of more than 75.6%. Therefore, the effective value of the dissemination of the concept of Internet teaching culture education based on digital media technology was verified.

## 1 INTRODUCTION

The dissemination of the nurturing concept of Internet teaching culture is mainly reflected through the daily work and study of teachers and students in the network, and educators help college students to form noble moral qualities, form values and pursue goals in line with social development, and promote the healthy and comprehensive development of students' physical and mental health through the network culture of colleges and universities implicitly (Panigot 2019).

Nowadays, more and more scholars have conducted a lot of researches in the dissemination of the concept of education of Internet teaching culture through various technical and systematic tools, and after practical researches, they have also achieved certain research results. Panigot believes that the dissemination of education of the idea of Internet teaching culture should be based on three evaluation indexes. The mechanism of the dissemination of Internet teaching culture ideology education should be determined by "the dominance of the process of

idea dissemination" and "the prominence of the position of the disseminator". Song C E believes that with the development of new media technology, it has brought profound insights to the dissemination of the concept of Internet teaching and cultural education while impacting traditional media. New media technology is applied in the dissemination of nurturing ideas. In the context of the development of new media technology, the reform that needs to be carried out in the dissemination of nurturing ideas. Teachers should make reasonable use of new media technology, innovate the mode of nurturing philosophy dissemination, enrich the content of nurturing philosophy dissemination, and integrate new media technology into nurturing philosophy dissemination, law (Song 2022). Thi N D to integrate digital media technology into nurturing philosophy dissemination is the fundamental requirement of new artistic ideas and technical means for nurturing philosophy dissemination. Therefore, this paper will analyze in depth the characteristics of the use of digital media technology and its mechanism in the dissemination of nurturing

ideas according to its basic concept and characteristics, and study its specific application methods and approaches in an attempt to provide effective reference for the combination of the two (Thi 2022). Although the existing research on the dissemination of the nurturing concept of Internet teaching culture is very rich, the research on the dissemination of the nurturing concept of Internet teaching culture based on digital media technology still has certain shortcomings.

This paper starts from the characteristics of digital media in the dissemination of Internet teaching culture nurturing concept, sees the four characteristics of the Internet teaching culture nurturing concept under the threshold of digital media, and explores the practical "innovation of Internet teaching culture nurturing concept dissemination in digital media technology" through the discussion of digital image processing technology and nurturing function. "In this way, we can respond to the wave of the digital media era and create a new communication strategy that meets the real needs. It provides an effective strategy and exploratory experience for the dissemination of other forms of educational concepts.

## 2 DIGITAL MEDIA TECHNOLOGY AND INTERNET TEACHING CULTURE EDUCATION CONCEPT DISSEMINATION

### 2.1 Internet Teaching Culture Murturing Function

In the process of spreading the concept of Internet teaching culture nurturing, it inspires and leads students to establish elegant moral sentiments and the correct world view, outlook on life and values needed for social development, thus promoting the free and comprehensive development of schools. The Internet teaching culture is different from the "forced indoctrination" in the dissemination of the concept of human development, which shows more permeability and plays a subtle role (Alrousan 2022).

### 2.2 Digital Image Processing Technology

The edge detection algorithm is a second-order differential algorithm commonly used in digital image processing for image edge detection (Hasanov 2022).

The transform function of edge detection is an isotropic second-order derivative, which according to its basic principle can be defined as:

$$G(k) = \frac{\alpha^2 g}{\alpha k^2} + \frac{\alpha^2 g}{\alpha h^2} \tag{1}$$

Among them:

$$\frac{\alpha^2 g}{\alpha k^2} = g(k+1, h) - 2g(k, h) + g(k-1, h) \tag{2}$$

$$\frac{\alpha^2 g}{\alpha h^2} = g(k, h+1) - 2g(k, h) + g(k, h-1) \tag{3}$$

The matrix region for digital image detection is expressed in the form:

$$g(k) = 4m_5 - (m_2 + m_4 + m_6 + m_8) \tag{4}$$

The sum of the required coefficients for digital image recognition is, whose matrix can be expressed as:

$$R_0 = \begin{bmatrix} m_1, m_2, m_3 \\ m_4, m_5, m_6 \\ m_7, m_8, m_9 \end{bmatrix} \tag{5}$$

### 2.3 The Integrated State of Digital Media Communication

Digital communication technology intervenes in the new digital media of broadcasting, and different communication methods can be realized on the same communication platform (Terzieva 2022). For example, the communication method with the help of digital media technology makes different ways of spreading the idea of education integrated into a new digital media communication (Terzieva 2022). In the field of communication, communication forms are divided into intrapersonal communication, organizational communication and mass communication, etc. These communication forms build a complete human social communication system and work together in the daily life of

individuals in society. Among them, interpersonal communication is the information exchange activity between individuals. Among digital media communication methods, on-demand and P2P are a kind of interpersonal communication in the context of digital technology, which breaks through the limited scope of traditional interpersonal communication with the help of digital media technology (Owusu-Agyeman Y2022). Mass communication refers to the large-scale information dissemination activities carried out by specialized communication organizations to the general public through the corresponding technology. The specific form is shown in Figure 1.

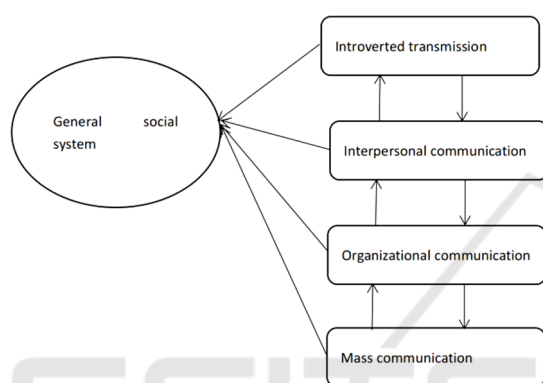


Figure 1. Integrated communication pattern diagram

### 3 SURVEY RESEARCH ON THE DISSEMINATION OF THE CONCEPT OF CULTURAL EDUCATION OF INTERNET TEACHING BASED ON DIGITAL MEDIA TECHNOLOGY

#### 3.1 Design of Questionnaire

For the study of the dissemination of the concept of Internet teaching culture nurturing based on digital media technology, this paper adopts a questionnaire survey. The questionnaire is mainly designed according to the Internet teaching culture nurturing concept dissemination and nurturing function, the survey object is selected full-time undergraduate and college students and teachers, the survey time is from late June 2022 to late July 2022, a survey of some colleges and universities in a city, a total of 850 copies of questionnaires were issued, 765 copies

of questionnaires were collected. There were 658 valid questionnaires with a recovery rate of 89.9% and an effective rate of 92.07% (Gilhooly 2022).

#### 3.2 Virtual Reality Engine

Generic technology principles in the virtual reality space, user behavior and basic interactions are all generic technologies. The built-in Api scripting library of the SteamVR plug-in enables joystick interaction, spatial jumping, ray detection, button control, vibration feedback, helmet positioning, stereo display, etc. Unity3D can only develop VR content after installing this plug-in (Lafkihi 2022). Unity3D can develop VR content only after this plug-in is installed.

## 4 DIGITAL MEDIA TECHNOLOGY-BASED INTERNET TEACHING CULTURE EDUCATION CONCEPT DISSEMINATION APPLICATION RESEARCH

### 4.1 Digital Media Technology-Based Internet Teaching Culture Education Concept Dissemination Strategy

(1) Using digital media technology to create a platform for the dissemination of the concept of Internet teaching culture and human education

In order to modernize education, it is inevitable to apply digital media technology to the dissemination of the concept of human development. As MU teaching is getting more and more recognition, colleges and universities should increase the construction of digital libraries, build content-rich online courses, and pay attention to the combination of digital media technology and the concept of Internet teaching and culture education. To maximize the online participation of college students, realize the combination of online and offline, improve the political consciousness of the majority of students, and enhance the equality and democratic consciousness of the majority of students.

(2) Pay attention to digital media technology and promote the synergy of microblogs, micro-videos and cell phone clients

The content of micro-video is short and vivid,

with strong visual impact, which can attract students' attention. Cell phones are easy to carry and convenient to use, so colleges and universities need to liberate their minds, keep up with the times, actively develop cell phone clients, and use them to broaden new ways to disseminate the concept of college students' education. It will make the network culture of colleges and universities full of vitality and vigor, and the interaction between teachers and students will be more friendly and frequent, which is conducive to spreading the concept of cultivation.

(3) Strengthen the dissemination of the concept of nurturing of Internet teaching culture close to the actual life of students

To strengthen the construction of university network culture, it is necessary to pay more attention to the concept, and more importantly, to implement it in action. The content and form of the dissemination of the concept of education of Internet teaching culture should be enriched continuously. Only by strengthening the construction and management of Internet teaching culture, enriching the content of Internet culture, insisting on the coordinated development of official and unofficial, understanding the online habits and meeting the actual needs of college students can attract the attention of college students, exert educational influence and promote the growth and success of college students.

#### 4.2 The Application of Internet Teaching Culture Education Concept Dissemination Based on Digital Media Technology

For the use of digital media technology in the dissemination of the concept of Internet teaching culture nurturing virtual reality mainly offline interaction-based nurturing concept dissemination platform can get the affirmation of school students, can really promote the dissemination of the concept of Internet teaching culture nurturing, these need to investigate the users. This research adopts the questionnaire method, as shown in Table 1, to give feedback to the real feelings of the experience through the questionnaire, and further improve the application of virtual reality platform in the dissemination. In this research, four classroom user pairs were selected for testing, and the target objects were mainly college students. The objective of the research, that is, how satisfied teachers and students were with the dissemination of the concept of Internet teaching and culture education in the virtual reality platform.

Table 1. Faculty and student satisfaction data

Object	Teachers	Students
Class1	80.2%	78.6%
Class2	77.5%	83.1%
Class3	79.7%	82.1%
Class4	78.4%	80.9%

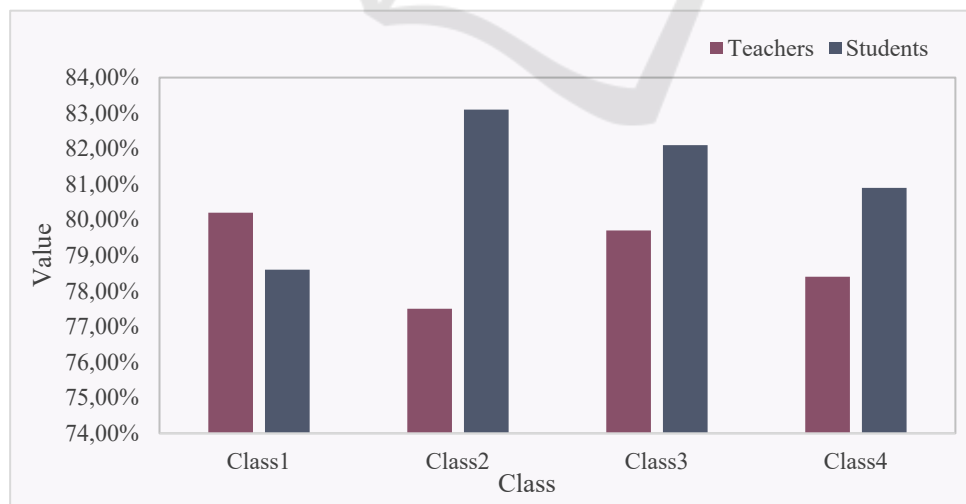


Figure 2. Satisfaction level of teachers and students

As shown in Figure 2, the satisfaction levels of teachers and students in the four classes can be seen

in the dissemination of the concept of Internet teaching culture and education in the virtual reality

platform. Among them, the satisfaction level of teachers and students in class 1 reached 80.2% and 78.6%. And the satisfaction level of teachers and students in Class 2 reached 77.5% and 83.1%. The satisfaction level of teachers and students in Class 3 reached 79.7% and 82.1%. The satisfaction level of teachers and students in class 4 reached 78.4% and 80.9%. In summary, the virtual reality platform has good user experience, innovative in the form of communication, and can realize interactive functions, which can better promote the dissemination of the concept of online teaching and cultural education (Abraham 2022).

## 5 CONCLUSION

Although the current Internet teaching culture education concept dissemination faces many difficulties, there are still a lot of sound improvement, now is still in a period. However, the dissemination of the concept of Internet teaching culture education has a very key significance for guiding college students to form a correct world outlook, outlook on life and values, promoting the healthy growth of college students' personality, and promoting the great development and prosperity of education, which must be paid more attention to. This research mainly uses digital media network as the medium to discuss the theories related to the development of cultural education thought of the network, and carries out some experimental research, but the ability is limited, and the research to be completed is far from enough.

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