Research on the Applicability of Tourism Teaching Based on Multimedia Assistant Technology

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Abstract. In this paper, the author uses the method of questionnaire to test the feasibility of Network multimedia assistant teaching system, and applies the network multimedia assistant teaching system to the teaching. Through the statistical analysis of the experimental data, the application of Network multimedia technology to the teaching has greatly increased the enthusiasm of students, enhanced the communication between teachers and students, and played a great role in the study of tourism.

Keywords: Multimedia Assistant Teaching, Statistical Analysis, Application, Teaching

1. Introduction

Computer-aided instruction (CIA) is a new teaching method of computer-aided instruction. It takes the computer as the medium, achieves the teaching through the interaction between the computer and the student[1]. This new way of auxiliary teaching has already obtained the widespread application in the university teaching system. It introduces the Computer Multimedia Technology into the teaching and plays a certain auxiliary function to the traditional teaching. This paper attempts to take the tourism object teaching of Tourism Management Major in a university as an example to study the application of computer multimedia technology in the course teaching and to construct a multimedia sports teaching platform. Students can master theoretical knowledge more actively, stereoscopic-ally and comprehensively[2]. They can help students understand teaching contents and improve students’ self-study.

2. Design of multimedia tourism teaching questionnaire

According to the purpose and content of this paper, according to the questionnaire design requirements of tourism science research methods, two sets of questionnaires are designed, questionnaire 1: "the
questionnaire of multimedia-assisted teaching in tourism practice class 1" , is a survey of two groups of students before the teaching experiment[3]. Questionnaire 2: the questionnaire of multimedia-assisted teaching of Tourism Practice 2, is a survey of students in the experimental group after the teaching experiment.

2.1. Validity test of questionnaire
In order to ensure the validity of the questionnaire, 10 teachers were consulted on the design of the questionnaire and the validity of the questionnaire was evaluated[4]. The assessment was based on five ratings: "very appropriate, relatively appropriate, general, not very appropriate, and very inappropriate. " The ratings were 5,4,3,2, and 1 respectively, the construct validity and content validity of the questionnaire were tested[5]. The basic information of expert composition and the results of validity test are shown in tables1,2 and 3.

| Expert members | Frequency (person) | Percentage (%) | Total |
|----------------|--------------------|----------------|-------|
| professors     | 3                  | 30             | 10    |
| associate professors | 7                  | 70             | 100   |

Table 1. basic composition of experts

| Rating | Structural evaluation | Content evaluation | Results of the validity test |
|--------|-----------------------|--------------------|------------------------------|
| 5      | 2                     | 1                  | 82%                          |
| 4      | 7                     | 8                  | 82%                          |
| 3      | 1                     | 1                  | 82%                          |
| 2      | 0                     | 0                  |                             |
| 1      | 0                     | 0                  |                             |

Table 2. The result of validity test of questionnaire(I) by experts (N=10)

| Rating | Structural evaluation | Content evaluation | Results of the validity test |
|--------|-----------------------|--------------------|------------------------------|
| 5      | 2                     | 1                  | 82%                          |
| 4      | 7                     | 8                  | 82%                          |
| 3      | 1                     | 1                  | 82%                          |
| 2      | 0                     | 0                  |                             |
| 1      | 0                     | 0                  |                             |

According to Table2 and table3, the structural validity and content validity of questionnaire (I) were 82% , 80% and 82% respectively[6]. The result shows that the content validity and the structure validity of the questionnaire are reasonable. Finally, the questionnaire of "research on volleyball teaching of Physical Education major in colleges and universities in Ginsu Province based on multimedia platform" is formed.

2.2. Distribution and recall of questionnaires
Before the experiment, 40 questionnaires (1) were given to the students of the 2015 class of tourism practice course (2 groups) of Physical Education Major in College of Physical Education, after the teaching experiment, 20 questionnaires were given to the students of the experimental group, and the recovery rate was 100% . Among them, 20 questionnaires were given and the efficiency rate was 100% (see table4)

Table 4. statistics on distribution and return of questionnaires

| Subject of investigation | Issued questionnaire | Recall questionnaire | Recovery rate | valid questionnaire | valid |
|--------------------------|---------------------|---------------------|--------------|--------------------|-------|
| The experimental group and the Control Group | 40                  | 40                  | 100          | 40                 | 100%  |
2.3. Reliability test of questionnaire
In order to ensure the reliability of the survey results, this paper tested the reliability of the results of the questionnaire survey. The questionnaire (1) and questionnaire (2) of "teaching research of Tourism Practice Course for tourism management major in colleges and universities based on multimedia platform" are tested by "half-reliability test". In this paper, the reliability coefficient is calculated by using the method of odd-even number in the form of Flanagan Flormala.

Split-half reliability test formula:

$$r_T = 2 \left(1 - \frac{SD_r^2 + SD_t^2}{SD_{rt}^2}\right)$$

The test results showed that the reliability coefficient of all the students in the experimental group and the Control Group was 0.83, and the reliability coefficient of the students in the experimental group was 0.87, it is proved that the results of the investigation have high reliability and accord with the requirements of statistical research.

2.4. Questionnaire requirement analysis
According to the statistical data obtained from the questionnaire, the students think that the traditional teaching method has some deficiencies, and hope to add new teaching method to assist them. The results are as follows:

Table 5. Satisfaction survey on teaching methods(n=40)

| Number of persons | Very satisfied | satisfied | Not satisfied | Not satisfied |
|-------------------|----------------|-----------|---------------|---------------|
| Percentage(%)     | 4              | 7         | 22            | 7             |

According to the above table, 55% of the students are not satisfied with the way of teaching, and 17.5% of the students are not satisfied with the way of teaching.

Table 6. A Comparative Investigation of Traditional Teaching and multimedia teaching(n=40)

| Number of persons | Traditional teaching | Multimedia teaching | A combination of the two |
|-------------------|----------------------|---------------------|--------------------------|
| Percentage(%)     | 6                    | 4                   | 30                       |

According to the above table, there are different opinions on the teaching methods of tourism practice course. 15% of the students think that the traditional teaching method should be adopted, 10% of the students think that the network multimedia teaching should be adopted, and 75% of the students think that the network multimedia teaching should supplement the traditional teaching method in order to achieve better teaching effect.

Table 7. Course improvement content survey

| Image and video teaching | Image and video teaching | The class was lively |
The statistics in the table above show that there are three areas in which improvement should be made in teaching: Seventy-five percent of students think that teaching should be done with images and videos; 87 percent think that teachers and students should communicate more; and 90 percent think that classroom content should be made more vivid and visual.

2.5. Feasibility analysis

The application of multimedia teaching system needs a certain environment and foundation, so I make a statistical analysis on the application prospect of multimedia teaching system based on the data from the questionnaire, the results are as follows:

Table 8. Investigation on the understanding level of multimedia-assisted instruction

| Very well. | Yes | No |
|------------|-----|----|
| Number of persons | 24  | 26 | 0  |
| Percentage(%) | 60 | 40 | 0 |

Table 9. Multimedia-assisted acceptability survey

| Accept | Yes | No |
|--------|-----|----|
| Number of persons | 28  | 12 | 0  |
| Percentage(%) | 70 | 30 | 0 |

According to the statistical analysis of the above data:

(1) All the students have access to the Internet, which provides a good environment for the application of the Network Multimedia Teaching System;

(2) The application of the network multimedia system in the teaching of the general course of volleyball technology, the percentage of students who fully accept and accept is 70% and 30% respectively.

(3) in the survey of the degree of Knowledge About Network multimedia assisted instruction, 60% of the students know and experience it very well, and 40% know but have not experienced it;

(4) 92.5% of the students know basic computer operation, and 7.5% are skilled in computer skills, can program and repair computers.

To sum up, students have a basic understanding of the network multimedia assisted instruction, learning environment is also very mature, so the network multimedia assisted instruction system is feasible.

3. Conclusion and recommendations

(1) The design of the network multimedia teaching system has certain use value. It has greatly enriched the tourism teaching resources, improved the teaching quality, and it is accepted by the students.

(2) According to the results of the comparative experiment, the students in the experimental group achieved the Technical Standard and the technical evaluation score. The technical evaluation score is higher than those in the control group. This shows that the use of network multimedia system assisted teaching students’ practical skills to master a great help.
According to the results of the questionnaire analysis, the multimedia-assisted teaching system gives students great interest, and the generation of learning interest stimulates students active study emotion and establishes the tendency of active study, which is helpful to improve students study enthusiasm, cultivate students ability to find, analyze and solve problems.

According to the data from the questionnaire, the network multimedia assistant teaching system has enhanced the interactivity between teachers and students, and students consider the multimedia assistant teaching system to be a good platform for the interaction between students and teachers, students and students, with a strong human-computer interaction function.

The network multimedia assisted instruction system has no time limitation and provides a good self-study platform for students. It can meet students learning needs at any time, enrich learning resources and enable students to master technical actions more quickly, grasp the main point of action, expand vision and train of thought.

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