An Analysis of College Students E-learning Based on Mobile Terminal

Jianwu He

Educational Science Institute of Xianyang Normal University, Xianyang Shaanxi, 712000, China

Email: hjw725@163.com

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Abstract: With the development of mobile Internet technology, mobile terminal has become an important source of information for people to work, study and live. College students have become one of the major groups using mobile terminals. College students are in the critical period of academic education and the formation of professional ability. It is very important to explore how college students use mobile terminals for e-learning. The researchers mainly use questionnaire survey and interviews to investigate students in some colleges and universities in Shaanxi province on the aspects of mobile terminal holding, e-learning behavior, and the use of learning platform and resources. With the investigation and analysis of it, the study comes to a general understanding of the status of e-learning based on mobile terminals for college students, and put forward some constructive recommendations for college students to use mobile terminals for e-learning.

1. Introduction

In July 2017, China Internet Network Information Center (cnnic) released the 40th "Statistical Report on the Development of China's Internet Network" (hereinafter referred to as the "Report").According to the "Report", as of June 2017, the number of Chinese netizens reached 751 million, and the Internet penetration rate reached 54.3%. Half of Chinese people have access to the Internet.According to the "Report", Internet users' Internet devices are being concentrated on mobile phones, and mobile phones have become the main factor driving the growth of Internet users. As of June 2017, the number of mobile Internet users in China reached 724 million, and 96.3% of Internet users access the Internet via mobile phones[1].

With the rapid development of mobile Internet technology, mobile terminals using smart phones, notebook computers, tablet computers and other media have been widely used in people's work, study and life, mainly in electronic reading, social media, entertainment and so on. Today, with the rapid development of the social economy and the continuous improvement of the concept of education and learning, digital learning (E-learning) has gradually become an indispensable part of daily life learning[2].The convenience of carrying the mobile terminal provides great convenience for the learner to learn anytime and anywhere, and is gradually praised by the majority of learners. In recent years, a large number of micro-courses, online open classes, and classes have become the main resources for people to learn independently. It can be seen that digital learning based on mobile terminals has become a hot topic in innovative education research.

Contemporary college students have become the main group of mobile terminal use, and they are in the critical period of academic education and professional ability formation. The time and method of college students' learning are relatively loose, and the degree of freedom of study is also large. University teachers and administrators are based on mobile students. The recognition of digital learning in terminals is also getting higher and higher, so it is of practical significance to explore how college students use mobile terminals for autonomous learning.

2. Research design and implementation

Researchers mainly use a combination of questionnaires and interviews. The questionnaire was designed from three aspects: the holding status of mobile terminals, the digital learning behavior using mobile terminals, and the use of digital learning resources and platforms. The respondents

mainly selected 8 colleges and universities in Shaanxi Province, and considered the school level, discipline, grade and other factors in the selection of samples. A total of 216 questionnaires were distributed and 183 valid questionnaires were returned. The effective rate of the questionnaire was 84.7%, of which 50.8% were in science and engineering, 38.3% in literature and history, 6.7% in sports art, and 4.4%. Questionnaire data statistics were processed using Excel and SPSS 17.0.

3. The survey content and results

3.1. The holding status of college students' mobile terminals

The proportion of smartphones is the highest, accounting for 94.07%, followed by laptops, which account for 51.91%, and tablets, which account for 28.96%.It can be seen that college students are more inclined to use powerful laptops and portable smartphones. In the interview, it was found that the campus network of the 8 colleges and universities under investigation gave students the conditions of network cable access, and some colleges and universities realized the full coverage of the wireless campus network. Thus, from the popularity of equipment and technical conditions, college students have a basis for the feasibility of digital learning for mobile terminals.

3.2. Using mobile terminals for digital learning behavior analysis

3.2.1. Frequency of digital learning using mobile terminals

Because the diversity of students' learning content and the persistence of attention are quite different from those of middle school students, there is no obvious tendency for single-time learning time distribution. Micro-course design generally emphasizes less than 10 minutes, but for the design of mobile terminal courses for college students, there are no sufficient reasons for the time standard of the micro-course.

The number of "1-5 hours" per week is the highest, accounting for 59.56%, followed by "6-10 hours", accounting for 25.14%, and "10 hours or more", accounting for only 9.84%.It can be seen that most students use mobile terminals for digital learning within one hour within a week, which means that the time spent on mobile learning is less than one hour per day. Obviously, from the perspective of learning time, college students are still based on mobile learning. Non-mainstream, mainly in personal needs and interests, the current main learning style of college students is based on traditional classrooms. How to use the fragmentation time of college students and give play to the advantages of mobile learning needs further design and development.

3.2.2. The purpose of digital learning

According to the survey data, the download data accounted for 65.57%, the communication and Q&A accounted for 48.09%, and the relevant test preparation and improvement scores and self-improvement accounted for 33.84% and 27.32% respectively.It can be seen that downloading materials, communication and Q&A are the main learning objectives in digital learning. There is no difference between college students' use of mobile terminals and the basic functions of the Internet, mainly to find downloading materials and use their social functions.

3.3. The use of digital learning resources and platforms

3.3.1. The use of digital learning resources

At present, digital learning mainly focuses on three major resources: video, e-book, and audio. These three types of resources are relatively complete and self-contained, and can be used alone.

3.3.2. The needs of learning resources based on mobile terminals

For the survey of whether the digital learning resources based on mobile terminals can satisfy the self-study, the data shows that 47.54% think that "can be satisfied", 20.76% think "basic satisfaction", and 31.69% think "unsatisfiable".The statistical data was subjected to $x2$ test, and the result was $x2=36.033>x2(2)0.01=9.21$, and the difference was very significant.The understanding of the needs of learning resources based on mobile terminals is not clear, there is no obvious

tendency, the resources are fragmented, fragmented, and lack of systematic and normative.In the interview, it was found that the user was cumbersome and inefficient in searching and finding related resources.The problem of total resources is not prominent. The obvious problem is that resources are structurally out of balance, lacking rationalized classification, leading to search difficulties and information redundancy.

4. Conclusions

4.1. College students already have the hardware conditions and technical literacy of mobile terminals, but the understanding of digital learning is generally in a spontaneous and blind state.

Although the service platform and resources based on mobile terminals can meet the needs of college students' mobile learning, college students can skillfully use mobile network information technology tools, but there are not many digital learning using the network. Digital learning has less investment time and low learning efficiency. In other cases, the overall situation is spontaneous, blind, lack of planning and systemic, which is a huge contrast with the expectation that college students should become the subject of digital learning.The survey found that college students are still open to digital learning based on mobile terminals. If the integration can be strengthened, the college students will have a deeper understanding of digital learning and higher recognition.Under the guidance and encouragement mechanism of the school, to improve the awareness and ability of digital learning for college students, it is imperative for students to realize the advantages and convenience of digital learning.Students can experience the many benefits of digital learning in practice, and can transform digital learning into a conscious learning ability, forming a habit of digital learning, which will benefit them for life[3].

4.2. Building a digital learning platform and learning resources is the key. Promoting the reform of teaching models and evaluation methods is a guarantee.

The digital learning based on mobile terminals mainly stays in resource downloading, communication Q&A, preparation for exams, etc. Most of the resources for digital learning are not designed and processed, lack of connection and integration with the school education system, and mobile learning fragments. In the long run, there will be distraction, low learning efficiency, and difficulty in persisting. The obstacles to digital learning are mainly in the lack of teacher guidance, lack of humanization of software and tools, insufficient digital learning resources, loneliness, helplessness and anxiety in the process of digital learning[4].At present, although most colleges have an online teaching platform, they are only used for the construction of quality courses, and have a single function, which is quite different from the requirements of digital learning. Develop a dedicated digital learning platform and learning resources, encourage teachers to participate in the construction of curriculum resources, actively incorporate quality resources such as MOOC and video open classes into the curriculum system of colleges and universities, and explore measures and ways for front-line teachers to participate in the digital teaching model and evaluation methods.

In short, mobile terminals have become the mainstream medium for college students' socialization and entertainment. They are highly recognized for digital learning based on mobile terminals, but they are restricted by learning content, resource platform and management mechanism. At present, digital learning and academic education are in a state of separation. Actively explore ways and means of integrating school education and digital learning as a breakthrough to promote innovation reform in higher education.

References

[1] China Internet Network Information Center (cnnic). "The 40th Statistical Report on Internet Development in China" [db/ol].http://www.cnnic.net.cn/.

[2] Yinhui Yang. Research on the status quo and improvement strategies of higher vocational students' learning ability under the digital learning situation [j]. Mechanical Vocational Education, 2016(2): 59-62.

[3] Shuzhen Xie, Wu Wei, Xie Yumeng, Li Zhaozhong. Investigation and Analysis of Digital Learning Characteristics of College Students[J]. Research on Electron Education, 2005(6): 23-27.

[4] Xiaoyan Zhang, Xu Panpan. Investigation on the status quo of digital learning behavior of college students, education modernization [j].2016(3):192-195.