

The Current Situation Analysis of Higher Vocational Students' Autonomous Learning Ability in the Context of the Internet

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Abstract. The expansion of enrollment in universities has led to a decline in the overall quality of students in higher vocational colleges. The application of Internet technology in the field of education has also accelerated the speed of knowledge updating and iteration, which requires students to have the autonomous learning ability in order to adapt to the rapid development needs of society. In the context of the Internet, utilizing online resources for autonomous learning and lifelong learning is an important way for students to grow and succeed. Independently design survey questionnaires and interviews to conduct surveys or interviews on current freshmen and sophomore higher vocational students and teachers. Collect and organize first-hand materials on higher vocational students' willingness, methods, content, effects, and other aspects of autonomous learning. The analysis results indicate that higher vocational students have problems such as weak awareness of autonomous learning, vague goals, lack of cognition, insufficient identification ability, and lack of effective resources.

Keywords: Higher vocational students; the Internet; Autonomous Learning Ability; Present Situation.

1. Introduction

The Internet technology is changing the way young people interact and understand society at an astonishing speed, while also changing their way of learning. The integrated development of learning content, platforms, channels, technology, and management under the Internet is moving towards a deep integration of "Integrate into one, merge into one". This is not only a severe challenge for the development of education, but also a good opportunity to break through various obstacles and achieve leapfrog development. In the era of the Internet, utilizing online resources for self-directed and lifelong learning have become an important way for students to grow and succeed. The educators should encourage students to use information technology to engage in autonomous learning and enhance their ability to analyze and solve problems. Therefore, contemporary college students must cultivate and improve their self-learning ability, making it an essential basic survival skill. In the era of the Internet, the autonomous learning methods of college students will show significant breakthroughs, and the era of truly student-centered autonomous learning has arrived.

In China, higher vocational students fail to develop good study habits, master learning methods that are suitable for their own learning, and develop good self-learning abilities during their middle school years, resulting in low scores in the college entrance examination and inability to enter ordinary universities for further education. If there is no good way to guide students to cultivate self-learning ability in the vocational stage, it will inevitably affect their lifelong learning and progress.

The Internet has great openness, making it difficult to regulate the dissemination of information, which in turn leads to the proliferation of harmful information. Young students have weak discernment abilities when facing this information. Without effective guidance, it will inevitably lead to a decrease in their awareness and efficiency of autonomous learning. Therefore, it has become an important research content of the times to analyze the autonomous learning ability and learning quality of higher vocational students in the Context of the Internet, so as to adapt them to the rapidly developing Internet era.

2. Survey Design

The Internet has enriched the learning content of higher vocational students, expanded their knowledge fields, and overall improved their comprehensive quality. However, it has also brought some negative impacts to higher vocational students. This study conducted a survey on the current situation of autonomous learning among higher vocational students in the Internet era using open-ended questionnaires and structured interviews, and conducted relevant statistical analysis.

2.1 Survey Questionnaire Design

Based on preliminary research and daily work summary, independent designed questionnaire on the current situation of autonomous learning among higher vocational students under the Internet. It revolved around seven dimensions: the use of online resources by college students, the use of the Internet for autonomous learning, the ways of using the Internet for autonomous learning, the impact of the Internet on autonomous learning, the adaptability of autonomous learning, the problems and reasons for autonomous learning, and the guiding strategies for autonomous learning among college students. The questionnaire was written based on the above seven aspects, with 2 to 4 sub dimensions set under each dimension. There are a total of 26 questions in the questionnaire, with two types of questions: single choice and multiple choice. To ensure the quality of the collected questionnaire, the team conducted a trial test on the survey questionnaire.

2.2 Interview Design

Prepare an interview outline before the interview, and determine the interview time and location with the interviewee, clarifying the purpose and requirements of the interview. During the interview process, recording can only be conducted with the consent of the interviewee. After the interview, first convert the interview content into document form based on the interview recording, then conduct statistical classification, and finally organize the relevant indicators. When interviewing in-service teachers, the interview time is between 20 and 60 minutes, and the location is mostly arranged in the conference room. The interview time for college students ranges from 20 minutes to 40 minutes, mostly conducted in student dormitories or quiet corners of the campus.

3. Investigation Implementation and Data Analysis

Fully understanding and analyzing the current situation of students' autonomous learning is a prerequisite for studying the cultivation of their autonomous learning ability. Therefore, conducting relevant surveys and data analysis is a necessary research process.

3.1 Survey on the Willingness of Higher Vocational Students' Autonomous Learning

3.1.1 The level of understanding of online resources among higher vocational students

A survey was conducted on the level of understanding of online resources among college students. According to the analysis of the collected valid questionnaires, 45.8% of the surveyed college students have a general understanding, 51.0% have a moderate level of understanding, and 3.2% indicate no understanding. From the data, it can be seen that most students have some degree of understanding of online resources, with only a small portion indicating lack of understanding.

3.1.2 The frequency of using online resources for autonomous learning

A survey was conducted on the frequency of higher vocational students using online resources for autonomous learning. Analysis of the survey questionnaire showed that 52.5% of the subjects frequently used online resources for autonomous learning, 40.1% occasionally used them, and 7.4% never used them, as shown in Figure 1. It can be seen that a large number of students use network

resources to carry out independent learning. Therefore, it is necessary to skillfully analyze its existing problems and give suggestive countermeasures.

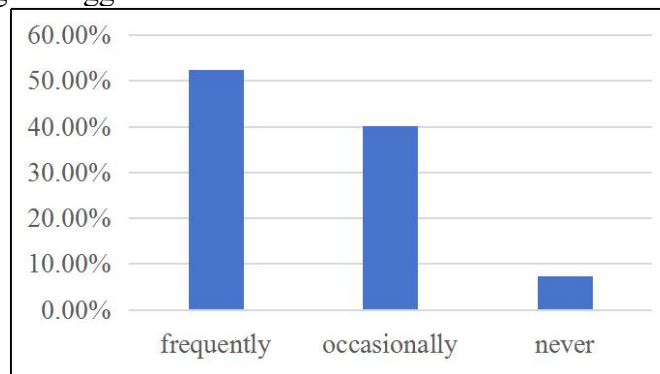


Fig. 1 Frequency of vocational students utilizing online resources for autonomous learning

3.1.3 Adaptability of autonomous learning

The research team conducted a survey on the adaptability of current higher vocational students to autonomous learning. Through statistical analysis of the collected effective questionnaires, it was found that only 27.5% of higher vocational students who use online resources for autonomous learning believe that they have fully adapted, while 42.5% indicate that they do not adapt. Some college students believe that prolonged exposure to the Internet can cause physical discomfort and confusion when encountering problems, Especially for some rural students who are relatively unfamiliar with online resources, they believe that using this learning method cannot bring good learning results, which can lead to insufficient trust and self-efficacy.

3.2 Survey on Autonomous Learning Methods of Vocational Students

Autonomous learning refers to a learning method that learners are responsible for themselves, which not only requires an active learning attitude, but also requires autonomy in clarifying learning goals, selecting learning content and methods, monitoring the learning process, and evaluating learning outcomes. The survey takes the Internet as the background, and mainly selects the representative ways of independent learning of higher vocational students, such as online learning, mobile devices learning and MOOC, and describes the current situation in detail based on the survey data.

3.2.1 The current situation of online learning for higher vocational students

Young college students have a personality that likes to accept new things, and undoubtedly they are the group that uses the most online resources and is the most direct. Interview data shows that college students mainly engage in online learning in dormitories, homes, teaching rooms, or using mobile devices such as laptops and mobile phones. According to statistical data, the current situation of online learning among college students is as follows: firstly, the daily online time of college students. Taking the survey sample as an example, the analysis of effective questionnaires collected shows that 7.3% of higher vocational students spend an average of less than 1 hour online per day, 39.2% spend between 1 and 2 hours online, 37% spend between 2 and 4 hours online, and 23.8% spend more more than 4 hours online. This data reflects the significant impact of the internet on young college students in its unique way, but we must approach it with a dialectical perspective.

3.2.2 The current situation of higher vocational students using mobile devices for learning

Mobile devices provide new means and approaches for higher vocational students to learn, but inevitably, they also bring corresponding problems and drawbacks. According to the Statistical Report on the Development of China's Internet, mobile phones have become the main internet device for new internet users, accounting for 82.7% of the total, desktop computers account for

9.2% of the total, and laptops account for 12.7% of the total. Most of these newly added internet users who use mobile phones are college students.

3.3 Investigation on the Content of Autonomous Learning for Higher Students

The network technology is closely related, and the concept of lifelong learning is gradually deeply ingrained in people's hearts. As a new generation of technical and skilled talents, higher vocational students must keep up with the pace of social development and further achieve the goal of lifelong learning through autonomous learning as a bridge. Based on the Internet, this study investigates the content of college students' autonomous learning through interviews, and describes it in detail based on the survey data.

The content of online learning is mainly presented in the form of online courses, which refer to multimedia materials or teaching and learning systems that have been digitized and can operate in a network environment, providing support to the learners'. Based on the comprehensive interview results, most students showed a reading tendency towards the following types of content.

3.3.1 Professional Website

A professional website refers to an information portal established around a certain topic or discipline, which generally only publishes information around one topic. For the convenience of mutual communication, a discussion community is often added. Some websites also package important materials for students to download and learn easily. In the interview, all students believed that professional websites were their preferred content for autonomous learning.

3.3.2 Learning Resource Library

A learning resource library is a database system specifically designed to store learning materials. In the interview, more than half of the students believed that for those who are related to professional learning, they place more emphasis on reading the content provided by the learning resource library. They believe that the data in the learning resource library is complete, professional, and easy to access, which can also save some time. So searching for learning materials on the Learning Resource Network has become the preferred way for most students to engage in autonomous learning.

3.3.3 Network Logs

Many experts and scholars nowadays publish their works in the form of online logs. Some of the logs are of great professional value and provide in-depth discussions on related issues, making them important content for students to learn. For this type of learning source, most students find it easy and interesting, especially for some aspects of life insights, social news, current affairs comments, etc. 67% of students prefer it, which is also the online world they often visit.

3.4 Investigation on the Effectiveness of Autonomous Learning among Vocational Students

In the Internet environment, higher vocational students have a higher degree of autonomy in learning. Learning resources are no longer limited to textbooks. higher vocational students can select valuable learning resources in the information environment according to their own needs. As the existence of garbage information in the Internet will interfere with students' learning, resulting in some inevitable negative effects, the author used questionnaires and interviews to investigate the effect of autonomous learning of higher vocational students under the Internet. The data analysis results are shown in Figure 2.

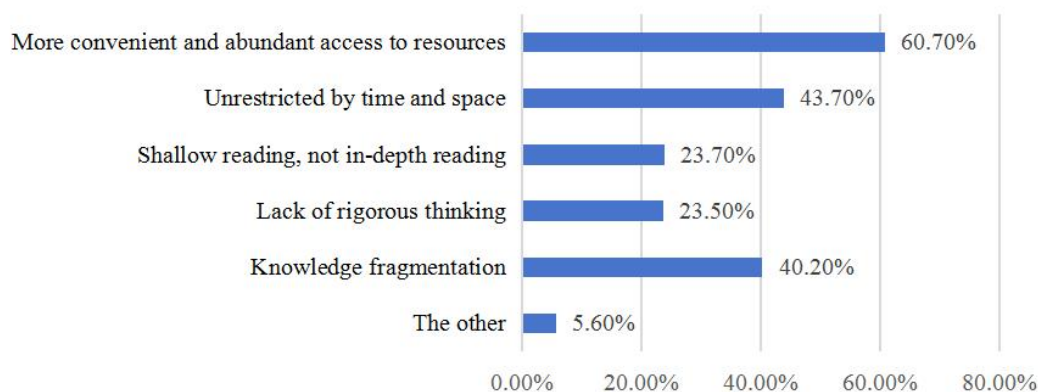


Fig. 2 The effect of autonomous learning for higher vocational students

4. The Main Problems of Autonomous Learning among Vocational Students

Everything has two sides. Network technology brings happiness to higher vocational students, but it also poses unprecedented challenges. Here, people should think backward and observe the impact of the Internet on independent learning of higher vocational students from the reverse side. A truly civilized and rational society will definitely analyze problems from multiple dimensions. When network technology flows into student autonomous learning activities like a tide, the negative effects of the network are gradually emerging in college students' autonomous learning. Although students' physical development is nearly complete, their psychology is not yet mature, and they are quick to accept new things. The complex information and multiple values presented in the Internet environment are bound to have a great impact on their values and behavior. Especially in the era of the explosion of online information, some students have poor self-discipline, vague learning goals, and weak planning, which makes it difficult for them to engage in effective autonomous learning. Based on the analysis of survey data, five problems in autonomous learning of higher vocational students in the era of the internet are summarized.

4.1 Weak Awareness of Autonomous Learning among Higher Vocational Students

The goal of talent cultivation in higher vocational colleges is to cultivate high-level and high-quality applied talents. The training mode for higher vocational students is gradually transitioning from teacher centered to student centered, and theoretical knowledge explanation is transitioning to student independent learning. Psychologists believe that meaningful learning requires learners to fully immerse themselves in learning activities. Learning motivation comes from within, and learning is a process of actively exploring and discovering knowledge. Nowadays, higher vocational students lack active awareness of autonomous learning, which leads to low efficiency in autonomous learning.

The main motivation for higher vocational students to engage with the internet is leisure and entertainment, followed by knowledge learning. Most higher vocational students engage in four main activities online: watching videos, chatting, listening to music, and playing online games. Only a small portion truly utilize the internet for learning. It can be seen that higher vocational students have a weak awareness of autonomous learning and need to further cultivate their own awareness of autonomous learning.

4.2 Unclear Self-learning Goals for Higher Vocational Students

At present, most higher vocational students engage in autonomous learning without any purpose or plan, without forming a systematic plan or understanding how to effectively utilize the internet for autonomous learning. There is a significant gap between the design level of online autonomous learning courses and current needs, and there is almost no targeted design for courses. Now, there are problems in both the form and content presentation of autonomous learning courseware, such as

unprofessional content, weak targeting, single form presentation, and lack of interaction. These defects can lead to students having vague learning goals and insufficient learning motivation in the early stages of learning. Freshman college students have a weak sense of autonomy, resulting in a lack of solid mastery of basic knowledge and skills.

Compared to regular universities students, higher vocational students are lazy in learning, lack interest and motivation in learning, let alone actively and reasonably plan their studies. In actual learning, their learning behavior is often linked to leisure, lacking self-control and a correct understanding of learning goals. In this situation, the efficiency of using the network for autonomous learning will be greatly reduced.

4.3 Lack of Network Knowledge among Higher Vocational Students

Due to the fact that the internet is a product of the information age, many students lack the correct knowledge about it, and some students have insufficient understanding of the types contained in the internet, resulting in ineffective use of the internet for autonomous learning. The uniqueness of the internet itself is reflected in its main features such as fast information updates, rich content, convenient retrieval, global dissemination, hypertext, and interactivity. Many students are unable to accurately and effectively grasp their characteristics when using the internet for learning, resulting in their habit of using traditional learning methods for autonomous learning and ignoring the advantages of the internet. This will have a negative impact on students adapting to the rapid development of the new era. For example, the internet has the characteristics of fast updating speed and low cost. If learners only rely on outdated knowledge in textbooks during the process of autonomous learning, without paying attention to the new knowledge updated in the current information age, it will inevitably not keep up with the pace of social development. Therefore, higher vocational education should strengthen students' understanding of the Internet, promote their correct use of the Internet, and enable them to effectively use Internet learning resources for independent learning.

4.4 Insufficient Ability of Higher Vocational Students to Identify Learning Resources

In the era of the Internet, due to the insufficient ability of students to identify learning resources, the massive amount of information resources filled with harmful information can cause irreparable harm to their physical and mental health, and even lead them astray. This is reflected in the inability of students to form a virtuous cycle of physical and mental development through individual, behavioral, and self-regulation. For example, prolonged addiction to online games can lead to insufficient sleep, mental disability, and seriously affect normal sleep patterns. They are deeply immersed in it, abandoning the learning of basic knowledge and experience, failing to build a correct and effective communication bridge with the Internet, and neglecting normal interpersonal communication with the real world, leading to a state of confusion. Many college students use the internet not to search for learning resources but for online games. The virtual and open nature of the internet can easily make college students ignore moral and ethical constraints, social responsibility, and their own social roles.

4.5 Lack of Effective Resources for Autonomous Learning of Higher Vocational Students

The Internet helps broaden the knowledge horizon of higher vocational students and provides them with more abundant learning resources for autonomous learning. However, according to the interview data, many higher vocational students believe that there are not many effective learning resources for online autonomous learning, or that there are many senses but few really available learning resources, and the process of finding them is very complicated. Nearly half of the surveyed higher vocational students aspire to have autonomous learning tutorials tailored to a certain course. In fact, currently most online learning materials are unprocessed, and their content and form overlook the characteristics presented by small screen handheld devices. Some higher vocational students think that searching information online through mobile phones will lead to problems such

as slow network speed, limited display content, incomplete link display, and sometimes they can't find the effective learning resources they need after turning over several pages. Therefore, the efficiency of autonomous learning for vocational college students in the Internet is low and urgently needs to be improved.

5. Summary

The research team conducted a survey on the current status of autonomous learning ability among higher vocational students through distributing questionnaires and interviews. Based on actively referencing relevant research, the survey results were analyzed. At present, in the context of the Internet, there are many problems for higher vocational students to carry out autonomous learning activities. Students, teachers, schools and society need to work together to improve the autonomous learning ability of students. Higher vocational students should cultivate the concept of lifelong autonomous learning and stimulate their intrinsic motivation for autonomous learning. Higher vocational colleges should strengthen the professional training of teachers in new media and provide guidance on the application of online resources for students. Combining multiple factors and working together to create an autonomous learning environment for students. Therefore, how to make the most of online resources and improve the ability of higher vocational students to learn independently is an urgent research topic in the current vocational education field. Due to the limitations of the survey questionnaire itself, certain viewpoints and analyses inevitably have some shortcomings, which may lead to biased and incomplete conclusions drawn by the research team.

References

- [1] ABEYSEKERA L, DAWSON P. Motivation and cognitive load in the flipped classroom: definition, rationale and a call for research[J]. *Higher Education Research & Development*, 2015, 34(1):1-14.
- [2] Sternberg. WICS:A Model of Positive Educational Leadership Comprising Wisdom,Intelligence, and Creativity Synthesized[J].*Educational Psychology Review*, 2005,17(3):191-262.
- [3] Keamy, K., Nicholas,H., Mahar,S.,&Herrick,C.. Personalising education: From research to policy and practice[C]. Melbourne: Office for Education Policy and Innovation, Department of Education and Early Childhood Development. July 2007.
- [4] Gordon, N. A. . Flexible Pedagogies: Technology Enhanced Learning[DB/OL].[2022-11-28]. http://www.heacademy.ac.uk/Resources/Detail/Flexible-Learning/Flexiblepedagogies/Tech_enhanced_learning/Main_report.
- [5] Baker,J.W.(2000).The Classroom Flip: Using Web Course Management Tools to Become the Guide by the Side[C]. The 11th International Conference on College Teaching and Learning, Jacksonville, April 2000.
- [6] Garrison D R , Kanuka H.(2004) .Blended learning: Uncovering its transformative potential in higher education[J]. *The Internet and Higher Education*, 2004(2).
- [7] TYACK D,CUBAN L. Tinkering toward Utopia: A Century of Public School Reform[M].Cambridge: Harvard University Press,1995:92.
- [8] LAMON M. Constructivist Approach[M]// GUTHRIE J W. *Encyclopedia of Education*(2nd ed.). Emerald Group Publishing Limited, 2003:1463.
- [9] RAJ K. Relocating Modern Science: Circulation and the Construction of Knowledge in South Asia and Europe,1650-1900[M].London: Palgrave Macmillan,2007:9,223.
- [10] ZIMMERMAN BJ. Becoming a Self-regulated Learner: Which Are the Key Subprocesses ? [J]. *Contemporary Educational Psychology*,2002,(11):307-313.
- [11] CHEN Y S, KAO T C,SHEN J P, et al. A Mobile Scaffolding-aid-based Bird-watching Learning System [M]//*Proceedings of IEEE International Workshop on Wireless and Mobile Technologies in Education*,2002: 15-22.

- [12] BIGGS J B. The Role of Metalearning in the Study Process[J]. British Journal of Educational Psychology, 1985,(3):185-212.
- [13] SLABBERT JA. The Development of A Metalearning Model[D]. University of Pretoria(South Africa), ProQuest,UMI Dissertations Publishing,1988:9-13.