

# Research on Digital Learning Status and Ability Cultivation of Higher Vocational College Students

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**Abstract:** With the advent of digital society, the requirements of digital learning ability of vocational college students are also updated. Through the questionnaire survey, it is found that there are some problems in digital learning of higher vocational students. This paper establishes the hierarchical framework of digital learning ability of higher vocational students, and puts forward the implementation strategy of digital learning ability cultivation.

**Keywords:** Higher vocational college students; Digital learning; Digital learning ability; The status quo; Cultivation strategy

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## 1. Introduction

The development of digital industry has put forward new standards and requirements for personnel training, and the comprehensive digital transformation of education has become an inevitable trend. Therefore, building a high-quality vocational education system supported by digitalization is an inevitable choice.

## 2. Related Concepts of Digital Learning

### 2.1 Digital Learning

Digital Learning is learning facilitated by digital devices or Internet that gives students some element of control over time, place, path and/or pace [1]. Digital learning includes three elements, which are digital learning environment, digital learning resources and digital learning methods.

### 2.2 Digital Learning Ability

Digital capacity involves the safe and critical use of ICT for work, learning, self-development and contribution to community [2]. While digital learning competency refers to the basic characteristics that learners are required to have, such as knowledge, skills, motivation and attitude, to carry out learning with digital tools and resources etc. Digital learning capacity serves for people's life-long learning [3].

## 3. Current Situation of Digital Learning for Vocational College Students

In order to understand the situation of digital learning ability of vocational school students, we conducted a questionnaire survey in a vocational college in Nanjing.

The survey results show that vocational college students have different degrees of exposure to the Internet experience, and a considerable part of vocational school students have a certain degree of digital learning ability, although their levels are different. They can better realize the important role of network information technology and resources in personal growth, and want to improve their own digital learning ability through various ways. A small number of students can skillfully obtain the information they want from the network. Most of the students have established the right value orientation and are able to correctly face the unhealthy information and unethical behavior on the Internet.

However, due to the lack of correct education and guidance, vocational school students have many deficiencies in digital learning ability. Some vocational school students do not have clear Internet purposes, weak awareness of information acquisition, and have not formed the habit of consciously collecting and using information. Some people are even addicted to the Internet, which leads to the weakening of social responsibility consciousness and moral feelings, and also seriously affects their academic progress [4]. Their information knowledge is still relatively poor, digital learning ability is still relatively weak, some students have never successfully used network resources to complete a certain task.

All these fully show that network information technology has become an important part of vocational school students' learning and life, and has a profound impact on the healthy growth of vocational school students, which has both positive and negative sides, educators must recognize this reality, fully realize the necessity and urgency of training vocational school students' digital learning ability. Thus, we should improve the consciousness of network education, give full play to the leading role of school education in cultivating students' digital learning ability, and constantly improve the comprehensive quality of vocational school students.

#### 4. Construction of Digital Learning Ability Framework of Higher Vocational College Students

This study attempts to explore the basic framework of vocational students' digital learning from the perspective of the current cognitive characteristics and learning conditions of vocational students, and then refine the framework of vocational students' digital learning ability (see Table 1).

**Table 1.** Digital learning ability framework of vocational college students

Competency hierarchy	Competence factors	Capability indicator
Primary Competency Stage	Establish the awareness of digital learning	Recognize and actively participate in various digital learning activities
	Use common digital learning tools	Master common digital learning tools and apply them to study
	Have the ability of digital learning self-management	Have bad information immunity and self-control ability to prevent network straying
Intermediate Competency Stage	Have the ability to deal effectively with information	Use information technology to capture and express information
	Communicate and collaborate with digital tools	Communicate and collaborate effectively on learning through digital media
	Arrange time reasonably in the process of digital learning	Plan the allocation of online learning and entertainment time to ensure learning progress
Advanced Competency Stage	Make creative use of digital learning tools	Explore the potential functions of digital learning tools and be able to find and deal with problems
	Have the ability to manage digital learning resources	Rational storage and efficient use of digital learning resources
	Carry on knowledge innovation in digital learning	Use information technology to participate in knowledge innovation

The first stage is the **Primary Competency Stage**. Vocational college students should recognize and actively participate in digital learning activities. In order to learn to use basic digital learning tools, vocational students can achieve this through formal and informal learning channels. In addition, vocational college students should improve their immunity to bad information.

The second stage is the **Intermediate Competency Stage**. Knowledge acquisition requires learners to accurately retrieve information and be able to identify, analyze and process the obtained information within a reasonable time frame. In digital learning, it is particularly important for vocational students to be able to use the Internet to effectively communicate and collaborate in learning.

The third stage is the **Advanced Competency Stage**. Vocational college student should learn to creatively use the functional attributes of various digital tools to improve their learning performance. Besides, learners should also improve the efficiency of resource utilization to create higher value. Finally, they need to be able to upgrade their abilities and innovate their thinking.

## 5. Strategies for Cultivating Digital Learning Ability of Higher Vocational Students

"Learning to learn" has become an important standard to measure talents in the digital age and a basic need for human survival in today's society. This study believes that the transformation and innovation should be realized to effectively improve the vocational students' learning ability. This is shown in Figure 1.

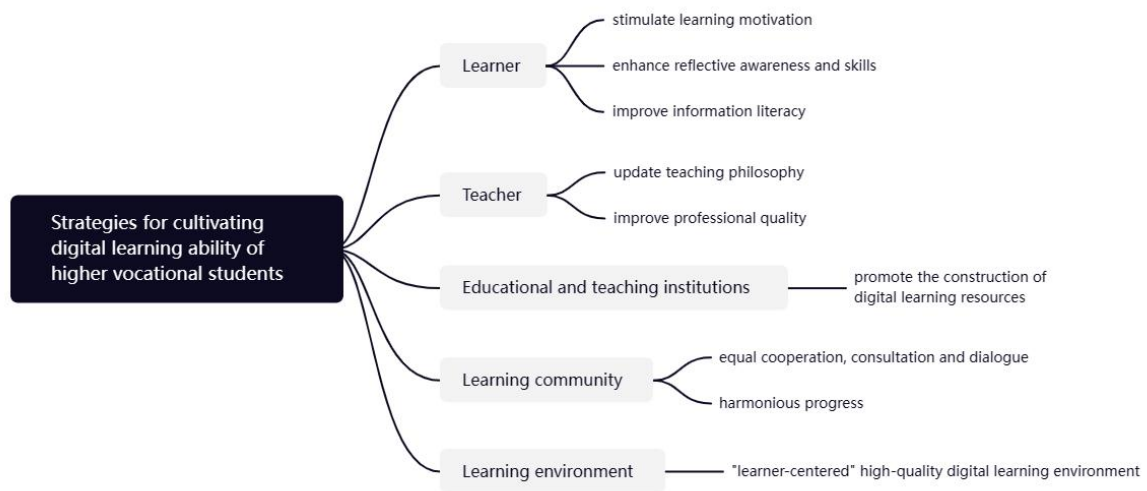


Figure 1. Training strategies of digital learning ability of vocational college students

From the learners' point of view, they should stimulate learning motivation, enhance reflective awareness and skills, and improve information literacy. The learners firstly need to awaken from the subject level, stimulate learning motivation, to learn for their own interests, learning for development [5]. Secondly, they should enhance the awareness and skills of learning reflection in digital environment and promote the improvement of self-regulation and metacognition level [6]. Finally, improving information literacy is the key to improving digital learning ability.

As for the teachers, they should update their teaching philosophy and improve their professional quality. Teachers' digital literacy is not only related to the education itself, but also the basis for teachers to know and understand students [7]. Teachers can carry out explicit and implicit courses, design online learning activities, and implant emerging information technology elements into teaching to influence students' learning habits [8].

Besides, education and teaching institutions should promote the construction of digital learning resources. Educational institutions set up courses to cultivate talents with new level of digital learning ability from the society. Besides, higher vocational schools need to strengthen the construction of their own high-quality digital learning resources, such as the establishment of micro-course resource library, so as to enrich online learning resources, and these high-quality resources classified management for students to find.

Then, it is significant to create a learning community featuring equal cooperation, consultation and dialogue, and harmonious progress. Learning community refers to a community in which teachers and students often communicate, exchange resources and jointly complete tasks [9]. Specifically speaking, the supporting effect of learning community on learners' online learning is mainly manifested as cognitive information support and interpersonal support.

Last but not least, we need to build a "learner-centered" high-quality digital learning environment. Learning environment can provide guarantee for vocational students. Schools need to create a good network software and hardware environment and adapt to the characteristics of learners [10]. The digital learning environment can also track the learning process, evaluate the personality, and push the appropriate learning content for learners.

## 6. Conclusion

With the arrival of the era of digital education, the vocational students must make digital adjustments to master the retrieval skills of information resources, to improve the ability of digital learning. Teachers, educational institutions and society all need to help them upgrade their capabilities

## References

- [1] What is Digital Learning, [online] Available: <https://gosa.georgia.gov/what-digital-2016/1/30>.

- [2]S. Somyürek and B. K. Coşkun, "Digital competence: Is it an innate talent of the new generation or an ability that must be developed?", *Br. J. Educ. Technol.*, vol. 44, no. 5, pp. E163-E166, Sep. 2013.
- [3]R. Aggarwal and I. Bates, "The relationships between approaches to study in higher education and life-long learning attributes in an undergraduate pharmacy cohort", *Pharmacy Education*, vol. 1, pp. 45-52, 2000.
- [4]Mahboobe M ,Elham H ,Mohammadreza F , et al. The Mediating Role of Digital Informal Learning in the Relationship between Students' Digital Competency and their Academic Performance[J]. *Computers & Education*, 2021,167(prepublish).
- [5]Wannapiroon\* N ,Shawarangkoon S ,Chawarangkoon C , et al. Next Normal Education, Hybrid Learning Model for Active Imagineering Learning to Enhance Digital Innovator Competency[J]. *International Journal of Information and Education Technology*, 2023,13(1).
- [6]Bo Y . Self-Regulated Learning: A Key Factor in the Effectiveness of Online Learning for Second Language Learners [J]. *Frontiers in Psychology*, 2023,13.
- [7]Isabell R ,Rebecca L ,Charlott R , et al. Teacher-Reported Instructional Quality in the Context of Technology-Enhanced Teaching: The Role of Teachers' Digital Competence-Related Beliefs in Empowering Learners[J]. *Computers & Education*, 2023,198.
- [8]Thi L N ,Issara K ,Grichawat L , et al. How Teachers Manage Their Classroom in the Digital Learning Environment – Experiences from the University Smart Learning Project[J]. *Heliyon*,2022,8(10).
- [9]Susila D . The Potential to Build Collective Capacity for Organisational Learning in the Context of Teachers' Use of Digital Technology for School Improvement[J]. *Education Sciences*, 2022,12(1).
- [10]G. S Z ,N. S Y ,F. L S , et al. Assessment of the Professional Competencies Formation in Students in the Course of Implementing Online Digital Learning Technologies[J]. *SHS Web of Conferences*,2021,103.