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# Research on the Problems and Strategies of Online Self-directed Learning for College Students in Higher Vocational Colleges

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**Abstract:** With the rapid development of Internet technology, the Internet is playing an increasingly important role in various industries and has also become an important trend in the development of the education field. The self-directed learning mode relying on the Internet has gradually emerged. Higher vocational education is an important part of higher education, undertaking the important task of cultivating high-quality technical and skilled talents. The online self-directed learning mode provides new paths for vocational college students' learning, but it also faces many challenges. How to effectively integrate online resources and improve students' self-directed learning ability has become an important topic in the educational innovation and reform of higher vocational colleges. Against this background, this paper takes college students in higher vocational colleges as the research object, exploring how to improve the effectiveness of online self-directed learning. Starting from the basic concept of online self-directed learning, it gradually delves into the practical dilemmas restricting college students' online self-directed learning in higher vocational colleges, and finally explores relevant specific paths, aiming to improve the quality and effectiveness of online self-directed learning and provide strong support for the educational innovation and reform of higher vocational colleges.

**Keywords:** Higher vocational education; College students; Online self-directed learning

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## 1. Introduction

In the context of the digital age, the Internet has increasingly become an essential tool for people's production and daily life. It not only transforms college students' learning methods but also serves as a powerful driving force for educational reform. Information-based teaching has emerged as a guiding direction for educational transformation and a key engine for promoting the high-quality development of educational modernization. Online self-directed learning, which uses the Internet as its medium, has gradually gained popularity. Its efficiency, flexibility, convenience, and autonomy offer significant benefits to both teaching and learning. Vocational college students, whose self-learning abilities, cognitive development levels, and digital literacy

have reached a certain stage, can leverage Internet resources for independent study, making it a unique way for them to adapt to the digital era. However, online self-directed learning in many higher vocational colleges still faces numerous issues and challenges, such as students' lack of self-discipline, uneven quality of online learning resources, and insufficient construction of Internet platforms. These problems not only affect students' learning outcomes but also impede the optimization of the online learning environment and the improvement of learning quality.

## 2. The concept and characteristics of online self-directed learning

### 2.1. The concept of online self-directed learning

The autonomous learning on the Internet emphasizes learning activities that take the Internet as the carrier and aim at knowledge mastery and skill development, including interactions through online learning platforms, searching for online learning materials, and learning via online videos etc. This learning mode breaks through the limitations of traditional education models on time and space, opening up a path for individuals to pursue continuous learning, lifelong learning, and self-improvement. At the same time, it also subverts the teacher-centered teaching method, placing students at the center of the learning process and highlighting their initiative and independence. The rich resources on the Internet provide learners with broader and more diversified choices, fully meeting the diversified learning needs of learners at different levels [1].

### 2.2. Characteristics of online self-directed learning

#### 2.2.1. Highlighting students' initiative

In the traditional classroom teaching model, teachers are the dominant force, and students often passively receive knowledge in a mechanical learning state, which is not conducive to the development of students' subjective initiative. Online self-directed learning emphasizes the dominant position of students in classroom teaching. Students can conduct selective learning according to their interests and actual needs, fully exert their subjective initiative, actively explore knowledge, cultivate the ability to think independently and solve problems, and achieve personalized development. Teachers, on the other hand, transform their roles into guides and assistants for students' learning, providing corresponding guidance when necessary to encourage students to conduct in-depth and self-directed learning. The emphasis on students' subjective initiative is also reflected in the fact that during online self-directed learning, students can independently arrange their learning progress, flexibly select learning content, truly apply what they have learned, stimulate their learning interest, and improve learning effectiveness [2].

#### 2.2.2. Free from time and space constraints

In the traditional classroom learning model, students often need to accept unified teaching arrangements within fixed time and space, and teachers also need to adjust teaching forms according to the existing equipment in the classroom. Both students and teachers are restricted by the physical environment, suffering from the problem of insufficient flexibility. The autonomous online learning model breaks through the time-space constraints of traditional classrooms. Students can freely choose study time according to their own schedules and learning progress, adjust learning pace by themselves, and use fragmented time to carry out learning anytime and anywhere, fully improving learning efficiency [3]. Meanwhile, the autonomous learning model based on online platforms can provide students with diversified resource presentation forms such as videos, audios, pictures, etc.,

which can be preserved for a long time to facilitate students' repeated review and consolidation.

### 2.2.3. Diverse learning resources

The Internet serves as a space for the dissemination and interaction of social information, as well as a hub for information. Network autonomous learning makes full use of this characteristic, taking advantage of the massive quantity, rapid updating, shared openness, and rich types of online resources. It allows individuals to freely choose according to their own needs and interests, select the latest materials, acquire the most cutting-edge knowledge, and broaden their horizons. Online learning resources feature cross-time and space, cross-national, and cross-disciplinary characteristics, covering various types such as life, economy, politics, culture, etc., to meet the different-level learning needs of students in different grades, majors, and with different purposes [4].

## 3. Strategies for online self-directed learning of college students in higher vocational colleges

Some higher vocational colleges and students do not have a deep understanding of the online self-directed learning model, and there are still many deficiencies in the operation of this model. For example, students lack self-discipline during online self-directed learning, are easily influenced by other information, which affects their learning efficiency. Additionally, insufficient digital literacy makes it difficult for them to fully utilize the practical effectiveness of the online self-directed learning model. From the perspective of higher vocational colleges, there are issues such as excessive rejection or over-reliance on online platforms, and the failure to achieve an organic combination of online and offline learning. Therefore, the online self-directed learning model urgently needs to be optimized [5].

### 3.1. Enhancing students' digital literacy and self-directed learning ability

Students are the main body of the online self-directed learning model, and their cognition and understanding of this model directly affect its application and learning effectiveness. When promoting the online self-directed learning model, higher vocational colleges should focus on the dominant position of students, cultivate their good digital literacy, self-directed learning ability, and self-control ability, and comprehensively improve teaching effectiveness [6]. Firstly, teaching concepts need to be transformed. Teachers can guide students to adopt modern learning concepts, face the challenges of the information age with a positive attitude, reduce the sense of rejection towards online self-directed learning and the fear and anxiety caused by low self-efficacy, and actively try to use relevant technologies for learning. Secondly, students' digital skills should be improved. Higher vocational colleges can conduct on-site investigations on the problems students encounter during online self-directed learning, and offer targeted digital skills training courses according to the difficulties they may face in practical applications, to comprehensively enhance students' information technology application ability. Additionally, these colleges can provide basic digital training for all students, such as cultivating students' abilities in information retrieval, screening, and integration, as well as their capacity to use artificial intelligence technology to solve learning problems, laying a solid foundation for students' online self-directed learning. Finally, students' self-directed learning ability and self-control should be cultivated. Many students often lack sustained motivation when facing self-directed learning and find it difficult to mobilize their subjective initiative, thus affecting the effectiveness of self-directed learning. Teachers should guide students to conduct a comprehensive and detailed summarization of their own learning abilities, actual learning situations, and career needs through means such

as self-reflection and technical assistance, helping students clarify their online self-directed learning goals and formulate reasonable study plans to stimulate the internal driving force for self-directed learning [7]. Meanwhile, students should also correct their learning attitudes, strengthen self-monitoring and adjustment, form good study habits, strictly follow their own study plans, and ensure the maximization of learning effectiveness.

## 3.2. Achieving an organic integration of online self-directed learning and offline learning

Online self-directed learning provides new channels, forms, and resources for the study of vocational college students. However, higher vocational colleges should not overlook the value of offline learning. Instead, they should construct a learning framework that combines online self-directed learning with detailed offline classroom instruction, leveraging the complementary advantages of both to comprehensively enhance learning effectiveness. Higher vocational colleges can offer different learning paths tailored to the diverse learning needs of students. Firstly, for students with strong self-directed learning abilities, teachers should encourage them to actively engage in independent exploration and online self-directed learning. Teachers only provide necessary assistance and guidance when students encounter difficulties, helping them improve the effectiveness of self-directed learning [8,9].

Secondly, for students who have not yet adapted to online self-directed learning, higher vocational colleges can adopt a "buffering" approach by combining online self-directed learning with offline learning. Meanwhile, relevant courses should be designed to teach students online self-directed learning skills, ensuring that every student can smoothly transition to online self-directed learning [10]. Thirdly, some students have a low acceptance of online self-directed learning due to issues such as lack of confidence in their own abilities or low receptivity to new technologies. In response to this situation, teachers should provide them with patient support and guidance, gradually helping them build confidence, enhance their self-efficacy, and then guiding them to gradually transition to the online learning mode and achieve self-directed learning [11].

## 3.3. Optimizing resources and interaction mechanisms of the online self-directed learning model

Although online self-directed learning emphasizes students' autonomy and initiative in learning, it is not completely isolated. Instead, it serves as another tool and approach for vocational college students to achieve self-learning. Higher vocational colleges and teachers should give full play to their roles in top-level design and knowledge guidance, providing assistance and guidance for students' self-learning [12].

Firstly, construct online learning resources. During self-directed learning, students often face the challenge of sifting through vast amounts of materials, which not only reduces learning efficiency but also makes it difficult to integrate high-quality resources, thereby hindering the learning process. Higher vocational colleges can establish professional online learning resource libraries, organize teachers to regularly screen and integrate high-quality resources, and classify and tag them according to course requirements and students' proficiency levels. This enables students to quickly search for excellent learning materials during self-directed learning, ensuring the accuracy of knowledge and enhancing the pertinence of learning. To further improve resource utilization, higher vocational colleges should introduce artificial intelligence recommendation systems that can intelligently push personalized learning content and resources based on students' learning weaknesses, interests, and historical learning behavior data, rapidly meeting the diverse learning needs of students and providing personalized learning experiences.

Secondly, improve hardware facilities [13]. Higher vocational colleges should start with the infrastructure for online self-directed learning. First, provide students with a high-speed and stable network environment. Second,

ensure an adequate number of computer devices and conduct regular updates and maintenance to provide basic support for students' online self-directed learning. These colleges can also introduce high-tech means and equipment, such as virtual reality technology to further optimize students' self-directed learning experience.

Finally, strengthen the construction of teacher-student interaction mechanisms [14]. On online self-directed learning platforms, higher vocational colleges can organize teachers to conduct online Q&A sessions. Meanwhile, functional areas such as comment sections and bulletin boards enable positive interactions between teachers and students, providing real-time feedback to address students' problems during self-directed learning. This also helps teachers understand students' self-directed learning effectiveness, offering references for offline teaching. In addition, teachers can organize students to engage in online self-directed learning in groups. This not only allows students to discuss and solve problems encountered during learning but also enables them to supervise and encourage each other, achieving common progress.

## 4. Conclusion

In summary, as a new learning mode, online self-directed learning has gradually become the latest approach for vocational college students' learning and development. Its unique flexibility and diversity can stimulate students' learning interest and enhance learning effectiveness, serving as an effective way for students to achieve lifelong learning and self-improvement [15]. Higher vocational colleges should always uphold the teaching concept of keeping pace with the times, actively embrace the trend of online education, and create an efficient and convenient learning environment for vocational college students by constructing online learning platforms, optimizing hardware facilities, and enhancing students' self-directed learning ability. Meanwhile, when building the online self-directed learning system, colleges should not overlook the importance of classroom teaching in students' professional development and competence cultivation. By establishing a diversified learning system and giving full play to teaching advantages, they can help students build a solid knowledge base, strengthen professional skills, promote ability development, and lay a sound foundation for their future study and career advancement.

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## Disclosure statement

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