



# The Application and Management Strategy of Smart Phones in the Teaching Process of Landscape Technology Specialty in Higher Vocational Colleges- Take the Course of Plant Landscaping as an Example

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**Abstract:** With a view to providing reform cases for modern "mobile education" in higher vocational colleges. The authors aiming at the phenomenon of "Smartphone addicts" in the teaching process of garden technology major. Analyze the characteristics of students and courses of garden technology major in higher vocational colleges. Taking the course of plant landscaping as an example, the paper makes full use of smart phones in teaching mode, teaching method and assessment mechanism, and discusses the guiding application of smart phones in teaching organization and teaching effect.

**Keywords:** Higher Vocational Education; Garden Technology; Smart Phones; Application; Management

## 1. INTRODUCTION

With the rapid development of modern network technology and the continuous upgrading of mobile phone intelligence, smart phones integrate shopping, games, chat, video and other functions, which have penetrated every corner of life and become indispensable tools in people's daily life. As the "fifth media", smart phones have been widely used among college students, and there are many Smartphone addicts in colleges and universities. In college classes, more than half of the students are bowed their heads and playing mobile phones. The teaching effect is poor and the enthusiasm of teachers is low. The high frequency use of smart phones has had a great negative impact on the learning and life of higher vocational students <sup>[1]</sup>. Starting with the mobile teaching reform of landscape technology specialty, this paper discusses the application of smart phones in teaching modes, teaching methods and assessment mechanisms to make full use of smart phones to improve teaching efficiency and teaching level and provide reform cases for modern "mobile education" in higher vocational colleges.

## 2. APPLICATION STATUS OF SMART PHONES IN MOBILE LEARNING IN HIGHER VOCATIONAL COLLEGES

As can be seen from the 39th China internet development status statistics report, by December 2016, the number of China's mobile internet users had reached 695 million, with most of them surfing the internet through smart phones. Due to its powerful function and the speed of product upgrading, smart phones have replaced personal computers and become the main tool of mobile learning for college students with a penetration rate of more than 99 % among college students <sup>[2]</sup>. In order to adapt to the development of the internet era and curb the phenomenon of "Smartphone addicts" among college students, the Ministry of Education began to implement the "mobile education" project nationwide in 2001. the campus wireless network in colleges and universities has achieved unprecedented development, basically realizing free and full coverage of wireless networks, and expanding library resources, online courses, teaching resources and life app and other resources to smart phones. for this purpose, a series of student wireless network management platforms have been tailored to promote "mobile teaching". "Mobile teaching" has been implemented for many years. According to research, at present, 32.8 % of students in higher vocational college's use Smartphone's for mobile learning occasionally, and 57.4 % of students often use Smartphone's for learning. This shows that most

students in higher vocational colleges have begun to try new learning methods, and mobile learning based on Smartphone's is a feasible teaching reform direction<sup>[3]</sup>.

### **3. MOBILE LEARNING PROBLEMS IN HIGHER VOCATIONAL EDUCATION**

#### **3.1. Teachers' Awareness of Using Smart Phones to Carry Out Mobile Teaching Needs to be Improved**

Although the educational concept of "mobile education" has been implemented for many years, it is still at the level of research and competition. The real use of Smartphone's by front-line teachers to carry out mobile teaching is still rare. Many teachers are still using traditional teaching methods to organize teaching. For students' use of cell phones in class, they are still using "encirclement and interception" and "cell phone rest areas" and other means to prohibit students from using Smartphone's in class. However, judging from the actual effect of feedback, the teaching quality has not improved and students' learning enthusiasm is still low.

#### **3.2. Students are Not Conscious Enough to Carry Out Mobile Learning**

Although the original intention of using smart phones to carry out mobile learning is to improve learning efficiency and make full use of students' fragmented spare time. However, most students lack systematic learning planning due to their low self-awareness and poor self - control. The mobile learning content in smart phones is far less attractive than "hand tour". In the absence of teacher supervision, the value of smart phones in mobile learning is very limited.

#### **3.3. Platform and Resource Construction to be Further Strengthened**

Mobile learning based on smart phones needs strong mobile learning resources and platform support, but at present the teaching resources and platform construction for mobile learning are still in the primary stage, the construction system is still in the exploration and verification stage, the construction lacks experience, and the built teaching resources and platform are relatively expensive to use. In addition, the existing digital resources and platforms have higher requirements on the allocation of mobile phones. Higher vocational colleges cannot allocate high-end smart phones to students in a unified way. The level of campus network hardware is also uneven, which also limits the popularization of smart phones in mobile learning.

### **4. CHARACTERISTICS OF STUDENTS AND COURSES OF LANDSCAPE TECHNOLOGY MAJOR IN HIGHER VOCATIONAL COLLEGES**

The major of landscape technology in higher vocational colleges is mainly to cultivate and master the professional knowledge and skills of landscape planning and design, landscape plant landscaping, landscape engineering, landscape plant cultivation and maintenance, and landscape plant seedling production, and can be engaged in the design, construction, and maintenance management of scenic spots, parks, and various types of urban landscape green space. At present, students majoring in landscape technology in higher vocational colleges are mainly from ordinary high school graduates and their counterparts in secondary vocational schools. Under the background of continuous enrollment expansion in undergraduate colleges, students of landscape technology major in higher vocational colleges generally have low comprehensive learning ability, insufficient learning consciousness, weak cultural foundation, little interest in theoretical curriculum content, and love operational curriculum or content in learning, which shows strong learning enthusiasm in practical teaching. In addition, the specialty of garden technology requires learning to have strong communication skills. However, most students are less active in communication, more self - centered, and hope others can communicate with them voluntarily. smart phones are the main communication means for them to express their thoughts and personal opinions. Students majoring in landscape technology in higher vocational colleges generally have a strong interest in Smartphone's. A few students already have a deep dependence. Leaving Smartphone's for more than 4 hours will make them feel anxious and uneasy.

The curriculum of landscape technology specialty in higher vocational colleges is set to meet the training objectives of high-level application-oriented talents. More closely combining with the requirements of landscape professional positions, it introduces the technical standards and norms of

industry enterprises, and constructs the curriculum system based on the principles of systematization of landscape work tasks, work processes and learning situations. The curriculum of landscape technology major in higher vocational colleges is relatively weak in theory and requires high practical operability. Especially, design courses require rich landscape experience and a large amount of material accumulation, which can present the flattened design in three dimensions and can be constructed according to the drawings.

## **5. THE APPLICATION AND MANAGEMENT OF SMART PHONES IN THE TEACHING OF LANDSCAPE ARCHITECTURE MAJOR - TAKING THE COURSE OF PLANT LANDSCAPE DESIGN AS AN EXAMPLE.**

The Ministry of education emphasizes the use of information technology to carry out exploratory and participatory teaching in the ten-year development plan for education informatization (2011 - 2020)<sup>[4]</sup>. Under the current era background and educational philosophy, changing teaching thinking mode, using modern scientific and technological achievements and using smart phones to carry out mobile teaching and mobile learning have become important ways to optimize teaching quality. The plant landscaping course for the major of landscape technology in higher vocational colleges has many graphics, large information and high requirements for knowledge storage, and has distinctive operational characteristics. the results of the course are mostly presented in the form of design drawings and written expressions.

### **5.1. Reform the Teaching Mode of the Curriculum**

Adopting online and offline mixed teaching mode reform to innovate subject teaching can effectively meet the development needs of higher vocational students at this stage and achieve the best teaching level [5]. Through the reform of online and offline teaching mode, the traditional teaching mode and modern information technology will be organically combined to stand up to realize the combination of curriculum teaching and network teaching, and to foster strengths and circumvent weaknesses. The implementation of online and offline teaching can not only reflect the leading role of teachers in the teaching implementation process, but also help students to find their main role in the learning process, greatly improving the teaching effect of teachers and students' learning enthusiasm. According to the curriculum characteristics of plant landscaping and learning from the modern information teaching concept, the online and offline mixed teaching mode, i.e. massive open online course teaching mode, flipped classroom teaching mode and other mixed teaching modes, is implemented. Teachers upload the relevant learning materials, success stories, and task assignments of the courses to the online massive open online course platform. Students use smart phones to log on to the platform before and during the class, and independently preview, learn, and review online. After class, students will complete online learning of the corresponding module independently according to the assigned tasks, and ask questions, discuss and submit homework online.

### **5.2. Improve the Teaching Methods of the Curriculum**

Teachers are the leading teachers in the teaching of courses. the implementation of modern educational concepts puts forward higher requirements for teachers' teaching level and teaching methods. According to the current characteristics of students majoring in landscape architecture in higher vocational colleges, if the traditional pure theoretical teaching or single spoon-feeding teaching method is still adopted, it can no longer adapt to the learning characteristics and teaching requirements of the current students, and will inevitably lead to students playing mobile phones and games, which will affect the teaching quality. Therefore, according to the characteristics of plant landscaping courses, teachers improve the traditional teaching methods, make full use of smart phones as teaching tools, and arrange the preview content of the next lesson to students in advance before teaching. Students can understand the teaching knowledge of the next lesson before formal teaching by using smart phones. This can improve students' classroom participation, make every student have tasks in the classroom, express them, and all need to be assessed, so that every student can obtain a sense of accomplishment in learning. In addition, smart phones are used to push teaching materials such as course videos, micro-class animations, and successful case effect diagrams, so as to enrich teaching methods and stimulate students' enthusiasm for learning.

### **5.3. Improve the Examination Methods of the Courses**

Curriculum assessment is an important guarantee for the teaching effect of the curriculum and an effective means to effectively prevent a few students from disobeying the discipline of subject teaching. Curriculum assessment should organically combine routine assessment with final assessment, theoretical assessment and practical assessment. During the examination of plant landscaping course, the intelligent mobile phone is used to collect data such as the enthusiasm of students to participate in the discussion in class and the quality of homework through the teaching platform, which is used as the basis for the evaluation. At the same time, theoretical question bank and practical operation video are provided in the teaching platform. through self - study, review, self-test and other methods, students can effectively improve their mastery of knowledge points and skill points. Relying on smart phones to carry out the assessment of plant landscaping courses, students' usual learning traces and learning effects have been effectively recorded. compared with traditional examinations, it can better reflect the process assessment of higher vocational colleges that pays attention to students, stimulate students' practical operation ability, and timely check and fill gaps according to the assessment results of each assessment. this can effectively control students' learning methods and enable students to learn according to the teaching ideas designed by teachers.

## **6. CONCLUSION**

With the rapid development of network information technology, smart phones have become very popular among higher vocational students and are closely related to their study and life. Water can carry boats and capsize boats. good use can effectively improve teaching quality. poor use will only lower learning efficiency. Encirclement and interception can only relieve symptoms, guide, utilize and develop to cure the root causes. only when teachers emancipate their minds, make full use of smart phones to carry out teaching, and through teaching reforms such as teacher mode, teaching method and assessment method, can smart phones be truly turned into teaching tools serving modern vocational education.

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