THE LEARNING EFFECTS OF TASK-DRIVEN METHOD IN COMPUTER TEACHING PRACTICE IN HIGHER VOCATIONAL COLLEGE-TAKING NANJING BUSINESS COLLEGE AS AN EXAMPLE

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This Independent Study has been Approved as a Partial Fulfillment of the Requirement of International Master of Business Administration in International Business Management

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ABSTRACT

With the rapid development of information technology, computer teaching in higher vocational colleges is encountering both new challenges and opportunities. The traditional teaching approach, primarily centered on knowledge transmission, is progressively falling short of meeting the students' actual needs. In response, novel teaching strategies, such as task-driven methods, have gained significant attention in the practical implementation of computer teaching in higher vocational colleges.

The objectives of this study were as follows: 1) To analyze the current state of computer teaching at Nanjing Business College. 2) To investigate the learning outcomes of the task-driven method in computer teaching at higher vocational colleges.

This paper adopts a qualitative research approach. Through a literature review, it summarizes the relevant theoretical aspects of the task-driven method. It reviews the learning outcomes of the task-driven method in higher vocational computer teaching both domestically and internationally. By employing observation and interview methods, it conducts an empirical case study involving ten computer teachers at Nanjing Business College, collecting feedback from these teachers. The study aims to explore the learning outcomes of the task-driven method in higher vocational computer teaching, ultimately validating the effectiveness of employing the task-driven method to enhance the learning outcomes in computer teaching.

This paper found that 1) The computer teaching of Nanjing Business College is lack of motivation for learning, weak practical ability, weak sense of teamwork, and teachers' traditional teaching methods. 2) Task-driven method in higher vocational computer teaching, can improve the learning effect of higher vocational computer teaching, stimulate students 'interest in learning and initiative, cultivate the students' problem solving ability, promote cooperative learning and interactive learning, promote the innovation of teachers' teaching methods, so as to promote the effectiveness of higher vocational computer teaching. Task-driven method has broad application prospect in computer teaching in higher vocational colleges, and is worth further research and promotion by educators and administrators.

Keywords: task-driven method, higher vocational computer teaching, teaching effect

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Ni Weiguo
August 8, 2023

Declaration

I, Ni Wei Guo, hereby certify that the work embodied in this independent study entitled "THE LEARNING EFFECTS OF TASK-DRIVEN METHOD IN COMPUTER TEACHING PRACTICE IN HIGHER VOCATIONAL COLLEGE-TAKING NANJING BUSINESS COLLEGE AS AN EXAMPLE" is result of original research and has not been submitted for a higher degree to any other university or institution.

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August 8, 2023

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Chapter 1 Introduction

1.1 Research Background

Higher vocational computer teaching has always been the focus of education, because the application of computer technology in modern society is more and more widely. For higher vocational students, to master computer knowledge and skills for future employment and career development. However, the current higher vocational computer teaching faces some problems: the first is that students' learning enthusiasm is not high. Traditional teaching methods are teacher-centered; students lack initiative a sense of participation, and interest in classroom content, which leads to low thinking activity and class participation, and unwillingness to take the initiative to ask and explore questions. Secondly, higher vocational computer teaching lacks practical operation links. Traditional teaching often pays attention to the teaching of theoretical knowledge, and students lack the opportunities and platforms for functional operation. As a result, students' mastery of computer knowledge is not deep enough to apply theoretical knowledge to practical situations. In addition, higher vocational computer classroom teaching lacks tasks related to useful work. Traditional teaching focuses on teaching basic theoretical knowledge while neglecting cultivating students' ability to solve practical problems and cope with work scenarios. That leads to a lack of the power and experience to deal with problems in practical work after graduation (Strobel, J., & van Barneveld, A. 2009). In addition, because classroom teaching pays too much attention to the indoctrination and transmission of knowledge, the evaluation method is often limited to the examination results, then ignoring the cultivation of students' comprehensive ability and practical operation ability. Therefore, the learning effect of computer teaching in higher vocational colleges needs to be further improved.

With the evolution of educational concepts and the rapid advancements in educational technology, the task-driven approach has garnered increasing attention in teaching. The task-driven method emphasizes combining learning content with practical tasks, allowing students to solve real-world problems to drive learning. This method can stimulate students' interest in education, improve their learning motivation, and promote the mastery of knowledge and the cultivation of application ability.

In higher vocational computer education, the task-driven method has gradually been tried and applied. By introducing practical cases and project tasks, allowing students to play a role in practical work in class and solve practical problems, students can have a deeper understanding of computer knowledge, application scenarios, and the functional significance of tasks. This driven learning approach promises to enable students to achieve a sense of gain and self-directed learning, thus enhancing learning motivation and improving learning outcomes (Kirschner, P. A., Sweller, J., & Clark, R. E. 2006).

Although the task-driven method has many advantages in theory, it is still less used in higher vocational computer teaching. Therefore, relevant research is needed to explore how to maximize the role of task-driven methods in higher vocational computer teaching to improve the learning effect further and cultivate more excellent computer talents.

To sum up, improving the learning effect of higher vocational teaching is one of the essential tasks of the current education reform and development. Under the background of the task-driven teaching method, it is a practical attempt to introduce it to computer teaching in higher vocational colleges. Through the task-driven teaching method, teachers can better stimulate students 'learning interest and initiative, promote the cultivation of students' practical ability to make higher vocational computer education closer to the practical application, more in line with students' learning needs, and lay a solid foundation for cultivating high-quality computer professionals. It is of great theoretical and practical significance to carry out the effect of task-driven methods to improve computer teaching in higher vocational colleges.

1.2 Research Problems

Professor Wang Wei is a well-known scholar in the field of computer education in China. He emphasizes that computer classroom teaching in higher vocational colleges should focus on cultivating students' practical ability and suggests that functional programming, project practice, and teamwork activities should be carried out in class to help students apply theoretical knowledge to practical problems. In the past three years, many scholars have studied and explored how to improve the learning effect of computer teaching in higher vocational colleges, but most of them remain at the individual level of scattered practice and lack of systematic research, and verification. (Wang, 2007)

Higher vocational computer teaching usually involves the learning of computer science and information technology, cultivating students' practical skills and knowledge in the field of computers. Traditional teaching methods tend to the teacher as the center, paying attention to the infusion of expertise and students 'passive learning, often appear in higher vocational computer teaching students' learning interest and initiative are not high, and there is a lack of ability to solve the problem, and the classroom is not cooperative learning and interactive learning, the lack of innovation in teaching methods, significantly reduce the teaching effect of education.

The introduction of a task-driven teaching method in higher vocational computer teaching can promote students' practical operation and practical ability, cultivate their problem-solving ability and team spirit, and improve the learning effect of higher vocational computer teaching.

1.3 Objective of the Study

1. To analyze the current situation of computer teaching in Nanjing Business College.

2. To explore the learning effect of task-driven methods in computer teaching in higher vocational colleges.

Studying task-driven teaching methods in higher vocational computer teaching, it can provide effective teaching mode and method for higher vocational education and effectively improve the learning effect of higher vocational computer teaching.

1.4 Scope of the study

This scope of study is the application of task-driven methods in computer teaching at higher vocational colleges. Through the literature review, summarize the related research theories of the task-driven way, and outline the learning effect of the task-driven process in computer teaching of higher vocational colleges at home and abroad. The study was limited to 10 computer teachers at Nanjing College of Business. The study will focus on students 'learning performance, improvement of problem-solving ability, as well as teachers' experience and observation during the teaching process, and evaluate the learning effect of the task-driven method through teaching practice and teacher-student feedback.

1.5 Research Significance

This paper has specific academic speculative value for the theoretical construction of task-driven methods. At present, there are relatively few studies on the improvement of computer teaching effect in higher vocational colleges in the place of task-driven methods. This paper puts forward an innovative research idea and research direction in the area of task-driven methods. The specific theoretical significance is shown as follows:

1. Expansion of educational theory: the task-driven method strengthens learners to learn knowledge and skills in the solving of practical problems, which is conducive to the expansion of the traditional educational approach, combining teaching with practical application, and promoting the innovation and development of academic modes.

2. Cognitive theory verification: The task-driven teaching mode focuses on the active participation and independent learning of learners, which helps to verify the theories of active learning, inquiry learning, and cooperative learning in cognitive psychology, and deepen the understanding of the learning process.

3. Subject integration research: the task-driven method usually involves the comprehensive application of knowledge of multiple disciplines. In the research process, computer knowledge needs to be integrated with other fields, which helps to promote the development of interdisciplinary research.

Practical significance

This practice in the task-driven method has guiding values, and puts forward some opinions and suggestions with pertinence, feasibility, effectiveness and operability for higher vocational computer teaching, which has a substantial improvement value for higher vocational computer teaching and has a robust realistic value. The specific practical significance is as follows:

1. Improve learning motivation: the task-driven method emphasizes the combination of learning and practical problem-solving, which can stimulate students' interest in learning and motivation and improve their learning enthusiasm.

2. Cultivate comprehensive ability: the task-driven method focuses on learners 'extensive use of the knowledge they learn to solve practical problems, which helps to cultivate students' extensive abilities, including problem-solving abilities, innovation ability, teamwork ability, etc.

3. Improve practical ability: the task-driven method requires learners to conduct useful operations in practical problems to enhance students' helpful ability and application ability.

4. Adapt to the needs of the industry: the task-driven method emphasizes solving practical problems, which can make students better adapt to the needs of the industry and cultivate higher vocational computer talents with functional application ability.

5. Reflect on and improve teaching: the task-driven method strengthens practical problems and practical operations, which helps teachers to understand deeply students' learning situations and issues to adjust better and improve teaching methods.

In general, the research and application of task-driven methods to improve the effect of higher vocational computer teaching helps promote the development of educational theory, improve the quality of higher vocational education, and cultivate higher vocational computer talents who better meet social needs. At the same, the practical application of task-driven teaching is also conducive to promoting the innovation of education mode and the deepening of teaching reform.

Chapter 2 Literature Review

2.1 Introduction

John Dewey, a famous American educator, philosopher, and psychologist, first proposed the concept of a task-driven teaching method in his book College and Society, published in 1900. He believes that learning should be based on student's interests and needs and that students acquire knowledge and skills by participating in tasks and activities in the real world. The core idea of the task-driven teaching method is to take learning tasks as the center and starting point of learning, and students acquire knowledge and skills by participating in practical tasks. The goal of this approach is to allow students to apply knowledge in a natural environment and develop problem-solving and practical skills. Tasks are often realistic, stimulating student interest and linked to their daily life and future careers (John D, Zhao X, L,., R, Z, Y,.,& Wu Z, H. 2005).

Professor Yang Dongping, a Chinese educator, is "the founder of China's task-based teaching method." In the late 1980s and early 1990s, Professor Yang Dongping conducted thorough research and exploration of the task-driven teaching method. He believes that the traditional teaching mode pays too much attention to the indoctrination of knowledge, but ignores the cultivation of students' initiative and practical application ability. Therefore, he proposed the task-driven teaching method to cultivate students' problem-solving ability, cooperative spirit, and innovative thinking by allowing students to learn practical problem-solving. The task-driven teaching method emphasizes the combination of teaching content with students' daily life and social practice, allowing students to play a more active role in the learning process, rather than just passively instilled by teachers. This teaching method pays more attention to cultivating students' comprehensive quality and ability, rather than only pursuing the memory and transmission of knowledge. Professor Yang Dongping's task-driven teaching method has been widely applied and promoted in China, which has a positive significance for promoting students' all-round development and cultivating their innovation ability. With the deepening of educational reform, task-driven teaching method plays an increasingly important role in China's educational practice (Yang, 2009).

In 2010, Yan Shuping published the application of the "task-driven method" in Computer Teaching in Vocational Colleges in the New Curriculum Learning. Expound task-driven method of teaching and learning can provide students with experience in practice situations and comprehension problem situations, follow learning tasks, with the completion of the task results test and summarize the learning process, etc., change the students' learning status, make the students actively construct to explore, practice, thinking, application, and processing high wisdom of the learning system (Yan, 2010). Wang Guiyan, in 2022, by using the task-driven method in higher vocational computer teaching, further expounds that the "task-driven method" is based on the constructivism development of excellent teaching methods, its unique teaching concept, and setting up the teaching process in computer teaching plays a unique

subject charm; the teaching method for innovation reform existing higher vocational computer teaching system, improve students' subjective initiative and learning ability is of great significance (Wang, 2022).

In conclusion, the task-driven teaching method is a teaching method that takes learning tasks as the core of teaching, and students acquire knowledge and skills by completing specific tasks. This teaching method emphasizes the purpose and practicality of learning, so that students can gradually master the knowledge and skills in practical problem-solving, and cultivate students' independent understanding and cooperative learning abilities. Introducing the task-driven method into higher vocational computer teaching not only pays attention to the transmission of knowledge, but also the cultivation of students' skill and the improvement of comprehensive quality.

2.2 Review of the domestic and foreign literature

The purpose of higher vocational computer teaching is to cultivate students 'practical operation ability and practical problem-solving ability. Due to the universality and complexity of computer knowledge, higher vocational computer teaching faces challenges, such as diverse students' backgrounds, lack of practical experience, teaching method innovation, and so on. The task-driven teaching method is a task-centered teaching method that emphasizes that students learn and develop various knowledge and skills by participating in real-world tasks. The goal of task-driven pedagogy is to allow students to explore and learn knowledge independently in the process of solving practical problems and apply it to practical situations. The task-driven method can effectively improve the learning effect of computer teaching in higher vocational colleges.

At present, the application effect of the task-driven approach in domestic higher vocational computer teaching mainly includes the following aspects. First, the task-driven method focuses on cultivating students 'practical and innovative abilities, and improves students' ability to solve practical problems. Secondly, the task-driven approach encourages students to participate in classroom activities actively, cultivating their active learning attitude and cooperative spirit. Thirdly, the task-driven process promotes the development of student’s independent learning and self-assessment ability, and improves the learning effect of learners. Finally, the task-driven method has also announced students' interest in learning computer knowledge and stimulated the potential for innovation and entrepreneurship (Zheng, 2017).

The task-driven method has been widely used in international higher vocational computer classroom teaching. Higher vocational education institutions in many countries and regions have incorporated the task-driven approach into their curriculum teaching design to improve the teaching effect and students' learning motivation. For example, many universities and colleges have adopted task-driven methods to teach computer courses in the United States. In these courses, students are assigned to small groups, each required to complete a specific task, such as developing a website or designing a software program. Students need to apply the knowledge and skills

learned throughout the project, and they need to constantly cooperate with the team members, solve problems, and make decisions. Through this task-driven teaching method, students can apply theoretical knowledge to practical problems and develop problem-solving abilities and a teamwork spirit. In some European countries, the task-driven law has also been widely used. For example, in higher vocational computer classes in Finland, students are asked to complete specific programming tasks, such as writing a small game or building a website. Through these tasks, students can better understand programming languages and technologies, and improve their problem-solving skills and innovative thinking. In addition to the United States and Europe, some Asian countries have also adopted task-driven methods in higher vocational computer classes. For example, in some vocational schools in Singapore, students are assigned to groups, each required to complete a project, such as designing a mobile application or developing a database. Through these tasks, students have a comprehensive understanding of the software development process, and develop problem-solving and innovative skills.

In future studies, we can further explore the differences and characteristics of different countries and regions in the application of task-driven methods, as well as in teaching in other disciplines.

2.3 Task-driven method theory

1. Meaning of the task-driven method

The task-driven method is a task-centered teaching method whose theoretical basis mainly includes constructivist learning theory and pragmatic learning theory. Constructivist learning theory holds that learning is a process in which learners actively construct their knowledge meaning through interacting with the external environment based on their original experience and cognitive structure. The task-driven method guides students to actively explore, and solve problems by setting specific tasks and promoting the construction of students' knowledge meaning. Grammar learning theory emphasizes the practicability and effectiveness of learning, believes that education should meet the needs of real life, and pays attention to cultivating students' practical abilities and problem-solving abilities (Chen, 2012).

2. Characteristics of the task-driven method

The task-driven method has the following characteristics: First, the task-driven plan sets the goal of learning to complete practical tasks, rather than impart knowledge. Secondly, the task-driven method focuses on the active participation of learners and encourages them to explore and practice the study, providing a positive learning environment. Also, the task-driven approach focuses on learners' ability development, and through task-driven learning, learners can constantly improve their problem-solving skills. Finally, the task-driven approach emphasizes the process and results of knowledge, but also pays attention to cultivating learners 'emotions and attitudes and promotes the development of learners' personality and values (Willis, J., & Willis, D. 2007).

3. Teaching design principles of task-driven method

The teaching design principles of the task-driven process mainly include the following aspects: First, the clarity of task objectives. In task-driven teaching, the goal of teaching activities is determined by itself, so it is necessary to define the purpose of the job to ensure that students know the plans needed to complete the study. The second is the authenticity and operability of the task. The task should be in line with the actual workplace needs, and the basic needs of students should be taken into account in the task design, so that students can obtain real operational experience in the task. In addition, the charges should also be somewhat operable, and students can complete the functions through their practical operation and improve their functional operation ability by meeting the parts (Zhuang, 2006). Moreover, the situational design of the task should be in line with the actual situation of students as far as possible. For example, in higher vocational computer classroom teaching, some functions related to practical work can be designed, so that students can use the knowledge learned in the actual situation. In addition, the situational design of tasks can also stimulate students' interest in learning and improve their learning initiative. In addition, there are personalized and differentiated designs of functions. Different students have different learning characteristics and needs, so the task design according to the customized differences of other students can better meet the learning needs of students and improve the learning effect. Finally, the task evaluation and feedback. Task-driven teaching emphasizes that students learn through task completion. Therefore, it is necessary to set clear evaluation standards in task design, evaluate students' task completion, and give timely feedback to help students find their shortcomings and improve. Evaluation and feedback can not only help students to understand their learning situation, but also stimulate their motivation to learn (Wang, 2021). The teaching design of task-driven methods can provide students with specific and clear learning objectives, make learning closer to the actual workplace needs, stimulate students' enthusiasm and initiative in learning, and improve the effect of computer classroom teaching in higher vocational colleges.

4. Implementation steps of the task-driven method

The implementation steps of the task-driven method are to guide students to complete their tasks through a series of processes based on instructional design. First, teachers need to clarify the objectives and requirements of the study. The task objective should be linked closely to the course objective, which can stimulate students' interest and motivation in learning. Secondly, teachers need to design the content and steps of the tasks. The task content should be challenging and practical and can stimulate students' ability to think and explore actively. The task steps should have a clear logical relationship, from easy to difficult, from shallow to deep, so that students can gradually master the relevant knowledge and skills. Then, the teachers need to provide the necessary learning resources and tools. Learning resources can be textbooks, materials, websites, etc., while tools can be software, hardware, equipment, etc. Teachers can also guide students to study together, so that they can cooperate and explore problems together. Next, the teachers must organize the students to complete the task, and give essential support and guidance. In the process of student’s

assignment, teachers should answer their questions in time and give them the necessary advice and feedback. Finally, teachers need to evaluate and summarize the students' completion of their tasks. The evaluation can consist of the students' performance, defense, report, and other forms, and the summary can include the advantages and disadvantages of the study, improvement suggestions, etc. Implementing the task-driven method requires the joint efforts of teachers and students. Only with the guidance of teachers and the efforts of students can better teaching results be achieved (Liu, 2018). By implementing the task-driven method, students can construct knowledge in practice, improve their problem-solving ability and innovation consciousness, enhance their learning motivation and interest, and realize the improvement of the computer classroom teaching effect in higher vocational colleges.

5. Differences between task-driven methods and traditional teaching methods

ZhaoPengfei, in the China Science and Education Innovation Guide, published the article "task-driven method in higher vocational computer teaching application," points out that higher vocational computer teaching current teaching methods, the teaching effect is poor, introduced in the actual teaching of the "task-driven method" can improve the students' practical ability, independent innovation ability and team consciousness, teaching effect significantly enhanced. There are some notable differences between traditional and task-driven teaching (Zhao, 2013). First of all, traditional teaching focuses on the transmission of knowledge and the passivity of students. Teachers are usually the primary source of knowledge, while students are the passive recipients. Task-driven teaching emphasizes students' active participation and self-directed learning. The role of a teacher is more like a guide, which provides tasks and guidance and encourages students to explore and solve problems actively. Secondly, traditional teaching pays attention to the transmission of theoretical knowledge and emphasizes the mastery of principles and concepts. However, task-driven education pays more attention to cultivating practical and applied abilities. By providing students with actual tasks and problems, they can use the knowledge to solve practical problems, and develop students' useful ability and innovative thinking. In addition, in terms of teaching content and form, traditional teaching pays more attention to the content of textbooks and teachers' education. In contrast, task-driven teaching emphasizes task-driven, and designs teaching content and structure according to the characteristics of tasks and the needs of students. Task-driven teaching focuses more on cultivating students 'cooperation abilities and team spirit, completing tasks through group cooperation, and enhancing students' interaction and communication. Finally, in terms of evaluation methods, traditional teaching tends to take an examination as the only evaluation means and pay attention to students' memory and understanding ability. Task-driven teaching pays more attention to the assessment of students' abilities through the completion of tasks and emphasizes the evaluation of students' subjective initiative and problem-solving ability (Wang, Shan, & Jia, 2008). In general, task-driven teaching has more advantages over traditional education. It can encourage students to study actively, improve their learning motivation and interest, and cultivate students' practical and application abilities. In addition, task-driven

teaching can also promote students' communication and cooperation and boost their team spirit and cooperation ability. By comparing the differences between traditional and task-driven teaching, we can see the potential and advantages of task-driven education in improving the effect of computer classroom teaching in higher vocational colleges (Harris, R. 2018).

Combining the above relevant theories, the task-driven teaching method emphasizes the active participation of learners in practical tasks, and understands the current knowledge through problem-solving and cooperation. This teaching method encourages learners to actively explore and discover knowledge and develop their problem-solving skills.

6. The application of task-driven method in higher vocational computer teaching

(1) Do an excellent job of task design before teaching

Before higher vocational colleges carried out computer teaching, be a straightforward task-driven design refers to the this class teaching content, according to the professional system and students' learning status, combined with the curriculum standard to complete this class teaching and teaching focus, highlight the teaching tasks, and detailed teaching task of this lesson. Setting the teaching objectives of the task unit, gradually dividing an enormous task into different small tasks, and doing a good job of setting the primary goals can help students understand what the foundation need to learn in the lessons. For example, teachers in the windowsxp and windows7 operating systems, should first be clear this lesson teaching task is to let the students understand the personalized operating system, different operating systems, and the differences between the operation. At this stage, teachers need to set the teaching goal for the students to scientific and effective management of computer resources, requires students through this lesson to learn in different systems, the primary operation content, system file management, control panel of corresponding function and the application of input method, etc. If, in this teaching, the teaching task set by the teacher is to make spreadsheets. Teachers should let the students know how to apply the Excel program in the office, teachers need to explain the application of Excel in this lesson about what middle school students need to learn. Including the essential operation of Excel, the analysis of the formula through Excel, the calculation of functions, chart making, output printing, table format editing, etc. These are all about what students need to learn, After this class, The teacher needs to respond to this lesson, Let the students make the Excel electronic report independently, And uploaded to the teacher's computer, The teacher scores the students' learning content of the lesson, This is the task-based teaching, task-driven teaching method, Higher vocational computer teaching before the application of the vital content.

(2) Give full play to the teaching effect of the task-driven method in the teaching

Design good teaching objectives in task design need to combine the characteristics of a professional set task carrier, develop the corresponding teaching objectives, can make the whole education teaching full of interest, make students in the process of learning more practical computer operation skills, and students can also according to the content of the teacher about new and old knowledge, after accepting the new knowledge, the old knowledge together, form a system of knowledge system,

computer learning in the future can also bring positive impact. Teachers in the task-driven method of the process of higher vocational computer teaching pay attention to the student initiative in the classroom. The purpose of the task-driven method is to let students independently according to the content of learning, computer teaching. If the students only listen to the teacher about theoretical knowledge, but not the actual operation of students operating quality will decline. Take the form Excel as an example, many students listen to the teacher that they have learned how to make an Excel table and how to calculate the formula, but in the actual process of self-operation, there will be a mess, poor operation effects and other problems. China's new curriculum standard also directly and points out, that students are the main body of the classroom, teachers must attach great importance to the students' learning state when carrying out teaching, always be student-oriented. This requires teachers to pay attention to the initiative of students in class, teachers need so more when choosing task-driven teaching. Students' learning status should be fully respected, give full play to the students' autonomy in the classroom. After telling the theoretical knowledge, teachers need to let the students learn independently. They can assign specific tasks, or choose the activities of the study group, and let a group explore how to solve this problem. When the independent operation in the group, students will have the courage to ask other students when they will not. Compared with the teachers, other students' explanation is better understood, and their understanding effect can be improved.The inquiry task teaching can operate independently and innovate appropriately according to the existing prompts. Its ultimate purpose is to realize the completion of the task, improve the completion effect of the task, and increase the initiative of students in the classroom. In addition, teachers must ensure the progress of the class and the overall direction of the discussion when designing classes, so that students can put the topic on the task objectives in the actual process of topic discussion. Teachers should help students find the teaching tasks and contents of this class to ensure that the whole classroom atmosphere is in an active and healthy state. Students should have a purposeful discussion of its content, teachers should encourage every student to participate in the teaching task of this lesson actively. When the students encounter problems, in a guided way to inform students and help them solve problems, instead of directly telling the students the answer to the question, students need to think for themselves, to get the answer to the question finally. To improve the effect of teaching, it can also improve the quality of their learning. In the process of learning computers, in the process of task design, we need to attach great importance to the practicality and knowledge of the design of this class, especially in higher vocational colleges to carry out the course teaching of "Computer Basic Application." Teaching objectives should be highlighted to ensure that the whole teaching idea is clear, and lay a good foundation for students, to steadily improve the learning effect in the later computer learning process. Teachers should highlight all the key knowledge, when designing the teaching tasks. They should make clear the knowledge that students need to master in this class and integrate the knowledge and technology that they need to master. Teach students by their aptitude, but ordinary tasks do not apply to all students. In the process of daily learning, vocational students also have pronounced

professional characteristics. Students should not only pay attention to theoretical knowledge, but also need to improve students' practical abilities. Let the students learn the theoretical knowledge in the shortest possible time into their practical ability, combined with the students' professional layout of various tasks, enables students to feel the computer and their professional, career has a very close relationship. In the process of task design, teachers should also pay attention to the enlightening task, which is enlightening to exercise students' innovative thinking, which is also one of the main reasons for choosing the task-driven teaching method. Teachers should leave more time for students to think and explore independently. Avoid the rigid thinking of students in the process of learning, mindlessly follow what the teacher said is right, and do not think independently, without their ideas, which will lead to the loss of autonomy in the whole task learning and design process, which is harmful to teaching. Teachers should leave more space for students to think, so that students can explore knowledge independently; students can also independently learn knowledge and tasks, improve the diversity of their exploration tasks, and stimulate students' learning thinking and divergent thinking. To help students develop independent, innovative thinking, in computer teaching, the same problem can be solved in different ways. Teachers can give children a solution after proposing this problem, while other solutions require students to analyze and explore independently. This way can also directly improve all students' overall learning quality and learning effect, can let the students in the process of daily learning constantly independent inquiry, analysis, understanding, and comprehension to the fun of autonomous learning, really improve the overall effect of students in learning, also can change the previous students in learning appeared step-by-step, students are not willing to state of active thinking. Such as in the design of the graphic can use drawing tools, also can use the way of illustration, or optional graphic art way to reflect. The content requires students to work independently, but students can study and work to find more ways to solve the same problem in the future, rather than in the face of the same problem that the only one solution, students need to make independent innovation, to solve the problem way more and more, the effect of solving the problem is getting better and better. At present, many new students do not have perfect computer operation ability, especially because some primary and secondary schools in China think that computer courses are not important. To this end, in higher vocational colleges, some students will encounter many problems when learning computer. The difference in computer ability between students is often large. When the teachers set up the task-driven method, one should also worry about the students' learning status, teaching from person to person, improve the overall effectiveness of the teaching, teachers should work step by step. Mobilizing the students with weak basic computer ability can also let the computer foundation ability of the better students to lay a solid foundation, not only reflects the fairness of education and teaching, but also shows the business trip. Let students with computer learning talents, in their current state of learning. They are more initiative to learn, they will gradually feel that the teachers are paying great attention to the students' learning status, teachers attach great importance to student's learning effect

and scene when learning. In the long run, when students learn, their learning initiative and learning effect will be significantly improved.

(3) Improve the evaluation system of education and teaching

In the task-driven teaching method, the need to constantly improve the education teaching evaluation system, no matter what kind of teaching method, education teaching evaluation system is a part of teachers in the teaching, teaching evaluation system directly affects the students in the subsequent learning overall effect, teachers in the setting the teaching evaluation system, must attach great importance to the students 'learning state, students' thinking condition and the impact of students' task completion. When carrying out the design of a teaching evaluation system, teachers should understand that different students have significant differences due to their thinking processes and understanding of the computer. In the teaching evaluation of students, they must not be evaluated according to the unified standard; they should be analyzed and evaluated according to their previous learning status which can make the students feel that they are improving bit by bit. Students' learning effectiveness and learning initiative will also be enhanced; teachers can also choose between student self-evaluation or student mutual evaluation, to evaluate this content with the students' thinking. Its evaluation is much more accurate. In the case of the task reference answer, teachers need to find what mistakes students have in doing their homework, and what advantages in their assignments. Teachers can not mindlessly choose to criticize the students. Instead, it should combine criticism with encouragement, so students can feel the fun of learning and teachers' care for students. In turn, every student can be active and more willing to learn. Teachers in the choice of task evaluation system, should also analyze regularly the task evaluation system, understand the task evaluation system setting process. If they encountered the problem and how to solve it, the teaching objectives and teaching plan are conducive to the improvement of teaching efficiency, help teachers' cognition in the actual teaching process what problems, and how to solve these problems further, always meet the demand of education teaching, make education teaching level in now meet the needs of the development of students. Teachers in the use task-driven teaching method, should also learn about how to cultivate students' autonomous ability, which is part of the education teaching evaluation. If the students' independent ability is poor, even if students’ classroom homework completion effect is good, teachers should also aim to communicate with students, let students know enough theoretical knowledge, its practical ability and autonomous learning ability is improved. (Du, 2020).

2.4 Study of learning effect

1. Task-driven method to stimulate students' interest and initiative in learning. Tan Chenming published a paper titled "Task-driven Method in Computer Teaching in Higher Vocational Colleges" in the journal "Computer Products and Circulation," pointing out that the task-driven method can better stimulate students 'learning motivation and improve students' learning effect (Tan, 2018). Deng Xuefen in 2018, the journal of Digital Communication World published an article, "Task-driven

method in higher vocational computer teaching", which expounds that teachers in computer course teaching, take task-driven teaching method, can effectively stimulate higher vocational students' interest in learning computer courses, because the task-driven teaching method has the flexibility and the characteristics of inquiry, can optimize the teaching mode to improve the teaching effect (Deng, 2018). Zhou Mei published in the journal of Informatization and Computer Education article "Task-driven Method in Higher Vocational Computer Teaching Application," clearly stated that the task-driven method is an effective teaching method of computer classroom teaching, especially in the process of higher vocational teaching, task-driven teaching method can stimulate students' interest in learning, let the students through practice, and feeling to learn to meet the current era's urgent need for computer technology personnel (Zhou, 2021).

3. The task-driven method cultivates students' problem-solving abilities. Wang Jian "education modernization" published task-driven plan in higher vocational computer teaching analysis, the task-driven approach in higher vocational computer teaching widely used in the process, not only can effectively improve the students 'learning ability, but also can cultivate students' practical ability, improve students' comprehensive quality, improve the efficiency of higher vocational computer teaching (Wang, 2016). Cao Youwen published an article, "Analysis of the Role of Task-driven Methods in Higher Vocational Computer Teaching," in Western Quality Education, discussing the introduction of task-driven methods in computer teaching in higher vocational education, which is a beneficial attempt at teaching reform. Based on the characteristics of computer teaching, teachers in the teaching process of the task-driven method timely introduction, to show the role of task-driven methods, in good teaching effect (Cao, 2017). In Finland's higher vocational computer classrooms, students were asked to complete specific programming tasks, such as writing a small game or setting up a website. Through these tasks, students can better understand programming languages and technologies, and improve their problem-solving skills and innovative thinking (Kirschner, P. A., Sweller, J., & Clark, R. E. 2006). In some higher vocational colleges in Singapore, students are assigned to small groups, each required to complete a project, such as designing a mobile application or developing a database. Through these tasks, students can fully understand the process of software development and develop the ability to develop problem-solving and innovation (Hmelo-Silver, C. E., Duncan, R. G., & Chinn, C. A. 2007).

4. The task-driven method promotes cooperative learning and interactive learning. In computer education reform in some higher vocational colleges in China, we began to try task-driven teaching, and some positive results have been achieved. Some colleges have achieved good teaching results by reforming the curriculum setting and teaching methods, developing teamwork, and practical project development (Liang, 2015). In the United States, many universities and colleges have adopted a task-driven approach to teaching computer courses. In these courses, students are assigned to small groups, each required to complete a specific task, such as developing a website or designing a software program. Students need to apply the knowledge and skills learned throughout the project process, and they need to

constantly cooperate with the team members, solve problems, and make decisions. Through this task-driven teaching method, students can apply theoretical knowledge of practical problems and develop problem-solving skills and teamwork spirit (Ellis, R. 2009).

5. The task-driven method promotes the innovation of teachers' teaching methods.

Liu Jing explained the positive role of the task-driven method in teaching in the article "Application of Task-driven Method in Computer Teaching in Higher Vocational College," published in the Journal of Curriculum Education Research. On the one hand, this paper shows that the application of task-driven methods in computer teaching in higher vocational colleges is becoming more and more common; on the other hand, they also emphasize the advantages and use practices of task-driven methods, which can further improve the learning effect of teaching (Liu, 2019). In promoting and applying the task-driven method, it is necessary further to strengthen the support of teacher training and teaching resources, and solve various problems in teaching design and implementation to improve further the learning effect of computer teaching in higher vocational colleges (Xiong, 2016).

Although the task-driven method has many advantages in computer teaching at higher vocational colleges, its application is still limited to domestic computer teaching at higher vocational colleges. On the one hand, some teachers are not familiar with task-driven teaching methods, and they have some problems with teaching design and implementation. On the other hand, the overall teaching environment and resources of some colleges and classes are limited, which makes it challenging to support the development of task-driven teaching (Li, 2008). Compared with China, international higher vocational computer education pays attention to the cultivation of students' practical ability and pays more attention to the practice of task-driven learning. Some international universities have set up courses with tasks as the core, designed and implemented schemes through projects, competitions, and other ways, and achieved remarkable teaching results. The application of the task-driven method in computer classroom teaching in international higher vocational colleges shows that the task-driven process plays a vital role in cultivating students' innovative thinking and practical ability. Still it also faces some challenges in teaching design and implementation, which needs further research and improvement (Herold, D. E., & Rutherford, T. A. 2017).

Many empirical studies show that the task-driven method plays an essential role in improving the learning effect of computer teaching, students' learning interest, practical ability, and teamwork ability in higher vocational colleges. Although there are some research results on the task-driven method in higher vocational computer teaching, there is no consensus on the application strategy and effect analysis of the task-driven way. Therefore, the research and discussion of using the task-driven method to improve the learning effect of computer teaching in higher vocational colleges still need to be further explored.

Chapter 3 Research Methodology

3.1 Introduction

This paper adopts a qualitative research practice to summarize the related research theory of task-driven methods and outline the learning effect of task-driven method in computer teaching at home and abroad. Using the observation method and interview process, the empirical case study of 10 computer teachers of Nanjing Business College, collected the feedback of teachers, explored the learning effect of task-driven computer teaching in higher vocational colleges, and further verified the effectiveness of using task-driven methods to improve the learning effect of computer teaching in higher vocational colleges.

3.2 sampling and sample size

The research sampling of this paper is Nanjing Business University, a higher vocational college in China. I chose the higher vocational colleges, because I have engaged in computer course teaching for 20 years, and the research problem, usually the use of college resources for computer teaching, actively adopting task-driven teaching method, able to obtain the necessary data and information, after years of education also accumulated some historical data and previous research. Choosing this unit for research can increase research credibility, improve research efficiency, provide a basis for policy-making, and further promote academic exchanges.

The research subjects of this paper are the teachers and students majoring in computer science at Nanjing Business University. Students of computer majors in higher vocational colleges are chosen because these students usually have a specific computer foundation and are the target group. Through research, they can understand the applicability and effect of task-driven methods in this particular group of students. At the same time, we also appreciate the improvement of task-driven processes on teachers 'teaching methods and their influence on students' learning performance, which is of great significance to improving teachers' teaching ability. Choosing the teachers and students of higher vocational computer majors as the research object can improve students 'learning interest and initiative, cultivate students' problem-solving ability, promote cooperative and interactive learning, and promote the innovation of teachers' teaching methods.

3.3 Research design

To ensure the validity and reliability of the study, this study used empirical case study methods for data collection and analysis.

Step 1: The research scope of this paper is the computer classroom teaching at Nanjing Business University. In computer teaching, the task-driven teaching method is adopted. Teachers design a challenging task according to the course objectives and the actual situation of the students: to create a simple 3D game scene to realize the essential operation and interactive functions. This task requires students not only to be familiar with concepts and technologies related to graphics, but also to have specific programming skills and innovative thinking.

Step 2: This study used observation and interview methods for material collection.

1. The observation method is mainly used to observe the practical application of task-driven methods in computer classroom teaching in higher vocational colleges, including the design and implementation of tasks, students' participation in task-driven education, etc. Through observation, the first-hand teaching process data can be obtained to provide a basis for the subsequent data analysis.

2. The interview rule is mainly used to collect the feedback and evaluation of students and teachers on task-driven teaching. Interviews can provide an in-depth understanding of the students 'experience and learning effects in task-driven education, as well as to understand the teachers' knowledge and application of the task-driven method. Through interviews, the honest thoughts and feelings of students and teachers can be obtained, providing substantial evidence for the conclusion of research conclusions.

Design the interview outline according to the study objectives. The purpose of the interview is to understand the teachers' views and experience of the task-driven method to improve the learning effect of computer teaching in higher vocational colleges, and to comprehensively evaluate the practical impact and potential of the teaching method from multiple perspectives.

Table 3-1 Interview outline

Interview outline	
Interview purpose	Interview questions
1. Stimulate students' interest in learning and initiative	How to design attractive tasks to stimulate students' interest in computer science?
	In the task design, how to consider the students' personal interests and career development needs?
	Could you share some successful examples to illustrate how task-driven can stimulate students' interest in learning?
2. Cultivate students' ability to solve problems	In the task-driven teaching, how to cultivate students' ability to analyze and solve problems?
	Are there specific task types or methods that can help students develop systematic and innovative thinking

	skills?
	Please share a case of how students improve their ability to solve practical problems by completing the task.
3. Promote cooperative learning and interactive learning	How to design tasks so that students need to work together in small groups?
	How to balance the importance of individual learning and teamwork in the task-driven teaching?
	Could you share an example of the gains and difficulties of students in completing tasks through cooperation?
4. Promote the innovation of teachers' teaching methods	How does task-driven drive you to try new teaching methods or materials?
	Is there experience sharing, involving task-driven teaching that brings teacher role change and teaching style innovation?
	How do you adapt and improve based on student feedback when implementing task-driven instruction?

Step 3: This study used group cooperation, where the students were divided into several groups, each consisting of 4-5 students. Each group selected a specific task scenario by drawing lots before the task began and completed the job under the guidance of the instructor. Observe the classroom and record the teachers 'teaching behavior, students' participation, and other information. In the observation process, minimize the interference to avoid affecting the regular class. After class, teachers and students will arrange the interview time and conduct the interview through the network, to ensure the interaction and in-depth interview process.

Step 4: This study collects feedback from teachers and students through observation and interview methods to understand the learning effect of students in task-driven teaching.

1. Observation data: Through the teaching process observation, record the students' performance and the interaction between teachers and students in the classroom.

2. Interview record: Interview questions were distributed, and the subjective feedback and feelings of 10 computer teachers from Nanjing Business College were collected through questionnaire star.

Step 5: Observations show that, in terms of task design, teachers have fully considered the actual needs and interests of students, and have developed challenging and practical tasks. Students showed an active participation attitude in the task-driven teaching environment, and showed high initiative and self-management ability for task completion. In terms of task implementation, teachers guide students to complete tasks by explanation and demonstration, and students learn new knowledge and skills in solving practical problems to improve and stimulate their interest and initiative in learning.

Through interviews with teachers and students, students generally believe that task-driven teaching can improve their learning motivation and learning effect. It can also cultivate their practical operation and problem-solving abilities, and the class students can be divided into several groups to promote cooperative and interactive

learning. They are more active in the class and solve the problems involved in the task. Teachers believe that in the process of completing tasks, students can deeply understand and master the relevant knowledge, and can flexibly apply it to practical problems. At the same time, in terms of students 'learning effect, teachers find that task-driven teaching can better encourage students to complete learning tasks and innovate teachers' teaching methods.

Chapter 4 Finding and Conclusion

4.1 Introduction

Through consulting many literature, collecting relevant data, discussing the application and importance of task-driven methods in teaching, the teaching design principles and implementation steps of task-driven learning theory and task-driven process, and also understanding the application of task-driven method in computer classroom teaching in higher vocational colleges at home and abroad. In an empirical case study, by introducing the task-driven process, we can change the teaching mode in the traditional computer classroom teaching to increase students' participation and initiative, and improve their ability in practical problem-solving. According to the research target design interview content, interviews with ten teachers to understand the current teaching situation of Nanjing Business College, an experimental task-driven method in the application of higher vocational computer teaching and effect, through the study found that task-driven approach can effectively improve the impact of computer teaching, cultivate the students' computer use ability, promote their all-round development.

4.2 Current situation of computer teaching at Nanjing Business College

With the rapid development of information technology, computer science and technology are playing an increasingly important role in modern society. The teaching effect of computer courses in higher vocational colleges are crucial for cultivating excellent computer professionals. For a long time, the traditional classroom teaching mode of Nanjing University of Commerce has gradually exposed some problems in meeting students' learning needs and cultivating their practical ability.

Lack of learning motivation: traditional computer classroom teaching is often teacher-centered, and the students lack the initiative and enthusiasm to accept the knowledge, which leads to a lack of learning motivation.

Disconnection between theory and practice: many computer courses focus on teaching of theoretical knowledge, but lack of education combined with practical application, makes it challenging for students to apply theoretical knowledge to practical problems.

The learning effect is not satisfactory: the traditional classroom teaching model makes it challenging to meet the learning needs of different students. Others may be bored because of the faster learning progress, while some students may not keep up because of the slow learning progress.

Task-driven method into Nanjing Business College of computer teaching, computer teaching, design interview outline, interview ten computer teachers, organize teachers teaching feedback, research task-driven method in higher vocational computer teaching learning effect, the results show that: the task-driven process can stimulate students 'interest in learning and initiative, cultivate the students' problem-

solving ability, promote cooperative learning and interactive learning, promote teachers' teaching method innovation.

4.3 The learning effect of task-driven method in computer teaching in higher vocational colleges

In this paper, through the qualitative research method, the literature reviewed the task-driven theory, introduces the task-driven plan to improve the effect of learning research, adopts the observation method and interview method, collected the Nanjing Business College 10 computer teacher teaching feedback, discusses the task-driven approach in higher vocational computer teaching learning effect. The results show that the task-driven process has the following learning effects in higher vocational computer teaching:

1. Task-driven methods can stimulate students' interest and initiative in learning. The task-driven process combines learning with practical problems and tasks, which can arouse students' interest and boost their motivation for learning. Students showed their positive learning attitude and initiative by solving problems and completing tasks independently.

2. Task-driven methods can cultivate students' problem-solving ability. Through the task-driven plan, students get a lot of practical opportunities to use what they learn to solve practical problems. In the process of task completion, they have cultivated their helpful ability and problem-solving ability, and improved their comprehensive quality.

3. Task-driven methods can promote cooperative learning and interactive learning. The task-driven approach encourages cooperation, and communication between students to complete tasks through teamwork. Students learn to listen, communicate and cooperate, improving their teamwork and communication skills.

4. Task-driven methods can promote the innovation of teachers' teaching methods. The task-driven process provides an innovative teaching model for teachers to cultivate students' comprehensive problem-solving abilities by introducing practical problems and tasks. Teachers can use this method to stimulate students' interest in learning and constantly improve this teaching method through continuous reflection and improving their teaching practice.

The research is designed to improve the learning effect of computer teaching in higher vocational colleges through task-driven methods that can evaluate the effectiveness of task-driven teaching methods in computer teaching in higher vocational colleges and provide a theoretical and practical basis for improving and popularizing the task-driven teaching method.

Chapter 5 Recommendations

5.1 Future application field of task-driven method

The task-driven method is a teaching method that aims to improve learning outcomes by placing task-centered learners in a practical problem-solving situation. For higher vocational computer classroom teaching, it can be successfully applied to the following institutions, organizations, and individuals:

1. Higher education institutions: Universities, higher vocational colleges, and professional training institutions can use the task-driven method to teach computer-related majors. This method can enhance the students' practical application ability and problem-solving ability.

2. Internal enterprise activity: The Company can apply the task-driven method to the internal training, especially for the employees in computer technology and information technology. This can better help employees solve problems in practical work.

3. Community education programs: Community education programs can use the task-driven method to introduce computer technology education into the community and improve the scientific literacy of residents.

4. Self-scholars and individual learners: Any individual learner interested in the computer field can study independently through the task-driven method. Online resources and learning platforms provide a wealth of learning tasks and programs to help individuals improve their skills.

Overall, the task-driven method applies to all institutions, organizations, and individuals who wish to learn computer knowledge and skills through practical problem-solving. Whether in college education or vocational training, the task-driven method helps to improve learning outcomes and develop students and employees as required in practical work.

5.2 Recommendations for future researchers

The task-driven method is an effective teaching method to improve students' engagement and learning effect in the classroom. Here are some suggestions for future researchers to better use task-driven research and be successful:

1. Task design: to design challenging tasks related to the computer course content of higher vocational colleges. Lessons should encourage students to think, work together, and solve problems collaboratively to stimulate their interest in learning and initiative.

2. Assessment and feedback: Researchers must explore assessment methods suitable for task-driven methods. These assessments should be able to measure the knowledge and skills that students acquire in the task. At the same time, giving timely feedback is crucial to students' learning process.

3. Technical support: Use educational technology and a learning management system to support task-driven teaching. These techniques can help fellows better track students' progress, manage tasks, and provide learning resources.

4. Teacher training: task-driven methods may require teachers to have different teaching skills and strategies. Provide training and support for teachers to apply task-driven methods and address problems that may arise flexibly.

5. Interdisciplinary cooperation: The task design in computer classroom teaching in higher vocational colleges can cover multiple disciplines. Fellows are encouraged to work with faculty in other fields to create more prosperous and integrated task experiences.

6. Publication results: Organize and summarize the research results, and actively seek to be published in relevant academic journals or conferences. That helps to promote the application of task-driven methods in computer teaching in higher vocational colleges and share experiences with other educators.

In short, the task-driven method can potentially improve computer classroom teaching in higher vocational colleges. In the future, researchers can further develop and optimize this teaching method through in-depth research, teacher training, and cooperation and communication measures to achieve better teaching results.

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