

# A Brief Analysis of the Role Conversion and Quality Update of Information Technology Course Teachers in the New Curriculum Reform

Zengni Hu \*, Tianyao Xiang

School of Information, Yunnan Normal University, Kunming, China.

\* Corresponding Author:1156799589@qq.com

## Abstract

The new curriculum reform proposes that information technology courses can be used to cultivate students' information literacy. Teachers, as an important role in achieving this goal, have practical significance in the study of their role positioning and quality capabilities in the teaching process. Therefore, in order to obtain the correct role view and quality abilities of information technology teachers in the 21st century, this article will focus on the role view and quality update that information technology teachers should change under the background of the new curriculum reform. The whole article Taking the new curriculum reform's requirements for information technology teachers, the current information technology curriculum and the status quo of teachers' own abilities, as well as the role conversion and quality update of teachers after the new curriculum reform, these three aspects are themed and elaborated. And then summarized the role view that contemporary information technology teachers should change and the quality and ability they should have.

## Keywords

New curriculum reform, information technology teacher, role view, quality update.

## 1. Introduction

With the development and implementation of the new curriculum in full swing, the information technology curriculum in primary and secondary schools has also started a transformational process. In the context of the new curriculum reform, information technology teachers have been given new quality requirements: teachers must change their educational concepts and enhance information awareness; establish a truly equal and harmonious teacher-student relationship with students; teachers must adapt to the change of roles. Actively change teaching methods; students' independent learning ability and teaching innovation ability should become the primary teaching task of teachers [1]. The new curriculum emphasizes that teachers are the instructors, organizers and collaborators of students' learning. The teaching process is an interactive process of communication and common development between teachers and students, so that teachers and students become a real "learning community" in the classroom. As the leading factor in the classroom teaching situation, teachers must be the first to take the brunt of the revolutionary road of curriculum reform, take the initiative to complete the role change, and update the quality requirements in time. Only in this way can it be ensured that teachers can act as implementers and promoters of the new curriculum reform, and can interact with students and develop together.

However, there are still some information technology teachers who are still in the state of teaching before the new curriculum reform: teacher-centered, teaching methods only use one-way teaching, teaching content design is single, and the idea of exam-oriented education is deeply rooted in the hearts of the people [1]. In this state, how can we meet the requirements of

using information technology to train students' "information literacy" in the new curriculum reform. Therefore, further research on the status quo of information technology teachers' role concepts and quality levels, analysis of the reasons for their limited development and corresponding measures will help to better promote the new curriculum reform.

## 2. Research and analysis on the status quo of teachers' quality

Since the new curriculum reform was proposed, there has been a wave of education reform in the education field across the country. It is only because of the regional characteristics, educational resources, rich and poor status, etc., the wind is not very balanced. Many remote areas It cannot follow the trend of the new curriculum reform to make changes to the regional education. However, as the country's economic development is on the rise, the education policy continues to improve, and the rapid development of science and technology, so far, the new curriculum reform has been continuously promoted throughout the country.

While the new curriculum reform is being comprehensively promoted, the regional development gap is still a problem that cannot be ignored. For border provinces like Yunnan, although the new curriculum reform is also in continuous development, compared with most developed provinces, it is due to the follow-up of new curriculum reforms. The curriculum reform is not long, coupled with the relative backwardness in economy and technology, the implementation of the new curriculum reform in border provinces such as Yunnan is still insufficient. Correspondingly, the status quo of teachers' professional quality in these areas is still backward.

Therefore, for a more comprehensive understanding, the author made a questionnaire for the professional quality of information technology teachers. This questionnaire is based on the basic status of information technology teachers in primary and secondary schools. It is divided into information technology Teachers' basic information, academic ability, teaching attitude towards information technology, whether they are familiar with the new curriculum reform and their level of understanding and mastery, as well as their understanding and views on the status quo of information technology courses, and then start to ask questions in turn. According to the analysis of survey data, the following summary can be drawn on the status quo of teachers' quality:

### 2.1. Disciplinary knowledge is difficult to adapt to the needs of informatization development

In the rapid development of information technology disciplines, in the contemporary society where new knowledge and new technologies are constantly emerging, the vast majority of information technology teachers rely on their own continuous learning, professional knowledge and professional ability can be improved to a certain extent, but with the continuous explosion of professional knowledge With the influx, the subject expertise and abilities of information technology teachers have begun to enter the dilemma that it is difficult to meet the needs of educational information development.

### 2.2. Advocating technology, ignoring educational theory

The rapid development of information technology and the wide application in various industries have made information technology teachers pay more attention to mastering technical operations, equating proficiency with the latest information technology knowledge as a good teacher, but neglecting the learning of general teaching knowledge and not going to the system Learning educational theoretical knowledge has led to the simple introduction of information technology courses into computer skills courses, and almost forgot to consider the connotations and fundamental tasks of information technology itself. This is contrary to the course goal of comprehensively cultivating students' information literacy in information

technology courses. At the same time, it also limits the professional development of information technology teachers.

### **2.3. The teacher's subject teaching knowledge is lacking**

The opening time of information technology courses is not longer than that of other subjects, and the research on subject teaching knowledge can only be regarded as the initial stage. There are very few successful experiences for teachers to learn from. Young teachers, who have not long teaching years, determine the teaching goals, The organization of teaching content, teaching methods, teaching evaluation and other subjects of effective teaching knowledge are obviously lacking. Some teachers are eager to receive training in the teaching knowledge of information technology subjects, and are eager to be directly taught by experts [2].

### **2.4. Subjects are marginalized and work pressure is high**

Since information technology courses have not received the attention they deserve before in schools and society, the sense of accomplishment and self-worth of information technology teachers has not been reflected. In addition to teaching information technology courses, he also undertakes the construction and application of school information technology, and helps other teachers to make courseware. It must work harder than other teachers in other disciplines, the workload is overloaded, and it is prone to job burnout. In addition, due to the lack of attention of school leaders, the evaluation of work results is unreasonable, and the salary is lower than that of "main subject" teachers. The most important thing is that compared with other disciplines, the development of information technology subjects is rapid. Teachers face new knowledge with each passing day, the pressure will be greater, and learning new knowledge requires more time and energy. This will seriously hinder the professional development of information technology teachers.

## **3. The wrong positioning of the role of information technology teachers**

Information technology teachers are teachers first, followed by teachers with high professional requirements<sup>[3]</sup>. Therefore, in addition to accepting the training and growth of ordinary teachers, information technology teaching must further develop learning based on the characteristics of their professional needs. However, the status, role, ability, and professional knowledge requirements of information technology teachers have not yet formed norms, which also affects the enthusiasm of information technology teachers and professional self-development capabilities.

When it comes to the professional development of teachers, it is hard to say what information technology teachers are. Because ordinary subject teachers only need to take care of themselves, and then subject teaching management will be a matter of course. The difference is that many information technology teachers mainly perform "technician" tasks in schools, and their teaching work has become part-time instead. This is undoubtedly turning the cart before the horse for the professional development of information technology teachers. The lack of attention to the professionalization of information teachers means that the true value of the existence of information technology disciplines is denied from the root, so the "information literacy" proposed for students in the new curriculum reform will be out of the question.

It is also the introduction and full implementation of the new curriculum reform that the education sector has shown unprecedented attention to information technology courses, and correspondingly, it has repositioned the role of information technology teachers. This also depends on the arrival of the Internet era. In the past, illiterate refers to people who are illiterate, while in the new century, illiterate refers to people who cannot operate computers or use the Internet. Information technology courses have become an important guarantee for people to have the literacy of the new era. In recent years, quality education has been in the

ascendant, curriculum reform has been fully implemented, and education informatization has been fully launched. Information technology education is also flourishing. Information technology courses have become an independent and increasingly prominent subject. As information technology course teachers, they should be the backbone of a more professional education informatization construction. Therefore, accurate role positioning is extremely important.

#### **4. The role of IT teachers under the new curriculum reform**

The role of teachers has always been an important research topic in the education field. In the context of the new curriculum reform, information technology teachers should do a good job behind the scenes and play a good role in information education [4].

The repositioning of the role of information technology teachers requires the support of the school in addition to the theoretical guidance provided by the text provided by the new curriculum reform. The most decisive factor is the need for teachers to recognize the importance and necessity of the repositioning of the role. Only in this way will it gradually affect the leadership's attention to information technology teachers and realize the in-depth development of information technology education. Combined with the statistical analysis of the status quo of the professional development of information technology teachers and the new requirements of the new curriculum reform on information technology courses and teachers, the role of teachers in this subject should be positioned from the following aspects:

##### **4.1. The authority of subject knowledge**

The survey shows that the most important reason for the failure of information technology courses to attract the attention of schools is that the teachers of information technology courses do not have high academic qualifications and lack interest in the research of subject professional knowledge, which leads to a low overall level of course teaching. As a teacher of a subject, it is difficult to teach a subject without professional knowledge and skills. Although information technology is not as long as the history of subjects such as language, mathematics and English, as a subject that has come from behind and plays an important role in education and teaching, its connotation and extension are indeed extremely rich and profound. In addition, information technology teachers must undergo professional education at the university and receive professional knowledge and abilities before they have the preliminary qualifications to serve as information technology teachers. If you want to be an excellent information technology teacher, in addition to mastering the teaching knowledge of school education, in the actual teaching work in the future, you must constantly update the latest relevant knowledge and improve your information literacy and ability through countless teaching practices. . After all, if you want to give someone a bowl of water, you must first have a bucket of water.

Most people use information technology but do not necessarily understand information technology. For information technology, many people may know "what" and "how to do", and information technology teachers need to work hard on the "why" in order to track and Grasp the current various new technologies and concepts, continue to learn to improve their comprehensive quality and innovation ability, and strive for experts and authority on subject knowledge. Education is essentially an authoritative activity, and teachers are the participants and promoters of such authoritative activities. When a teacher becomes a subject expert, in addition to the enhancement of academic authority, it can also increase the teacher's own personality strength.

Regarding the authority of teachers, it is necessary to emphasize that teachers are both the leader of the subject and the instructor of students. When facing students, they cannot blindly use absolute authority to suppress students. The authority of teachers is based on love, emotion

and children. Based on internal acceptance, it can give full play to the student's subjectivity and the student's dominant position. Only authoritative teachers with a love of life can be respected and loved, and only under such a role positioning can students consciously and actively participate in the learning of information technology.

#### **4.2. Course builders and developers**

Information technology teachers are not only the executors of the courses, but also the builders and developers of the courses, especially in the face of outdated teaching cases and part of the teaching content is too simple or too complicated. Information technology teachers need to continuously improve and update the teaching content according to the actual situation of the school, strive to build an information technology curriculum system and resources with local characteristics, and gradually exercise and form the ability to develop courses.

Curriculum is the carrier of school education. The quality of the curriculum determines the quality of education. The "Information Technology Curriculum Standards" stipulates: "In the learning process, emphasize students' self-selection and self-design; promote the reasonable extension or expansion of curriculum content, give full play to the potential of students, and realize the development of students' personality." Before formal teaching, teachers Network resources should be collected and organized as curriculum resources, and students should be guided to use online resources for autonomous and exploratory learning. In addition, teachers must learn to develop local characteristic resources, combine subject content and subject characteristics, and finally develop characteristic courses suitable for local education. Coupled with the development and application of social practice resources, the teaching space has not only been greatly expanded, but also effectively supplemented, coordinated and promoted school curriculum teaching, successfully achieving classroom goals, and ultimately promoting curriculum reform and development. Information technology teachers should also develop the ability to evaluate courses, learn how to evaluate various teaching materials, analyze the implementation of courses, and then continue to reflect and summarize, and further guide teaching.

When doing curriculum developers and builders, we must insist on cultivating students' scientific and humanistic concepts, and we must bear in mind that an important purpose of information technology courses is to cultivate students' information literacy so that they can survive in the future information society.

#### **4.3. Instructor and facilitator of student learning**

In the Internet age, information is changing with each passing day, so that students cannot rely on a textbook and a blackboard to keep up with the pace of information. In order to closely link the development of actual information, teachers should comprehensively apply a variety of channels and resources to deliver the latest knowledge to students based on actual conditions. Information technology teachers need to do this even more. On the one hand, they must actively guide students to look at the online world in a rational manner, and cultivate their correct views on right and wrong and network ethics; on the other hand, they must cultivate students' learning interests, methods and abilities, and organize Students carry out group activities to mobilize students' enthusiasm for learning. While transferring subject knowledge, they must also teach students how to learn and cultivate their self-study ability. This is one of the ways to cultivate students' information literacy.

#### **4.4. Collaborator of student learning**

In the teacher-student relationship, there is a concept called "the chief among equals". This concept comes from the famous American educator Dole. "The chief among equals" is not only a challenge to traditional teaching ideas and methods, but also a reconstruction of the value of teachers. "Equality" is the center of this concept. In the traditional teacher-student relationship,

the teacher has always been in the position of absolute authority. The new curriculum reform's requirements for the transformation of the role of teachers are precisely to reflect the concept of "chief in equality". This requires information technology teachers not to take students' learning as an "authoritative" matter to participate, but to communicate with students on an equal basis, be good at listening to students' voices, give guidance patiently, and treat them as their own. Partners and collaborators to treat. Teachers should learn to accept students' good suggestions and ideas, and actively discuss and study with them.

The information technology course itself is more flexible in teaching, the teaching tasks are developmental, and there are many ways to solve them. If the teacher lectures and teaches skills and skills, the teaching content is fixed in a closed frame, with the authority The posture of being aloof, using the only teaching method to require students to draw cats and tigers and draw dippers according to gourds will inevitably limit students' imagination and creativity, and at the same time seriously weaken students' interest in learning. Therefore, information technology teachers must actively communicate with students and discuss together as collaborators, so as to stimulate students' potential as much as possible. In addition, when there are conflicts and conflicts with students, you cannot use the concept of "the teacher is right" to solve the problem. This will not only not solve the problem, but will even stimulate the students' rebellious psychology, which will gradually make the students dislike learning and disbelief Teacher's misconceptions. The correct method is to stand on the same position as the student when the problem occurs, and communicate patiently with the student as an event participant, so that the student can recognize the cause of the problem and the correct way to correct the error.

#### **4.5. Direct trainers of teacher information literacy**

With the continuous promotion of information education technology in teaching applications, the use of modern education technology and equipment in schools has gradually become more frequent and complex. In teaching practice, some teachers still use information technology at a lower level, which makes it difficult to carry out teaching activities. Therefore, how to improve the application ability of educational information technology of subject teachers and enable them to carry out teaching activities smoothly is a problem that needs to be solved urgently. At this time, the existence of information technology teachers embodies another important value, that is, the trainers of teacher information literacy. The integration of information technology and disciplines has become a hot topic in the current education field. Information technology teachers who have received professional learning can become direct trainers to improve their information technology capabilities. This is an existing resource that can be fully utilized and can help schools save teachers' re-education expenses. At the same time, it is also a professional affirmation of information technology teachers, allowing information technology teachers not only to enhance their sense of self-worth, but also to continuously improve and expand their knowledge and professional skills in training.

However, the reorientation of the role of information technology teachers is still complicated; it is required that information technology teachers themselves should actively learn and study. Only when their own comprehensive qualities are continuously improved can the status of information technology courses become a reality. The process of continuous accumulation. The goal is ahead and the road is underfoot. Walking in the rapidly changing information age, we must position ourselves in a good role, constantly reflect and summarize the problems in teaching practice, and constantly improve our vocational education system. Only in this way can we cultivate talents who adapt to the requirements of the times.

## 5. The quality update after the role change

What the 21st century needs is a compound teacher. No matter which type of professional teacher must have comprehensive comprehensive qualities, only by constantly learning and accepting new knowledge and optimizing his knowledge structure can he gain a foothold in the 21st actual education field. As an information technology teacher, good professional quality is of great significance to the professional development of teachers [5]. The professional qualities that a qualified information technology teacher needs are as follows:

### 5.1. Teachers must be responsible for their work

Teachers should love their work and career, because the work of a teacher not only has to complete a specific course teaching, but also includes words and deeds, ideological and moral education, etc. This kind of education cannot be accomplished by preaching alone. In the teaching process, every behavior and detail of the teacher will affect the students. Therefore, teachers must always pay attention to their words and deeds. Let the students feel the teacher's teaching, let the students feel the teacher's love for them. If you can convey this feeling, the teacher will be able to get twice the result with half the effort. Therefore, in order to be responsible to students, to parents, to society, and to teachers themselves, teachers should be committed to education and have a great sense of enthusiasm and responsibility.

### 5.2. The teacher must constantly improve from the author and keep up with the pace of the times[6]

With the rapid development of modern information technology, information technology teachers must constantly update their subject knowledge and professional skills, work hard to learn modern education theories, understand advanced education concepts, establish correct education concepts, and use advanced education and teaching concepts to guide practice. With the renewal of thinking, new educational methods can be created to meet the learning requirements of students in the new era. Under the conditions of information technology, the changes in educational methods and educational environment have put forward new requirements for the professional development of teachers. Information technology itself has a large amount of information, a wide coverage, and a faster update speed. As an information technology teacher, you not only need to have excellent professional knowledge and technology, but also need to continuously improve teaching ability and teaching design ability, and strengthen the teacher's moral construction. Especially in the current era of rapid development, it is difficult to effectively organize teaching in a stylized teaching mode. Teachers' professional knowledge and subject practice skills must also keep pace with the times, otherwise it will not only make students bored, but will also be easily eliminated by the times.

### 5.3. Information technology teachers must have a solid foundation in information technology

First of all, information technology subject knowledge is always changing rapidly, and teachers must constantly update subject knowledge and professional skills; second, information technology teachers must not only use a fixed blackboard to transfer subject knowledge to students, but also fully apply modern information technology methods to provide Opportunities for students to practice on their own. Thirdly, in order to implement the task of subject teaching, information technology teachers must quickly grasp the technical ideas that adapt to the development of the times, skillfully use information technology tools, and know how to make information technology works and the development of information technology systems to solve various problems in student experiments. Technical issues in order to be competent in teaching information technology. Most of the existing students have a certain

understanding of computers before systematically learning information technology. If teachers do not update and expand subject knowledge in a timely manner, students are easy to question.

#### **5.4. Information technology teachers must have the ability and quality to comprehensively apply various scientific knowledge**

The problems that arise in teaching activities cannot remain unchanged. Naturally, there are higher requirements for teachers' adaptability and syndrome quality. The new curriculum standard points out that students should be trained to ask questions, analyze problems, and solve problems. This requires teachers to create a good classroom atmosphere, let students take the initiative to ask questions, and then group discussions, which not only improves students' ability to cooperate, but also improves their ability to express themselves. In addition, information technology and subject integration are hot topics in current education and teaching, and information education is an educational philosophy that teachers of all subjects must always implement. For information technology teachers, information technology is their main subject, but as an information technology professional in their own school, when the school needs you to carry out information technology literacy training for teachers in other subjects, it can only have comprehensive application skills. The ability and quality of subject knowledge can be competent for this job.

#### **5.5. Teachers should discuss and analyze problems with students**

In the context of long-term exam-oriented education, the role of teachers is mainly to teach students the knowledge of classroom teaching; finally achieve the teacher's expectations in the form of grades, which does not conform to the advocacy concept of the new curriculum reform. The new curriculum reform requires teaching To cultivate students' ability to actively communicate, explore cooperation, and solve problems. Teachers and students participate in teaching research as equals, and discuss and study together in an organized and purposeful manner. Teachers can participate in students as partners and organizers to discuss, analyze, and verify a certain issue together. , Finally solve the problem and form a "learning community".

### **6. Conclusion**

Different from the indifference in the past, in the context of the information age, information technology teachers will usher in unprecedented attention to disciplines, so their professional qualities urgently need to be continuously updated with the needs of society. In the information technology classroom after the new curriculum reform, teachers are no longer simply "teachers" who simply impart knowledge, but as "guides" to lead students to discover and explore knowledge on their own, and practice by themselves. What happens in the classroom? Then there is the traditional lecture mode of "teaching as the mainstay", replaced by a new scene of "learning as the main" under the guidance of teachers. The classroom is full of teacher-student interaction, student-student interaction, and mutual education. The learning scene of equality and democracy, where students are transformed from being learners to masters of learning, truly embodies the new teaching concepts of "teaching-oriented" and "student-centered" teaching.

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