# Research on the Course Construction of Introduction to Computer

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**Abstract:** Aiming at the requirement of undergraduate education and aiming at cultivating advanced technical applied talents, this paper analyses the problems existing in the course of computer introduction in traditional education, and studies the course construction of computer introduction from the aspects of the construction of teachers, the optimization of teaching contents, the reform of teaching methods and means, etc., and applies them in practical teaching. Finally this paper points out the areas to be improved.

**Keywords:** Course Construction, Computer Introduction, Teaching Methods, Teaching Means.

## 1. Introduction

Introduction to Computer is an important basic course for computer science and technology specialty. In line with the purpose of undergraduate technical education, the school aims to cultivate high-tech applied talents with innovative spirit and practical ability, which are oriented to enterprises and grass-roots units[1].

In order to better reflect the requirements of training talents in technology application-oriented undergraduate colleges and universities, we have carefully carried out curriculum reform, carefully studied and participated in the formulation of professional training programs, defined the training objectives of higher technology application-oriented talents, and designed educational reform programs on the basis of careful analysis and research. The reform of curriculum content is based on the principle that the teaching content stresses the application of basic theoretical knowledge and the cultivation of practical ability. It aims at application, strengthens pertinence and practicability, reorganizes curriculum structure according to the principle of highlighting application and practicality, renews teaching content, chooses high-level teaching materials to adapt to teaching requirements, and carries out

curriculum reform from teaching content and teaching methods. The curriculum construction should be carried out with teaching means and teaching staff.

## 2. The Construction Objectives of the Course

The overall objectives of curriculum construction are as follows

Firstly, a complete and applicable syllabus is formulated; a series of matching textbooks and reference materials are selected; the content of the textbooks is novel, reflecting accurately the direction of discipline development and adapting to the needs of teaching. Refinement of curriculum, integration and integration of curriculum content, highlighting key and difficult points, handling well the relationship between knowledge, ability and quality, and fully considering the link of knowledge in the curriculum system, in line with the law of education, to adapt to professional development and students' learning needs [2].

Secondly, a set of practical teaching implementation plan is formulated. The teaching implementation plan includes the teaching requirements, progress, schedule, classroom instruction, discussion, guidance, homework exercises, experimental requirements and other arrangements.

Thirdly, we should adopt advanced scientific teaching methods and modern teaching methods. In the undergraduate technical education, we should not only introduce advanced teaching methods, but also form our own teaching characteristics in combination with the actual situation. In terms of teaching means, the integration of network information technology and teaching is carried out. This is also the focus of technical education[3].

Finally, we should build a teaching echelon with good quality and reasonable structure, establish a good mechanism for sustainable development and implement curriculum construction. Continuously explore teaching methods, so that all kinds of resources play the greatest role, so that curriculum construction can be implemented.

## 3. Course Construction Contents

We have earnestly studied the principles and policies of technical undergraduate education. At the same time, we have carried out in-depth job skill survey in IT enterprises to understand the technical application connotation of technical undergraduate education and train students with the guidance of social professional posts. Formulate a series of curriculum construction measures[4].

### 3.1 Reform of Teaching Content

In technical undergraduate education, the reform of teaching content is creative, the theoretical content requires depth, using heuristic and interactive teaching methods;

the practical content takes practical ability as the main line, adopts task-based, participatory, divergent and innovative teaching methods; the combination of theoretical knowledge and practical experience, teaching and on-line practice, knowledge learning and grade examination.

The teaching content of computer introduction should take into account the relationship between traditional content and modern content, basic knowledge and frontier hotspots, so that students can maximize the ability of database application in limited teaching time, and further lay the foundation for students to continue learning and engage in professional research independently[5]. Therefore, the teaching content of computer introduction should keep the basic knowledge of traditional specialty while striving to catch up with the newer professional knowledge and frontier hot spots at home and abroad. Therefore, in addition to using some classical database teaching materials, teachers can also carefully select some of the latest computer introduction information and literature as teaching content or for students to learn after class. To enable students to grasp the traditional basic knowledge, at the same time, in the latest information or works to maximize the latest developments, learn to master some new professional methods and theories, in order to cultivate students' ability to independently acquire professional knowledge, which is also the main teaching goal of our technical undergraduate colleges and universities.

## 3.2 Teaching Method Reform

In technical undergraduate education, we should not only introduce advanced teaching methods, but also form our own teaching characteristics in combination with the actual situation.

One of the important contents of deepening the teaching reform in Colleges and universities is the reform of teaching methods, in which the important thing is to change the old teaching methods of full-house irrigation and cramming. On the one hand, the new teaching method should pay attention to the cultivation of students' lifelong learning ability, promote the all-round development of students' quality, and train qualified students with special skills. On the other hand, it is necessary to change students as passive object of education into the main body of participating in the educational process, and fully mobilize the enthusiasm, initiative and creativity of students' participation. Under the guidance of teachers, students show subjective initiative, so that they can receive the purpose of teaching and improve the teaching effect.

Firstly, we should not only introduce advanced teaching methods, but also form our own teaching characteristics according to the actual situation. We should pay attention to the combination of learning and application. In view of the strong operability and

high flexibility of this course, the teaching method of "case teaching" is adopted. Each teaching subject includes the proposition of tasks, the analysis of tasks, the realization of tasks and the expansion of tasks. Through the process of solving tasks, we can master the operation of database design, and through the expansion of tasks, we can give one example to the other. The heuristic, participatory, questioning and metaphorical teaching methods should be extensively developed, and attention should be paid to integrating theory with practice. Select representative database design system, focusing on the practical application of theoretical knowledge[7].

Secondly, we should recognize the characteristics of the curriculum, carefully design examples, make full use of courseware, and stimulate students' enthusiasm for learning.

For beginners, there are many problems such as strangeness and abstraction. So it feels boring to learn, so it is particularly important to stimulate students' enthusiasm. The application of vivid multimedia courseware and vivid animation to display teaching content on the big screen greatly increases the amount of information transmitted from teachers to students, helps to deepen the understanding of knowledge, and thus stimulates students' interest and enthusiasm in learning.

Thirdly, we should apply the difficulties to engineering practice. This course is one of the courses closely combined with engineering practice. Many of the knowledge can be applied in engineering cases, and it has a wide range of applications. It is also a very effective method to solve the key and difficult points of the course through engineering examples.

### 3.3 Reform of Teaching Means

The reform of teaching means is an important aspect of teaching reform, an effective measure to cultivate students' innovative spirit, practical ability and learning ability, and a "catalyst" to improve teaching quality and running level. In the course construction, the reform of teaching means and the integration of multimedia technology, network information technology and computer introduction teaching are the key points of the course construction, and also meet the requirements of technical undergraduate education.

The use of multimedia is an innovation of traditional teaching methods. It not only makes the teaching content more intuitive, but also changes the one-way information dissemination mode of "teaching-learning" in traditional teaching, which makes it possible for teachers and students to interact with each other in real time. We can make full use of modern teaching methods and make use of the network as the largest resource treasury for interactive teaching with students. We have developed a full set of multimedia courseware for classroom teaching and experimental teaching. The

courseware contains a large number of FLASH animations. It explains various abstract and difficult knowledge points in this visual way, so as to facilitate students' understanding and mastery. The application of multimedia in teaching enlarges the amount of teaching information and improves students' interest in learning and teaching effect.

In the future, the teachers of the project group also intend to set up the teaching website of Introduction to Computer to give extra-curricular guidance to students. The application of teaching website can not only cultivate students' good learning habits, but also improve their ability of self-learning. This is also a platform for teachers and students to communicate. In addition to pure classroom communication, this platform also provides a base for extracurricular extension of teaching and deepens the friendship between teachers and students.

## 3.4 Construction of Teachers Team

Teacher team construction plays a very important role in curriculum construction. In order to ensure the quality of teaching, we have always put teacher team construction in an important position. Building a teaching echelon with good quality and reasonable structure is our goal. In particular, a lot of work has been done in the training of young teachers. The main measures are as follows:

(1) Encourage young teachers to continue their studies

The school regards the training and further study of young teachers as one of the important aspects of department development, and has formulated a strict training plan. Every year, some excellent young teachers will be selected from among them for visiting and studying in famous universities at home and abroad or for further study. In the process of learning, they will continue to follow up their learning process and give corresponding guidance. Teachers are encouraged to pursue doctoral postgraduates in-service and make achievements in the field of professional research.

(2) Implement strict teaching inspection system and attendance system

At the beginning, middle and end of each semester, teachers are inspected three times, especially young teachers, which are the focus of the inspection. Through the inspection, problems are found and solved in time to make them improve and grow rapidly; new teaching rules and regulations are organized for learning each semester, and teachers are urged to carry out teaching activities in accordance with relevant regulations and norms; in each semester, our college will be subject to expert group. The inspection system for young teachers, including theoretical courses, experimental courses, professional training and graduation design, will be strictly checked, which plays a very important role in regulating the teaching process of young teachers.

(3)Implementing the New Teacher Guidance System

For each new teacher, a middle-aged and old teacher with rich teaching experience, rigorous academic attitude, excellent teaching style and high teaching quality is appointed as his instructor. The instructor guides the whole process of new teachers'teaching and makes them competent for teaching as soon as possible.

(4) Regular teaching competitions

The school has organized various teaching contests, including basic skills contest, practical teaching contest, teaching plan contest, multimedia courseware contest, graduation design contest and so on, so that young teachers attach great importance to all aspects of teaching, comprehensively improve their teaching level and make them grow rapidly.

## 4. The Effect of Course Construction

After two year's construction, the course construction team of Introduction to Computer successfully completed the course construction work. Continue to improve and revise the syllabus, refine the teaching content, improve the teaching plan, make the teaching process more standardized, elaborate design of electronic teaching plan and multimedia courseware, improve students' interest in learning and teaching effect, improve the overall quality of teachers, fully apply the results of curriculum construction to the teaching process, regard teaching as the experimental field of curriculum construction, in order to improve the calculation. The teaching quality of Introduction to Machines contributes to the construction of other courses.

The result of this course construction is the crystallization of all the teachers in the Research Group in-depth research and implementation of undergraduate technical education reform ideas, giving full play to their professional advantages, actively carrying out teaching research and courseware development, and striving to improve the quality of teaching. It is comprehensive, basic and pioneering in content, advanced in technology, advanced and expansible, strict in teaching organization and implementation, and guaranteed by an excellent professional teaching staff. Some of its achievements have been unanimously affirmed by experts and all teachers and students. It has effectively promoted the teaching quality of computer courses in our college, and stimulated the enthusiasm and initiative of the majority of students.

## 5. Conclusion

After two year's construction, the Course Construction Group of Introduction to Computer successfully completed the course construction. The course teaching content, teaching methods, teaching means and teaching staff were initially reformed and constructed, and achieved good results. Some of its achievements were unanimously affirmed by experts and all teachers and students.

Of course, because the construction time is relatively short, although the results of curriculum construction have been revised, but all kinds of results need to be constantly revised, improved, and constantly improved to adapt to various uncertainties in classroom teaching, but also need to invest a lot of energy to do better in the curriculum construction of our technical undergraduate colleges and universities.

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