

## Construction of Informationalized Teaching Mode About "Learning As The Main"

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**Abstract.** Aiming at the problems existing in the informationalized teaching practice and according to the guiding idea of "Learning As The Main", the characteristics of students' interactive studies are given full consideration and the informationalized teaching mode of "learning as the main" are built in three architectures about the overall architecture, the process architecture and the architecture of students self-learning activities

### Introduction

The main body of education in colleges is students, and the foothold of all teaching work are students, fully exerting students' subjective initiative in teaching is the decisive factor to improve teaching effectiveness and quality of personnel training. At present, informationalized teaching applications is relatively common, but the teaching mode in which teachers are the main is still very prominent. And relevant teaching design or curriculum design cannot fully embody the idea of "learning as the main", existing a series of deviations and problems, mainly in the following three aspects.

#### **Ignore the design and construction of learning environment**

Now, some teachers still put too much attention to teaching details, ignoring the design of learning environment, in the informationalized teaching practice. More, they put a high value on information technology means overlooking the relationship of teachers and students as well as the changes of organization about informationalized teaching. As a result, the use of information technology has been attributed to the use of multimedia. Although it accelerate of the transmission of information, expand the capacity of information, it does not actually build up a body of teaching mode of "learning as the main".

#### **Ignore the concern to activities for students, especially to students' personalized activities**

At present, all built online courses widespread neglect students' activities, especially personalized activities. The most prominent aspects: the courses ignore the elaborate design and application of online communication module in network information technology teaching platform, and the positioning straitness of interactive function leads to the singleness of interactive mode and interactive content between teachers and students. It unable to adapt to the learners' personalized learning requirements. The teamwork learning requirements cannot be fully reflected. Furthermore, it unable to fully meet the needs of interaction between teachers and students, and it cannot fully support the role of the interactive network platform.

#### **Ignore the association between curriculum-related functional modules**

When making curriculum design, based on information technology platform. The designers commonly have clear functional positioning about the modules they set. However, due to different degrees of neglect of the association between the functional modules, good integral effect cannot be realized. For example, although some modules serve the same teaching objective, but they did not use link to jump, which brings a lot of inconvenience to students' study. For another example, at information technology platform, it merely lists a series of columns, lacking of logic system

construction and the organic integration. And also, it does not have scientific and reasonable guidance system. These imperfections lower the efficiency and effects of network resources.

Teaching in information-based environment is not only the inheritance of traditional teaching, but also the process of explore and construction of new teaching model in technology-based environment, and the process of combining structural component of all kinds of teaching mode with technology applications .Teachers are the practitioners and creators of teaching mode. Varied practical scenarios is a source of innovation of teaching mode; Information technology provides a wealth of resources, tools, as well as exchanges and cooperation platform for the development of the teaching mode.

### “Learning as the main” information-based teaching mode

Architecture is divided into the overall architecture, the architecture of the process architecture with the students self-learning activities.

#### Frame architecture

"Learning as the main" teaching mode, emphasizing the teaching activities of the faculty to serve the learning needs of the students, stressed that "to promote indoctrination" teaching to "pull self-teaching transformed. Based on this understanding, "learning as the main" teaching mode is divided into teaching analysis, teaching strategy selection and design, organization and implementation of the process of teaching, evaluation of teaching effectiveness in four stages overall architecture design, the overall architecture is shown in figure 1.

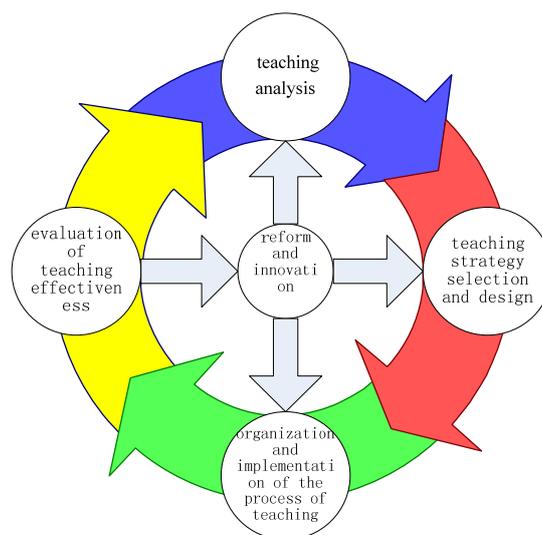


Figure 1. Frame architecture of informationalized teaching mode about "learning as the main"

#### Process architecture

"As the main body of information the teaching process, not just the teacher trainees within a limited three-dimensional space-time process of knowledge, but also a teacher of the use of information technology, especially network technology, network virtual time and space to guide, help and promote the students are actively to learn knowledge, empowerment and improve quality, and to seek a comprehensive development process. Based on this understanding, "learning as the main teaching mode process to be divided into course preparation, course unit, comprehensive case analysis and experiment teaching, course of study summary concluded six teaching on every aspect of the from student learning activities, teacher guide student promote learning activities, IT support three aspects of architecture design, as shown in figure 2.

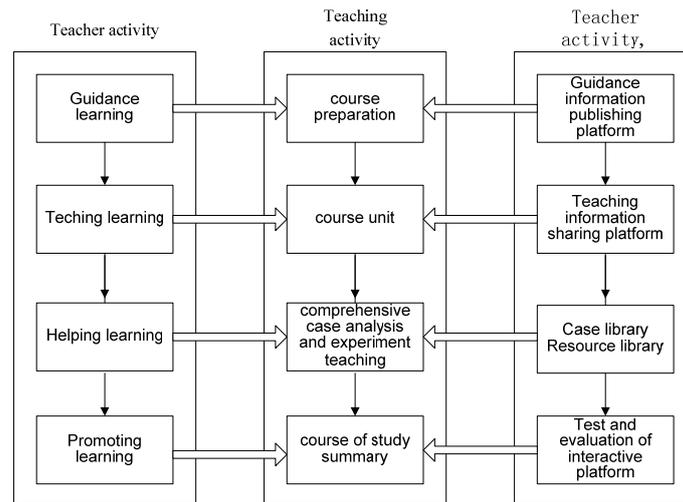


Figure.2. Process architecture of informationalized teaching mode about "learning as the main"

### Students independent learning activities architecture

"Learning as the main body of information under the teaching model student self-learning activities include prep self-learning activities, review of independent learning activities and knowledge of the integrated use of self-learning activities. "Learning as the main" teaching mode of knowledge integrated use of self-learning activities, project tasks as the carrier with the driving force of a self-learning activities, it is also known as task-driven students self-learning activities.

### Practical effect

The study conducted for the students before and after the students' self-learning ability contrast, as shown in table 1 and table 2.

Table 1 Comparative analysis to third-grade students (conducted before the study)

Self-learning ability	Grade 3 students (conducted before the study)			
	Not (%)	Occasionally (%)	Often (%)	Yes (%)
You will know in advance prior to the commencement of the course background knowledge do?	90.7	9.3	0	0
On every lesson prep before you read it?	10.3	20.4	56.7	12.6
On the front of each lesson you will be reading other than job?	60.5	39.5	0	0
You will take notes in class do?	68.9	10.4	15.7	5.0
When you encounter problems class will be recorded to ask students or teachers do?	34.2	43.5	13.5	8.8
After each class, you will read a book review it?	14.9	33.5	15.3	36.3
After each class, you will be reading a book review do other than work?	56.8	22.4	7.8	13.0
Are you able to previously studied the relevant courses and course content are learning linked?	69.4	14.4	15.6	0.6
Have you ever thought of the previously studied courses related to learning methods applied to the curriculum are learning to go?	65.9	24.5	6.7	2.9

### Conclusion

"Learning for the information of the main teaching model, the purpose is to promote the teaching

mode" teacher-centered "to" learner-centered "change, improve and perfect the teaching of information technology" learning "and" teach interaction between the means and mechanisms for full and rational use of information technology teaching and learning environment to enhance participants' self-learning ability and power, promote trainees personalized training, and effectively improve teaching effectiveness and quality of the training of information technology, with some guidance and application.

Table 2 Comparative analysis to fourth-grade students (conducted after the study)

Self-learning ability	fourth-grade students (conducted after the study)			
	Not (%)	Occasionally (%)	Often (%)	Yes (%)
You will know in advance prior to the commencement of the course background knowledge do?	30.7	23.6	25.8	19.9
On every lesson prep before you read it?	5.7	10.4	46.1	37.8
On the front of each lesson you will be reading other than job?	35.0	40.6	20.7	3.7
You will take notes in class do?	20.5	15.8	22.3	61.4
When you encounter problems class will be recorded to ask students or teachers do?	30.4	24.8	30.7	14.1
After each class, you will read a book review it?	3.4	20.5	38.7	37.4
After each class, you will be reading a book review do other than work?	42.5	10.5	25.7	21.3
Are you able to previously studied the relevant courses and course content are learning linked?	34.5	23.4	21.5	21.1
Have you ever thought of the previously studied courses related to learning methods applied to the curriculum are learning to go?	24.5	34.5	15.6	25.4

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## References

- [1] Feng Lidan, Lu Meiyu. Analysis of the informatization instructional design. Software guide, educational technology, 2008,2:31-33
- [2] Zhou Wei, Guo kekun. Construction of College English teaching mode of information support. New curriculum research of.2008,11:66-67
- [3] Wu Jie, Sheng Linyang. Research on autonomous and cooperative teaching mode under the network environment of computer education,.2010. (14).
- [4] Kong Lu, Liu Chengguang, Song yingzi. For construction and reform of the information class curriculum education in transition. "The twenty-first National Academic Conference on" computer science and computer education papers.2010,07.
- [5] Loyens SM, Rikers RM, Schmidt HG. Students' conceptions of constructivist learning: a comparison between a traditional and a problem based learning curriculum [J] .Adv Health Sci Educ Theory Pract,2006,11(4):365-379