

# Research on Teaching Design Ability and Its Training of Primary and Secondary School Teachers

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## Abstract

Instructional design ability is a professional skill that teachers must master in the modern educational environment. It mainly refers to the ability system that takes modern education as the core and further makes decisions and regulates the teaching activities of the teaching system through the way of instructional design. In the educational work of primary and secondary schools, students do not have strong autonomous learning ability due to the limitations of various objective factors. If teachers do not have strong teaching design ability or understanding of teaching design, it will inevitably have a negative impact on students. Based on this background, this paper will deeply analyze the training principles and Countermeasures of primary and secondary school teachers' teaching design ability.

## Keywords

Primary and secondary school teachers; Instructional design; Ability training.

## 1. Preface

In the current stage of education, teaching design ability is a professional condition that teachers must have. However, combined with the analysis of the current teaching situation, in the educational work of primary and secondary schools in China, many old teachers will carry out teaching design with their own experience, and many new teachers will carry out teaching design with their own professional knowledge. However, most teachers do not have the professional teaching design ability, and even many teachers do not have a deep understanding of the nature of the discipline, and can not grasp the teaching objectives and teaching direction, which affects the teaching quality to a great extent.

## 2. Principles of Cultivating Primary and Secondary School Teachers' Teaching Design Ability

### 2.1. Principle of Combining Theory with Practice

The investigation and analysis shows that in the current primary and secondary education, many teachers do not form a correct understanding of theoretical learning, and even in the process of autonomous learning, they will deliberately ignore some theoretical information and only pay attention to practical training activities. Without the support of theory, the stability of practical activities can not be improved. Therefore, in the process of cultivating teaching design ability, primary and secondary school teachers need to follow the principle of combining theoretical learning with practical reflection, constantly consolidate their foundation with theory and continuously improve their ability with practice [1].

### 2.2. Combination Principle of Design and Research

For many primary and secondary school teachers, instructional design is not a job they should carry out, but an urgent task. Although teachers have rich teaching experience, due to the long-term implementation of fixed teaching mode, they can not break through the thinking pattern

for teaching design, and their enthusiasm and initiative are gradually consumed. In teaching design, teachers need to follow the principle of integration of design and research. Through research, teachers can perceive more perspectives of instructional design and find more problems. Only when problems arise can they independently optimize them, promote instructional design work more accurately and with higher quality, actively summarize teaching, reflect on teaching, and constantly pursue more perfect instructional design works, continuously improve personal ability.

### **2.3. Principle of Independent Cooperation and Combination**

One's thinking is limited. In the process of instructional design, innovation and inspiration are very important. However, blindly learning from others' ideas and creativity will lead teachers to lose themselves. Therefore, in the process of cultivating teaching design ability, teachers need to implement the principle of combining independent cooperation. They should not only carry out teaching design activities independently, reflect and optimize independently, but also form cooperative relations with other teachers on the basis of maintaining themselves, communicate and share with each other regularly, so as to obtain more experience and inspiration, so as to improve their ability.

## **3. Countermeasures for the Cultivation of Primary and Secondary School Teachers' Teaching Design Ability**

### **3.1. Strengthen Pre Service Education and on-the-job Training**

Objective analysis shows that in the current education work, many primary and secondary school teachers still have many problems in teaching design, and the discipline understanding education theory is not solid, which has greatly affected the improvement of their own teaching design ability. For similar problems, we can solve them in the following ways.

Firstly, in the pre service stage of education, normal education colleges need to properly optimize the curriculum system. For example, insert the content related to instructional design to improve teachers' understanding and ability through professional education. Generally speaking, most of China's teachers graduated from professional normal colleges. In the colleges, teachers will form a solid theoretical foundation and master some reasonable teaching methods. However, the teaching system set up by many normal universities is relatively backward, excessively praising the traditional teaching ideas and unable to meet the requirements of modern education [2]. Therefore, normal universities need to break through the limitations of traditional courses, combine the development trend of the times, and innovate the course content, such as educational psychology, teaching design, learning psychology, etc., which should be reflected in the modern normal education industry, so as to further improve the normality and learning of education. Moreover, normal colleges and universities need to irregularly organize student groups to carry out internship activities and practice activities, and gradually improve the teaching design ability and teaching design experience of teachers in practice, so that they can apply these practical resources to their future career, improve the teaching design ability and form the development consciousness of lifelong learning.

Secondly, in the on-the-job stage of educators, schools need to strengthen training, involving both theoretical knowledge related to instructional design and relevant practical methods. Improving teachers' teaching design ability is not a task that can be completed in a short time. At the same time, it can not be achieved overnight, but should be continuously improved and formed in the continuous and long-term development. When teachers graduate from normal schools and enter each school to start their career, their own employment school is an effective auxiliary to them. Therefore, the school also needs to regularly organize teachers

to carry out training activities to promote teachers to master more abundant teaching design theories and teaching design methods. For teachers of different disciplines, different educational backgrounds and teaching ages, schools need to guide teachers with hierarchical training. If necessary, we can introduce some training methods to implement the people-oriented teaching thought, such as case guidance and task driven, so as to improve the training experience of teachers and strengthen the training effect.

Moreover, many schools will organize teachers to carry out school-based research activities, and the promotion of this activity will also help to further improve teachers' teaching design ability. However, in the training process, schools need to find the key points of training and focus on improving teachers' understanding and skills of instructional design.

Finally, teachers should pay attention to online research. In this way, they form a learning community with primary and secondary school teachers in other schools, broaden their horizons and enrich their cognition. And in the process of communicating with other primary and secondary school teachers, teachers can also accumulate richer experience, enrich their own reserves and improve their ability with diversified experience and multi angle exploration.

### **3.2. Strengthen School Management of Instructional Design**

First of all, the school needs to build a perfect teaching design evaluation system and management system. For modern primary and secondary school educators, the ability of instructional design is a kind of ability they must master, and instructional design is also a major link that must be promoted when carrying out teaching activities. However, when this ability and this link gradually tend to conventional development, the gap between teachers will be higher and higher, and even many teachers will have greater pressure on it and think that instructional design is a burden. Schools need to provide comprehensive assistance to teachers. On the one hand, schools need to build perfect evaluation standards for instructional design, so that teachers can carry out self-evaluation based on the evaluation standards after completing instructional design activities, and optimize and adjust the existing problems in time, which is also conducive to the further display of teachers' personality; On the other hand, the school can regularly organize primary and secondary school teachers to carry out teaching design evaluation activities and public display activities. In a variety of activities, enrich teachers' understanding of instructional design. In addition, for the new and old teachers in the school, the school needs to implement management evaluation in a hierarchical management mode, so as to form a complementary relationship between them and enhance teachers' teaching design ability.

Secondly, the school needs to build the corresponding teaching resource database, which can provide teachers with rich teaching design resources, so as to improve teachers' ability and design quality. For some excellent teaching design works and high-quality teaching micro class videos produced by school teachers, the school can also store them in the teaching resource library with the permission of teachers for other teachers to learn from.

Finally, primary and secondary school teachers need to actively form cooperative relations with other schools. If necessary, they can also invite some experts or excellent teachers of relevant majors to the school to carry out lecture activities, so as to solve some problems existing in Teachers' teaching design by means of on-site training, on-site guidance and on-site explanation [3]. At the same time, teachers can also prepare some of their own design works in advance, invite experts to comment, constantly enrich their own experience and continuously improve their ability in the process of multi-channel communication.

### **3.3. Strengthening the Research on Teaching Design of Subject Characteristics**

First of all, teachers should try their best to use their professional scripts to carry out instructional design activities. In the process of instructional design, for many primary and

secondary school teachers, the language they use is relatively simple because they contact students with low age. For some too abstract and obscure instructional design theories, they are not suitable for primary and secondary school students, but also for primary and secondary school teachers who are used to some simple languages, It also has high difficulty. Therefore, teachers should try to use their familiar discourse system, and the corresponding professional researchers also need to develop the relevant language system, so that teachers will not regard instructional design as a burden, but can show their practical experience in the form of instructional design works in time.

Secondly, in related fields, we need to increase the design and research and development of systems that can assist in promoting instructional design. Teaching design is not a simple design of teaching process and teaching content. It is highly professional and systematic. And many primary and secondary school teachers say that the long-term development of teaching design will delay the progress of other work and lead to excessive pressure. Therefore, relevant fields need to increase the development of relevant auxiliary systems based on intelligent technology, such as automatically generating design framework design templates by using intelligent technology, or allowing teachers to spontaneously upload their own teaching design works with the help of network platform, so as to solve the obstacles and limitations of primary and secondary school teachers in teaching design as much as possible, Make it continuously improve itself in the state of accumulation over time.

#### 4. Conclusion

To sum up, good teaching design is conducive to the further improvement of teaching quality and the all-round development of students' learning ability and learning literacy. Therefore, primary and secondary school teachers must consciously improve their teaching design ability. On the one hand, we need to follow relevant principles, be able to combine theory and practice, design and research, and independent cooperation; On the other hand, we need to actively participate in pre service education and on-the-job training. Schools also need to strengthen the management of instructional design and the research on instructional design integrating the characteristics of disciplines, so as to provide support for the further improvement of teachers' instructional design ability.

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