

# Collaborative Innovation-Based General Elementary School Teachers Training

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**Abstract:** Based on the analysis of necessity of all-disciplined primary teachers, this paper examines the connotation of the collaborative innovation, and then it introduces the collaborative innovation of general elementary school teachers. Finally, it discusses about the training based on collaborative innovation of primary school general teachers.

**Keywords:** collaborative innovation, elementary school teachers, training

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## I. Introduction

With the rapid development of social economy and the fast pace of the development of education, the training of primary school teachers in China gradually improves, from normal school to college development and from specialist to undergraduate normal transition, and in some economically developed cities master's degree being needed. This level of education is an inevitable trend in the social and educational development in our country, which can not stop, rather promote the overall development of primary education. The demand for high-quality primary school teachers is urgent for every parent and society<sup>[1]</sup>. Therefore, we need to continue to explore through practice, deepen the study of primary education, to meet the social needs of qualified modern primary school teachers. But training elementary school teachers with a bachelor degree in theory and practice there are still some problems which need us to explore from different angles.

### Concept Explanation: The Connotation Of The Collaborative Innovation

Collaborative innovation thought originated in the research field of international innovation synergy theory in the 1970s, which emphasizes the interactive connection between the innovation main body and the collective innovation, promotes the development of innovative activities in the way of collaborative innovation<sup>[2]</sup>. As the general secretary, Hu Jintao in Tsinghua University points out that "university should carry out the deep cooperation with research institutions and enterprises, to establish a collaborative innovation strategic alliance, promote resource sharing, joint to carry out the important scientific research projects, trying to make a positive contribution for constructing a creative country", thus collaborative innovation has become hot phrase after the "innovation" word in China.

Collaborative innovation is upgrading, which not only emphasizes the innovation, also the cooperative consciousness. The role of innovation ability and collaborative communication is designed to achieve collective innovation through the team cooperation. The main form of collaborative innovation in macro level is the industry-academic collaboration innovation which refers to three basic subjects: the enterprises, universities and scientific research institutes (research institution)<sup>[3]</sup>, which use their respective advantages of resources and capabilities to develop technology in the collaborative innovation activities with the collaborative support of the government agencies, financial institutions, science and technology service and other related organizations.

Collaborative innovation is the integration of various innovative elements and the effective utilization of resources in the system. Collaborative innovation is not only based on knowledge appreciation as the core, and also on the value creation process of innovation main body, including enterprises, universities, research institutes, government and education department<sup>[4]</sup>.

The industry-academic cooperation is an important innovation model in the national innovation system, and the cooperation performance of the each main body depends largely on the efficiency and operation model of the knowledge appreciation<sup>[5]</sup>. The essence of collaborative innovation refers to achieving the goal of efficient allocation and fully being shared by building various innovation platforms to break the barrier and system barrier, promote efficient allocation of talents, capital, information, etc, and by strengthening the multiple synergy of innovation main body, to obtain the comprehensive innovation in the greatest degree. Collaborative innovation can overcome the information asymmetry problem, reduce the transaction cost between the technology and capital in order to make the cooperation main body communication more instantly and efficiently exchange information.

### **The Collaborative Innovation Of General Elementary School Teachers**

*The Teacher Education Curriculum Standard (trial)* put forward a request for future primary school teachers, that is, they must have knowledge, basic solid, high quality and strong ability, and wide adaptation. For this case, the requirements of primary school teachers must be well-rounded.

Of course, in terms of people's physical and psychological development and the reality (the high school of Arts and Science), it is impossible to cultivate all-rounded type primary school teachers; therefore, comprehensive typed primary school teachers should master the teaching basic skills in multiple disciplines, but more importantly, they should have strong comprehensive quality (can guide students to carry out the comprehensive practical activities, and skill training in a certain art and GYM) teacher. Thus general elementary school teachers are a kind of inter-disciplinary talents who have two or more professionals, subject knowledge structures and ability of talents<sup>[6]</sup>. Its starting point is based on multidisciplinary blend of knowledge to form new knowledge, then reborn the new thinking method and comprehensive ability, in order to achieve the goal that updating the original knowledge and ability, which requires to use the new thinking ways to tackle all kinds of practical problems and put forward effective solutions. This is also a crucial road to burst creativity, activate innovation gene, and look for breakthrough innovation.

Compound talent training and collaborative innovation take innovation as the goal which serves innovation, introducing the new concept of collaborative innovation to compound-talents, and it also plays an important role in the mode reform of our country existing compound talents training. Introducing collaborative innovation to compound talents cultivation, firstly we must clearly analyze the relationship between them, and then analyze the talent training mode in our country and finally on the basis of the relationship between them, we can propose the restricting factors in the existing cultivation model under the new situation of the collaborative innovation.

Collaborative innovation for the training of comprehensive type primary school teachers brings the new guiding ideology. With the development of science and technology, science and technology workers face the problems solved, that is, more the cooperation of multidisciplinary talents together. But with the modern social division of labor and limited knowledge as well as the subject divided intensively, the scientific and technical workers' interdisciplinary exchanges and cooperation become more difficult. As a guide of collaborative management of science and technology innovation, collaborative innovation also can be a guiding ideology of the compound talents, in other words, it means that based on the development of the students' ability as a goal and under the guidance of collaborative innovation, inter-disciplinary talents are cultivated<sup>[7]</sup>. Collaborative innovation, as the following of the original innovation and integrated innovation, adopts them and comes up with the new innovative concept, and it can maximize and use various resources and provide theoretical support for the cultivation of the general teachers for elementary school.

### **The Training Based On Collaborative Innovation Of Primary School General Teachers**

Currently, the training of primary school general teachers has been exploring lots of training modes, such as "three training modes" in Huzhou Teachers' College. These training modes have some theoretical and practical values, which is worthy studying. According to the collaborative innovation thought and Chinese current primary school teachers training modes and restriction factors, we propose that the collaborative innovation-based talents training. The general ideal is to regard collaborative innovation as the goal, with the combination of research approaches, training talents in the discipline and industrial clusters in the docking, joint training of personnel training platform, training talents under the guidance of primary school master teachers and university teachers.

Smooth implementation of collaborative innovation mechanism under the compound type talents training system requires a reasonable collaborative mode of operation to ensure, and therefore, an effective cultivation system should be set up corresponding compound talents training mode to realize the collaboration and combination of the schools, scientific research institutions and enterprises in order to study, research, and make full use of every training member's function.

### **I. Introducing primary talent teachers, special grade teachers and develop primary school teachers to adapt to the needs of educational development**

Hiring many elementary school principals, famous teachers, master teachers to school as a part-time tutors, through lectures, teaching and so many forms of communication, can make students get close contact with the frontier problems of primary school education research, the teaching issues which affect the development of primary education and urgent research projects that primary education development needs. Even under teacher's leadership, participating in the project of educational scientific research work, we not only exercise the ability of scientific research, but also greatly broaden the students' horizons.

## **II. Building the industry university research institute alliance, to try to transfer students to enterprise base and scientific research institutions**

In addition to the introduction, this paper also suggests that based on going out, striving to achieve the universities and primary school resources in many aspects to tight butt. For example, transferring some students to primary school bases to finish the graduation design at this stage, breaking convention, implement double tutor system for students, hiring first-line famous teachers as master tutors, school counselors as vice supervisors, students and teachers deciding the graduation design projects and thesis together that are derived in primary school teaching and practice<sup>[8]</sup>.

## **III. Developing elementary school teachers through docking of the disciplines and industrial clusters**

In the past, teachers in Colleges and universities were actually out of touch with the first primary education, and the work of training primary school teachers, which existed gaps between goal setting and practice. Under the idea of collaborative innovation, higher education school teachers can cooperate with the first-line teachers in primary schools, enter the classrooms and study classroom teaching in primary schools, study the composition of attainment and professional knowledge that the first-line primary school teachers need in the reaching, and guide primary teachers in scientific research. At the same time, it can apply the research results for the training of primary school teachers in the whole.

## **IV. Building training bases with primary schools, to promote the training of school general teachers in joint training**

The key of innovation platform construction is to break through in the innovation of system and mechanism which bundles with universities and elementary school personnel, and it constructs the base and the project as a whole, gives full play to the interdisciplinary mutual advantages, carries out research organically, and enables the student teachers to acquire knowledge and increase their ability in the process of teaching practice.

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