

## **A Study on the PCK Structure and Developing Approach of Art Teacher**

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**Abstract.** In the last 80s, Shulman put forward the concept of pedagogical content knowledge (PCK), which aroused great concern in educational field. Pedagogical content knowledge is the core content of a teacher's knowledge. The PCK Structure of art teacher consists of subject matter knowledge, pedagogical knowledge, student's knowledge and situational knowledge. Although, unified understanding on pedagogical content knowledge has not been achieved yet, the construction of art teacher's PCK still proactively promotes the development of art teacher's training education on mode.

### **Introduction**

In 1980s, Shulman, a famous American educational theorist, published two articles, and he put forward the concept of pedagogical content knowledge, which immediately aroused education experts and scholars' great concern and provided a completely new version for the development of teacher's profession. However, the concept also received challenges from the opponent at the same time such as the teaching problem on the subject matter knowledge itself as well as the clarity and ambiguity of the definition on pedagogical content knowledge. Challenged by academic theory from various aspects, pedagogical content knowledge, as a construction mode of the teacher's knowledge, are still comprehensively applied in studies on teacher's training education in different disciplines.

### **The Origin and Connotation of PCK Theory**

For pedagogical content knowledge, Shulman assumes that it has the following features it includes the discipline content and its pedagogical knowledge. it is a mixture of specified content and pedagogy, which can be both a unique sphere of the teacher and a special form of their comprehension on certain professions [1]. Pedagogical content knowledge is also a form of subject matter knowledge. It is based on teaching, which has special forms of content knowledge. At the beginning, Shulman believes that content knowledge equals to subject matter knowledge. Additionally, subject matter knowledge, together with pedagogical content knowledge and curricular knowledge belongs to content knowledge, while later he found the irrationality of such classification. In 1987, Shulman reclassified and redefined the pedagogical content knowledge that it is to combine subject matter knowledge and pedagogical knowledge and to form a new comprehension, knowing how to organize specified topic, problem and event according to different interests and abilities of the learners and present it by the teaching form [2]. He separates the content knowledge and subject matter knowledge and forms two relatively independent subcategories.

Teacher's knowledge can be divided into general cultural knowledge, professional subject matter knowledge and pedagogical knowledge. From the development of pedagogical education, the focus and tendency of the three types of knowledge mentioned above vary from different periods. Before the last 70s, teacher's general knowledge and professional knowledge in curricular design received much concern. While after 1970s, teacher's pedagogical science knowledge was put on schedule, especially for general pedagogical knowledge. Then in 1980s, with Shulman's pedagogical content knowledge concept being put forward, pedagogical content knowledge has become a focus again on teacher's

training education. On whole, Shulman's pedagogical content knowledge is not a single unit. Instead, it is to comprehend different teaching units based on professional subject matter knowledge and pedagogical knowledge in a comprehensive way and to deal with how to reasonably and effectively organize teaching activities to suit different students' different interests and abilities. It integrates the teacher's various aspects of knowledge on the learner, curriculum, teaching situation and teaching method. In teaching process, teachers can apply analogy, illustration, demonstration and exemplification relating to the content characteristic of a single unit of a subject, which will facilitate the student's comprehension of the content learned.

After Shulman, Cochran and other people further deepened pedagogical content knowledge into pedagogical content knowing from the field of dynamic development, i.e. PCKg, the teacher's comprehension to general pedagogy, student's characteristic, subject content and learning situation knowledge. Compared with PCK, PCKg emphasizes more on knowledge dynamics and constructiveness, more on teachers and the principal status. In summary, PCK is a type of knowledge with quite complex elements. It is to integrate the value and faith of the teacher him or herself based on the combination of subject matter knowledge and education knowledge. It is also an organization or a reorganization of the teaching content of certain subject, which is to realize the knowledge transformation by certain teaching strategies and approaches like exemplification, demonstration, illustration and explanation so that the teaching capability can be formed and developed.

### **Art Teacher's PCK Structure**

Although Shulman's pedagogical content knowledge concept has been put forward since 1980s, which has been applied and developed in science, mathematics, English, chemistry, music, physical education and even special education, art subject is still quite stagnant compared with other subjects. Reasons can be analyzed as follow: First, in the inner part of art subject, knowledge impartment is only a part of art learning. The work should be achieved by artistic skills, so the importance of skill learning outweighs any other art knowledge. In the process of skill impartment, the boundary between subject matter knowledge and pedagogical content knowledge is ambiguous. Therefore, numerous people engaged in art education confuse subject matter knowledge with pedagogical content knowledge. Second, "master-apprentice impartment" in art education could not be eradicated. A fantastic painting could not be achieved by unified method. The personalized characteristic of painting form language can be hard to form general learning methods and strategies in art learning. It is also hard to form unified standard, which affects the vertical development of art education subject theory. Nevertheless, as a positive beauty education, we should try to teach art by the possible rules though we knew there can be almost no rule in art teaching. To master systematic art pedagogical content knowledge is of extreme significance for art teacher's training on non-professional or compulsory education scale. According to Cochran's view, PCK is integrated by subject matter knowledge, pedagogical knowledge, student-relating knowledge and situational-relating knowledge. The four parts also offer a construction mode for art teacher's PCK.

First and foremost, in terms of subject matter knowledge: Art subject matter knowledge is a basic connotation of PCK structure, in which pedagogical content knowledge is converted from subject matter knowledge. Art education itself serves modeling art as a performance medium. Art subject matter knowledge is a complete knowledge integration, which can be specified into art culture knowledge (art history, art theory, art criticism) and art skill knowledge. In new curriculum standard, art learning in middle school can be divided into four aspects: & performance, design & application, appreciation & comment as well as synthesis & exploration, both relating to the history and theory in art historic theory and different disciplines within modeling arts, so art subject matter knowledge is a premise and foundation of art pedagogical knowledge.

Then, in terms of student's knowledge: PCK attaches great importance to the strengthening of subject matter knowledge by means of teaching strategies between subject matter knowledge and students. Art teachers should know the students' age characteristics, learning motives, original knowledge reserve, learning interest and basic capabilities. The learning characteristic of art subject is from seeing to thinking, and to the generation of work, so the comprehension of art differs from people. The effect of inherent quality, interest and extrinsic complex social factors will form the students' different art learning value orientation. To know the students means to know your teaching target members so that you can shoot the arrow at the target and improve the learning efficiency at a short period of time.

At last, in terms of teaching situation knowledge, the concept of education includes both teaching and fostering. Teaching means to impart knowledge; Fostering means to stimulate the students' potential ability and intelligence. The new curriculum standards requires the change of skill-learning focus in the past art education both in skill-learning level and in the sphere of art culture learning. Art culture learning is to illustrate art from the angle of cultural situation, thus getting art education out of craftsmanship, and being included in human culture study. Hence, art education should stress not only the rationality as a practical tool but also the rationality as the value of empathy. Teaching situation knowledge is also one of the core contents in art teacher's PCK structure.

## **Development Approach of Art Teacher's PCK**

### **Self-constructing PCK in Teaching Practice**

On mentioning the specialty of teaching career, Cochran believes that unlike historians and biologists, teachers know how to organize and utilize knowledge from teaching aspect instead of stressing the quality and quantity of the grasped knowledge. In college teacher's education, teachers need to teach students art by starting from practice, and students should experience a natural learning process, that is to know the nature, to reproduce nature and then to self-behave the nature. Art subject matter knowledge and pedagogical curricular learning should be completed at school, and at last strengthened by 1-2 month's teacher internship program. Though there is shortcoming on teacher internship program because the time is limited, and it is quite difficult to help students form solid teaching ability, students keep improving their teaching quality based on undergraduate studies in teaching practice, thus forming teaching ability gradually.

PCK is a "mixture" of various type of knowledge. Fixed knowledge and personal experience achieved mutual integration and mutual promotion in the practice day by day. The "mixing" process produces the teacher's personal pedagogical cognition. Instead of calculated by simply adding the quantity, it has vivid situations and needs teachers to actively construct by integrating all the aspects in teaching practice.

### **Accelerating Forming PCK in Self-reflection on Teaching Experience**

Teacher's PCK emphasizes self-constructing knowledge, which reckons teacher's teaching experience as a premise, and constructing means to accumulate experience and correct experience results. Experience should be accumulated by continuously repeating the process, and among the process, correcting experience is the ultimate key to success. The teacher's PCK construction is completed by mutual support between experience and self-reflection. Because of subject characters, art teachers mix lots of subjective and uncertain factors in acquiring knowledge and skills. Quite many art teachers teach the course by imparting their personal art experience, so the process can be obviously personal and parochial. Hence, self-reflection is quite prominent in its status. Without the correction of self-reflection, uncertain experience imparting will cause mistakes and limitations for students. In addition, self-reflection on teaching experience could not be completed in one time, while it is a gradual process by observing the developing orbit: practice-reflection-practice again-reflection again.

Thinking over performance to performance, teachers gradually form PCK ability. To put self-reflection on teaching experience in daily teaching activities will speed up producing the art teacher's PCK.

### **Co-developing PCK in Learning Community**

Science has quite many common points, whilst art is different in many ways. Art education is not like science that can provide unique answers; however, every art teacher teaches with his or her own knowledge features. Participating in teaching activities as a single worker, communication among teachers is a direct means of transmitting knowledge. PCK itself is a learning community among teachers, such as experienced teachers and new teachers, teachers within a common major or in different majors. They discuss teaching or pedagogical experience together, learn from other strong points and close the gap and co-develop PCK through art salon, hot issue traces, testing complex teaching problems, skill competitions, comment on typical lessons, recording and note-taking teaching activities. In this way, we can narrow the diversity the personal experience and ability among art teachers, or change the diversity into complementarities, thus optimizing teaching content and improving teaching quality.

In conclusion, art teacher's PCK is integrated in teaching practice. It is quite personal and practical as a core of teacher's knowledge. In a word, construction of art teacher's PCK is of vital significance.

### **References**

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