Research on the Normal Students' Professional Development in Self -organized Learning Environment-Taking the Project of "New Class" as the Case Study

Wu Changcheng[a*],Luo Ying[b],Ta Weigang[c]&Liu Xuan[d]

[a]*Sichuan Normal University,China*

[b]*Chengdu Aeronautic Polytechnic,China*

[c]*Xinjiang Normal University,China*

[d]*Sichuan Radio and*

TV Universit,China

[*]chengcheng1098@gmail.com

Abstract: Taking the project of "New Class" as the case study, this paper explores the practices of teachers' professional development based on the theory of "Self Organized Learning Environments".This project aims to improve the normal students' professional development by applying the ideas and methods of HCD of IDEO designed by the global design company, and organizes teaching activities design workshops which involved the normal university teachers in experiencing the education value of "students-centered teaching" and the experience teaching methods. This study focuses on the teachers' personal professional development from the perspectives of the autonomy of teacher development and the practices of teachers' professional development.

Keywords: Teachers' professional development; cultivation of normal university students; self organized learning environment

Introduction

In the context of the information age, knowledge and skills are developing rapidly.Teachers not only need to continue to move forward in the depth direction of professional education and teaching, but also requires them to interdisciplinary, extending the breadth of interdisciplinary subject knowledge. This put forward higher requirements to the teachers' teaching ability. Today,if teacher can make an outstanding contribution to education and equal with the social elite with people coming, enjoy the same status and reputation.They must be full-time teachers and their teaching level education should be more comparable with physician education(International Encyclopedia of Education,1990)(Chen-shijian,2007). The key to the success of education reform in

teachers, they are the education reform practitioners and innovators. normal university students are the first pre-drilled to teaching skills practice, and that is Teaching Skills Upgrading the most important "exercise."

Teaching skills means "teaching teachers to use the existing theoretical knowledge, solid, complex behavior of the system by teaching practice and formation.It is based on the theory of teaching which includes, in accordance with a certain way for repeated practice or primary teaching skills due to mimic the formation, but also in teaching based on the theory and practice for repeatedly formed, reaching the level of automation of advanced teaching skills, namely teaching skills.Teaching skills are essential teacher education and teaching skills, it made good teaching effectiveness, innovation of teaching, has a positive effect. "

Above all, experts and scholars from the focus on the theoretical research of teacher's professional development, gradually pay attention to the practice of teacher's professional development,self-organizing and diversity, and pay more attention to the teacher in a relatively free and colleagues under the environment of mutual teaching practice efficiency and actual efficiency. Teacher's professional development from the past is only the government and schools to participate in to a third party public welfare organization intervention and evaluation of undergraduate teaching development.

2. Research Questions

Because of the most practice time is organized for the students in their sixth and seventh semester by school, the students are eager to exercise their teacher's skills early, on one hand, many normal college students think it's more and more sooner for the recruitment department to find their teachers, the earlier you contact with the primary and secondary school teachers and go into the teaching practical field, the more conducive to the normal students master the teaching skills and have the opportunity to find a suitable job; on the other hand, the training of normal students' teaching skills is a long-term, continuous improvement and optimization process, not overnight "temper". Therefore, the students have an urgent need to establish the self-organized team in normal university, contact with teaching practical field and advance the teaching skills' training. So, how do the normal students and teachers form a self-organized team? How to develop the teaching skills' training in the self-organized learning environment (SOLE)? These above two questions are the focus of this article.

The new class project is a teacher self-organized community, through the cooperation of teachers, normal students, the social people who pay attention to education to carry out a variety of workshops and teaching salon, to help teachers improve teaching skills, to solve the problems encountered in teaching, etc. The "new class" program mainly helps the students to develop the teachers' professional quality and mainly focuses on the cultivation of students' teaching practice skill, teaching design and teaching innovation. In this paper, we use the concept of Thinking IDEO which is the world famous design Domain Company and the Human Central Design method to carry out the teaching activity design based on children as the center by the solution of experience teaching workshop.

3. The Self-organized Model of the Normal Students' Teacher Professional Development

3.1 Self-organized Learning Environment Theory

In 2013, the TED Prize winner Dr.Sugata Mitra brings us the innovation concept of learning for children, self-organized learning environment (self-organized learning environments, referred to as the "SOLE"). SOLE is designed to help educators and parents to encourage their children to explore the problem, and they use the natural curiosity to take part in the children's oriented learning(Sugata Mitra,2013). (1) SOLE is an important role in guiding children to think about problems and give them space to think, and it also includes let children know how to ask questions. (2) SOLE consists of several key elements: self-organization, curious, interesting, social, cooperative, peer interest driven, adult encouragement and appreciation are the "catalyst". (3) Four ways of supporting the SOLE activity: first of all, the four children and one computer form a group; second, a whiteboard or blackboard is needed to record the inquiry; third, paper and pen for recording notes, easy to end sharing after SOLE; finally, provide a written chest card with their name or other which is easy to identify the helper role, let the children feel funny. (4) SOLE activity process is divided into three steps. First, the problem is raised; second, carry out the investigation; third, review the reflection(Sugata Mitra,2013). Students can self-organize to form a good learning environment, so, the teacher can also carry out the growth workshops in this self-organized environment, and to improve the teachers' professional ability and quality.

3.2.Teaching Skills of Normal Students Practice the Self-organized Structure

The practice for self-organzation of the teaching skills of the normal students is a kind of loose and mutual cooperation mode which is based on familiar with each other by the teacher, the normal student and concerned about education. Under this kind of informal organization, the teacher is mainly based on the interest and the need to participate in the activities. The new class organization structure is divided into three layers: the core team members, the primary and secondary school teachers and the normal students. The core team, with the help of the external think tank, decided to organize the development direction and concrete actions of the teachers. Teachers and normal students formed the group by voluntary pair, through in-service teachers guide the future teachers, pass on their experience to them,and help students about their professional development of teachers. The self-organized model can be formed, and it comes from the needs of both teachers and students. The normal students' needs are that entering the real classroom, participating in the real teaching environment, and contacting children closely to exercise their own teaching ability, to observe the in-service teachers about how to have class, but also hope to be able to accumulate teaching ability, to help them to get better jobs; the teacher's needs is that teachers can work with the normal students to carry out class management, teaching design, class preparation, etc. The self-organized community of the

new class satisfys the needs of normal students and teachers, which is the value of the new class. In-service teachers and the normal students formed the mentoring relationship which can move towards to both internal and external school cooperation, stressed the need to learn and practice. The purpose of cognitive apprenticeship is making the students to adapt the real practice by those significant industry teacher-student way or similar activity and social interaction(Gu Linyuan&Wang Jie,2013).

4. the practice case of the normal students' teaching skills in self-organizatied learning environment

The preparation scheme of the student teachers' professional development's self-organization is the experiential teaching workshops which mainly is according to a point of knowledge or a problem, through group collective wisdom and collective action, forming concrete teaching plan, and then inviting teachers to participate in lessons and trial lecture of feedback, the teaching take the design to the real classroom. The research and development experience of self-organization is divided into four steps: participate in IDEO design workshop, research the experience teaching workshop, the internal testing and improvement workshop, and the external application and assessment workshop, shown in Figure 1.
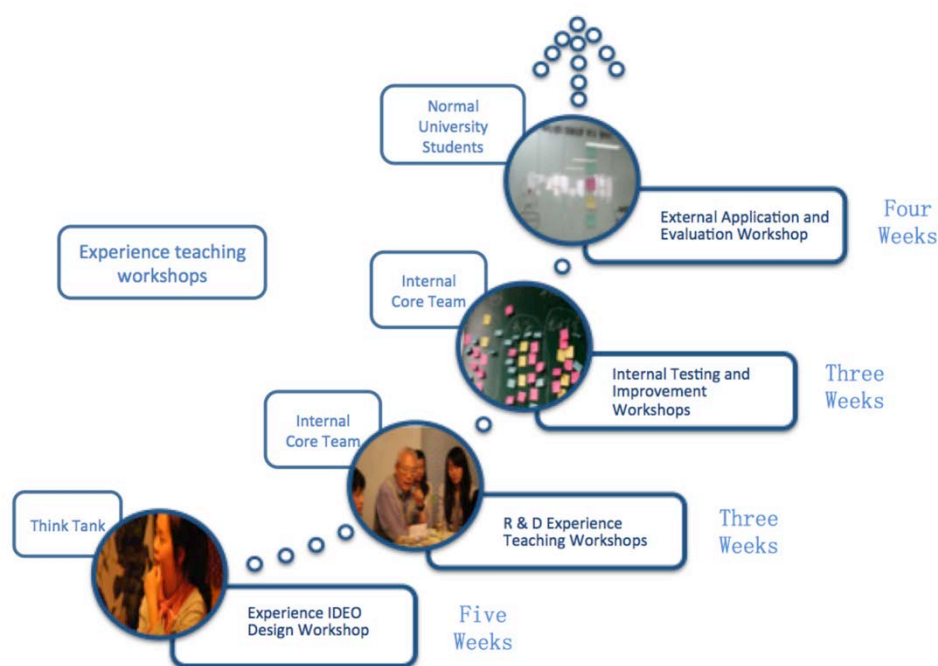

Figure 1. experiential teaching workshop three-dimensional diagram.

4.1. experience HCD design workshop

When participate the global famous design company IDEO's HCD creation workshops, a new class project team and ThoughtWorks company and the Chengdu Super Love

education technology company learn a global open course which is human centered design for social innovation course(IDEO ,2015). Adopts the idea and method of "human central design" (short for HCD), and tries to use innovation way to solve the social problems. Throughout the whole course process are studied throughout the material of the network community, Google+, and the combination of off line group practice. The whole activity consists of five workshops, 5 weeks, include: the overview, the creation, the creation of the prototype, and the test piece. Specific content is: to determine social innovation challenges, to collect innovative ideas, to contact the user to carry out social investigation, the team develop brainstorming, to determine 1 to 2 solutions, to conduct user investigation to form a preliminary solution, and finally to test and modify. Weekly workshops choose a fixed place and time, and download and reading and leading manual, select a leader to lead team members to carry out the next workshop and help people prepared the workshop materials in advance at very week, and review the previous weekly workshop. Specific strategies include the notes, design thinking, social investigation, brainstorming, empathy, experiential teaching methods, etc. The core of the HCD workshop is standing the user's perspective, to help him to solve specific problems that he encountered. In the HCD global open course(IDEO ,2015).

4.2.Developing experience teaching workshop

In the research process, we first translated HCD five workshops(human centered design for social innovation course materials), from the perspective of teaching and learning create again, according to the "learner centered" teaching design concept, to meet the needs of normal college students' professional development, to design teaching programs, and then test it. The IDEO design workshop is reformed and polished; it is more suitable for the development of education and teaching. Reconstruction of experiential teaching workshop still have five steps: experience design thinking, determine the teaching challenges, convergence teaching creativity, design teaching program and test it. Through the short period, continuous iteration of the found problem and small steps in the development of the way, continue to test and modify and improve the experience teaching workshop.

4.3. the internal testing and improvement of the workshop

Testing the experiential teaching workshop which is researched before in the internal team, including 5 to 6 teachers and juniors at the department of Science Education in normal college, continue testing and iteration, and form a more perfect, suitable teaching workshop for the normal college students. The internal team of the new class has done three tests of challenges, "how to help 3 to 6 grade children to have more activities of environmental protection very week?", " how to help the 4 to 6 grade children to avoid unintentional injuries?" , " how to help 5 grade students understand the living environment of the earthworm through experiments?". To design a specific solution for the above 3 teaching challenges, and carried on the 3 round of testing, improved 3 editions of the teaching design plan. We find that there are 2 key problems in the concrete practice of the

workshop: the positive and initiative of the students in the survey are not strong and lack of the ability of teaching design. For the already exists problems, the team give the active guidance to the normal students who participate in the workshop, and reduce a survey. In view of the weak design capability, we provide a series of design salon and design practice activities to help designer to improve and make up for the deficiencies in this area.

4.4. external application and assessment workshop

After 3 rounds of iterative and polished the experiential teaching workshop is relatively perfect. It began to spread and apply in several primary and middle school teachers in Chengdu, and to evaluate the effect of the application of young teachers and college students. Refer to the practical effect of the case "how to help 4-6 Grade children to avoid accidental injury?". After the assessment, and then it will be modified and improved.

5. the practical effect of teaching skills of the normal students

In this way, we can meet the needs of teachers and the normal students, especially for the growth of normal students. This way can be evaluated in several ways, the participants' survey, teaching activity design case and network learning community. Through survey interviews, teaching activity design case and network learning community knowledge management data and other research data and marital, the use of "triangle mutual evidence method" is to ensure the reliability and validity of this study. In short, the combination of quantitative and natural research, from the medium and micro dimensions, is to promote the development of research.

5.1 the feedback of the participants' experience

The normal students through participating in experiential teaching workshop get the opportunity for self-growth, the 74% participants considered their teaching activity design ability have a large promote after participate in experiential teaching workshop. We have a more scientific evaluation of the effect of the implementation of the project through the feedback from the students of 2010 grade and grade 2011 whose majors are science education. Wang Li think, "The new class project has brought a wide range of teachers and school internship opportunities for me, let me diversified know about the possible of the classroom teaching design". Zhou Dan believes that "when the business friends of the new class critic and lead us, they give us sharp thought, let us clearly know what we don't know". Li Shuangjun, Chengdu Zongbei primary school science education teacher ,issued a feeling, "The new class builds a platform for learning and communication for us and the normal school students, the normal students are very lucky with such a good platform to communicate and grow with a good and experienced teachers, and for 12 years' experience, my experience told me that the new class can make normal students walk less curving road which need themselves to explore own. "

5.2. teaching design case

By the new class team to design experience teaching workshop cases how to help 4-6 Grade children to avoid accidental injury?", "how to help grade 3 children have more environmentally activities every day? ". We mainly through peer mutual aid to carry out 5 field experience teaching workshop. The first workshop is from the activities named "you write I draw", to understand the design thinking. Then by the way of noting, writing on the note with the issues which they think most 3 concerned, and then expressing their views. Team divided the notes into five categories: natural class, English class, team building, the universe and human, we found that the most concerned issue is "wild escape", so the field of escape theme is formed to the teaching challenges that is "how to help children in grade 4 to 6 to avoid accidental injury?" through collective wisdom. Second workshops are brainstorming: on this subject ' what we know ', ' what we do not know '. Then, through the "I know" are posted by notes; "I want to know" are listed, brainstorm and classify the content. The new class team find experts, teachers, students, parents, etc. from the side and the network in this area to form suitable problems which are understood by the investigation object, in order to facilitate the investigation and get the real answers.

5.3. the knowledge construction of teachers' community

The new class and many schools are cooperated to carry out the teaching and research activities, and to establish partnerships with primary school attached to Sichuan University and Sichuan Normal University, Tongzi Lin primary school, to improve their teaching skills, and carry out platform application research. Teachers in the new class platform application mainly interact by the teacher community, and the normal students elicit the topic by asking questions, in the process of Tower.im discussion, there are 112 participants to discuss 411 topics. Topics focus on four categories: experiential teaching workshop, newclass.org platform development, teaching activities and seminars and teaching cases. The teachers, the normal students, public welfare organizations and other groups are formed a joint force to promote the application of the platform through the online and offline ways, and a large number of teaching cases based on the application of teaching platform are came out. As so far, the newclass.org platform has set up 150 high-quality teaching cases, the number of participated teachers is more than 50, the number of students reached 100 people or more. Offline activities carried out a total of four workshops, four open classes and two teachers Sharon.

6. conclusion

In this paper, we study the growth pattern of the teachers and student self-organization in the New Class, which is a combination of online and offline learning style. but it is also the product of social development for a certain stage. In this paper, the following conclusions are obtained: firstly, to meet the needs of the personal growth of the normal students and teachers is the prerequisite for the existence and development of

self-organized community, and it is also the inner driving force of teacher development. Secondly, one of the contradictions in the process of self-organization is how to solve the problem of loose state and efficient cooperation. The research focus on the teaching research by different professional background and subject teachers; this study tries to find out the way to promote the professional development of teachers by combination of the public organizations, schools and teachers, especially in the structure of personnel, it makes a bold practice to try; finally, in the sustainable development level of the teachers' workshop, it is still needed to deeply study the driving and incentive mechanism.

Acknowledgements

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