THE PROJECT-BASED TEACHING IN VIETNAM AND ADVANTAGES OF PROJECT-BASED TEACHING METHOD IN TEACHER TRAINING

Tran Thi Mai Phuong and Phan Thanh Thanh
Faculty of Politic Theory - Civic Education, Hanoi University of Education

Abstract. Project Teaching Method (PTM) introduced in Vietnam in recent years, this method has received the attention of teachers in many different fields, especially in teacher training. In addition to studying the applying PTM in Vietnam, the paper discusses the advantages of this teaching method in teacher training, such as development of problem solving skills, presentation skills, collaborative working skills; evaluation skills and skills of using modern teaching aids etc.

Keywords: Project teaching method; Project teaching method in Vietnam; The advantages of project teaching method; Teacher training; Professional skills.

1. Introduction

The term of project in English, is "project," which is commonly understood as a project, a proposal, or a plan that needs to be implemented to achieve its intended purpose. The concept of the project is widely used in most socio-economic fields and in scientific research. Then, the concept of the project went from the field of economics, social to the education and training sector, not only in terms of educational development projects, but also as a teaching form or teaching method.

Understandably that project teaching is a form of teaching or a complex teaching method, in which, learners acquire knowledge under the guidance of teachers, and learners develop skills through problem solving (project). It is closely connected with the realities of life, closely follows the curriculum, combination of theory and practice and the creation of specific products.

In the world, at the late of twentieth century and the beginning of the twenty-first century this problem have been presented in theory of teaching method by D. Jarrett [5], such as JW. Thomas (1998) - Project Learning: Overview [7], JW. Thomas (2000) - Review of project teaching methods [8]; J. Railback (2002) Project Learning: Creating Excitement for Learning [6], etc...

In Vietnam, in recent years, there have been many articles, master theses and doctoral theses, with study of project teaching method in different aspects. Some studies have highlighted the nature of the project teaching method as well as the application of this method to teaching, such as: "Project teaching and its implementation" by Do Huong Tra [23]; Project Teaching and Teacher Training in Secondary School in Technology, PhD thesis in Education, Hanoi University of Science by Nguyen Thi Dieu Thao [15], etc...

In some teacher training institutions, the PTM is included in the training programs, with the aim to provide theoretical issues as well as apply this teaching method for the teachers in the future.
Hanoi National University of Education has put PTM into the theoretical programs of higher education courses for Master courses;

Hue Pedagogical School of Hue University also included the PTM into the program of implementing the project on development of junior high school teachers. In addition, PTM is also included in the training program for primary school teachers by Vietnam-Belgium Project [2]; The Department of Biology of the Ho Chi Minh City Pedagogical University also introduced the content of PTM in the "Teaching Program of Intel" for fourth year students in the 2006-2007 school year and third year students in the 2007-2008 school year.

In the education sector, PTM has been used to teach a wide range of different subjects, at various levels. Particularly, at the teacher training institutions, PTM has been used by many teachers, in order to improve the quality of teaching, including the improvement of professional skills for pedagogical students. However, the reality is that the application of PTM in practice is still not much, not really much effective, because many teachers have not recognized the importance, advantages and nature of this method and how to effective implementation of PTM. Therefore, research is required to show the advantages of PTM in teacher training, which will help teachers to have more scientific evidences to enhance application of this method.

2. Content

2.1. Situation of teaching and research on Project Teaching Method in Vietnam

2.1.1. A brief introduction to Project Teaching Method

2.1.1.1. Basic characteristics of Project Teaching Method

- Learners are the center of the teaching – learning process.
- The project focuses on the important learning objectives that associated with the outcome standards.
- The project requires diversity and regular forms of assessment.
- The project is related to reality.
- Learners demonstrate their knowledge through product and process implementation.
- Modern technology support and promote learning process of learners.
- The thinking ability is an indispensable element in the PTM.

2.1.1.2. The role of teachers and learners in Project Teaching

- The role of the teachers

In contrast to traditional teaching methods, the teachers play a central role and they are the specialists and their main task is to convey knowledge. In the PTM method, the teachers is the only guide and consultant (or advise) for learners, rather than "hands on work" for students. Whereby, teachers do not teach contents that needs to be learned in a traditional way, but from the contents that looks at its relevance and find out the issues of real life and developing the ideas of a project that involves learning contents, forming the roles of the learners in the project, that relating to the learning contents of learners (design exercises and learning tasks for students)...

In summary, the teachers no longer plays the leading role in the teaching process but becomes a facilitator for learners, creating the most favorable environment for the learners on the way of implementing of the project.
- The role of the learners

The learners are the persons whose decides the approach to the problems as well as the methods and activities that need to be taken to solve the problem. Learners tackle real life issues by the skills of adults through teamwork. It is the learner who chooses the data sources, collects data from these different sources, synthesizes, analyzes, and accumulates knowledge from their own works. The learners complete their study with specific products (projects) and can present and protect the products. The learners are also presenters of the new knowledge they have accumulated through the final project. The learners by themselves are the evaluators and are judged on what they have collected, and based on what has been collected, reasonable and appropriate presentation of the learners according to the criteria has been built before.

2.1.1.3. The process of Project Teaching Method

**Preparation stage**

The works of the teachers:
- Develop orientation questions: based on learning contents and objectives.
- Project design: define the field of content application, whose needs, ideas and project names.
- Designing tasks for learners: How to make learners complete the task of learning is also questionnaire was solved and objectives were achieved simultaneously.
- Preparing materials that support for learners and teachers as well as actual project implementation conditions.

The works of learners:
- The learners and teachers agreed on the evaluation criteria
- Team working to build projects
- Project planning: identify what work need to do, expected time, materials, funding, methods of conducting and assigning works in the group.
- Prepare reliable sources of information to prepare for implementing the project.

**Implementation stage**

The works of teachers:
- Monitoring, guiding and evaluating learners in the course of project implementation.
- Contacting necessary facilities and needed guests for the learners.
- Preparation of facilities, creating favorable conditions for learners to implement the project.

The work of learners
- Assign tasks to team members to implement the project as scheduled.
- Conducting collection and processing of collected information.
- Product development or report.
- Contact, finds help when needed.
- Regular feedback, informing teachers and other groups through discussions.

**Synthesis stage**

The works of teachers:
- Monitoring, guiding and evaluating learners in the final stages of the project.
- Initially through the final products of the learner groups.
The work of learners:
- Finished product of the group.
- Prepare to introduce the products.

Assessment stage
The works of teachers:
- Preparing the facilities for the project report section.
- Monitoring and evaluating project products of groups.

The work of learners:
- Introduce products.
- Self-evaluation on the products of the project.
- Evaluate project output of other groups according to criteria.

2.1.1.4. The advantages and disadvantages of Project Teaching

The advantages: The following basic advantages of project teaching can be summarized:
- Linking theory with practice, thinking with action, school with society;
- Stimulating the motivation, learning excitement of learners;
- Promoting self-reliance, responsibility;
- Develop creativity;
- Training the capacity to solve complex problems;
- Training the perseverance, patience for learners
- Training the collaborative and team work;
- Developing assessment capacity of learners.

Disadvantages:
- PTM is not suitable for delivering abstract theoretical knowledge and system, as well as training of basic skill system;
- PTM requires a lot of time; therefore PTM is not a substitute for presentation method and exercises, but rather as a complementary form for traditional teaching methods.
- PTM requires appropriate materials and financial resource.

2.1.2. The research and Project Teaching Method in Vietnam

In Vietnam, similar teaching methods as PTM have been used in high school and college education. At the universities, PTM is shown through the implementation of important assignments, essays, thesis, and graduation projects in the field education. In these forms, self-reliant students undertake research-oriented tasks, under the guidance of the teachers.

In high schools, some schools have a form of teaching organization closely to PTM, which is teaching the theory in relation with practice, experimentation through the project of application to production, such as in Hoa Binh Socialist Vocational Youth School, Tran Hung Dao High School - Hai Phong ...

At the Tran Van On Secondary School in Ho Chi Minh City used PTM as pilot training in English for Grade 9 in the 2006-2007 school year and self-selected elective in Grade 8 [15, tr. 11].

In the 2008-2009 school year, Doi Can High School, in Vinh Phuc province used PTM for "Solar Energy Utilization" in its program called Project Week for Students in grades 11A2 and 11A3. Under
this project, students are organized in small groups (4-5 students) to carry out the project with the support of teachers. At the end of the project, students presented 12 products of solar cookers, salt water filters and agricultural dryers by self-designed groups along with a Power Point presentation. The products were just assumed, so that students have not been able to participate in solving problems associated with real life of societies.

In the field of general education, along with the implementation of educational development projects, in the environmental education project, the PTM has been initially applied and has been developed for many subjects of general schools through the teacher training programs, remarkably, the implementation of the teaching program of Intel and Vietnam - Belgium Project in Vietnam.

From 1997 to 2010, the Belgian Government has got two projects supported for Northern Mountainous Provinces of Vietnam with the aim of innovation of the teaching methods, which oriented to apply active teaching methods. The active teaching methods (including PTM) has not had a specific model for reference, but with enthusiasm and active Many teachers have innovated, initially creating a breakthrough in teaching and learning methods. Although PTM has recently been applied in Vietnam, but this method has brought positive effects and teachers and teachers and students have approached enthusiasm.

In the study, there were a number of theses, research works using PTM in teaching in high school and teacher training in universities.

In the Departments of Chemistry, there are a number of studies, such as application of PTM to teach non-metallic chemistry in high school programs to provide students with the necessary capacities to improve the quality of chemistry teaching [1]. Project teaching method and application in the training of chemistry students at pedagogical universities [21]; Teaching the project with the development of creative teaching for students in teaching organic chemistry [4]; Nguyen Thi Suu, Nguyen Thi Phuong Thuy (2014), Improving the effectiveness of using PTM in organic chemistry teaching in northern mountainous province [12]; Nguyen Thi Phuong Thuy, Nguyen Thi Suu, Vu Quoc Trung (2015); Develop problem-solving capacity for students in Dien Bien province by PTM for the 11th grade in high school on the content of hydrocarbon organic chemistry [18]; Nguyen Thi Suu, Vu Quoc Trung, Nguyen Thi Phuong Thuy, Le Tung (2015), Applied PTM in organic chemistry teaching in Dien Bien secondary school [13]; Nguyen Thi Suu, Vu Quoc Trung, Nguyen Thi Phuong Thuy (2015), Environmental education for students in the Northwestern region by PTM of organic chemistry for grade 11 at high school [14]; Nguyen Thi Phuong Thuy, Nguyen Thi Suu, Vu Quoc Trung (2016), Designing Tools for Assessing Problem-Solving Capacities in the Organic Chemistry by using PTM for Students Grade 12 at high school in the Northern mountainous region [20].

In the physics teaching at high school, since 2005, there have been many master's theses, doctoral dissertations and scientific studies on the PTM. The following are some of the typical examples: Tran Thi Thuy Hang (2006), a teaching organization by PTM for the contents of the chapter on "conservation and energy conversion" in the textbook of physics 9, with the aim to develop active awareness and self-control of students in the study. The master thesis in education, Hanoi Pedagogical University [9]; Nguyen Nguyet Hue (2010), Organization of PTM on contents of knowledge of chapter on "Mechanics of Fluid Mechanics" - Textbook of Advanced Physics 10, Master of Education thesis, Hanoi Pedagogical University [10]; Bui Tri Thuc (2010), Organization of teaching the content of the program "Electricity - Electric field" - Textbook of Advanced Physics 11, master thesis on education, Hanoi Pedagogical University [22]; Nguyen Thi Mai (2011), Teaching Organization of
PTM of some knowledge of the chapter "Conservation Laws" - Basic Physics 10, Masters thesis on Education, Pedagogical College of Thai Nguyen University [11], Tran Van Thanh (2013), Organization of PTM on some electromagnetic knowledge - Physics 9; Secondary school, PhD thesis; Hanoi Pedagogical University [16]

In summary, in Vietnam, the PTM has been used in teaching at general school, high school as well as in the universities and there are many researches on PTM method in teaching for some specific subjects. However, not many researches have shown the all advantages of this teaching method in teacher training at teacher training institutions.

2.2. The advantages of Project Teaching Method in teacher training

The PTM has a number of advantages in training teachers, especially in the training of their occupational skills. The following are some key advantages of this method in teacher training:

2.2.1. Improve the presentation skills

It can be said that presenting a problem in front of many people is an important skill of teachers. Teachers must know not only how to explain things for others but also attract the attention of others when speaking. The PTM pedagogical students (pre-service teachers) practice these skills. Because PTM require students present their projects for others and giving feedback to the others and receive their comments. The students have to speak and present clearly all things for listeners to understanding. A good project but with poor present may become less attractive, but with a skillful present it could be much more valuable. The presentation skill is a basic requirement in PTM method. As such, practicing presentation skill is strength of the PTM method that needs to be promoted, especially in teacher training.

2.2.2. Improve problem solving skills

In PTM, students have to deal difficult problems, these tasks require students to independent works and solve problems by themself. Projects may related to resolve problems in theory or in practice or apply theory in practice. Students must use their knowledge and personal skills to resolve their tasks, it’s mean that implementation of the projects from the requirements of lessons.

The problem resolving is also an important skill for teachers. In the daily teaching tasks, teachers must resolve many complex problems. It may be that the problems of personality education for students, it may be problems arise in teaching, or problems have been given by students... Problem resolving skills help teachers effectively carry out their teaching and education tasks. As such PTM method has a lot of advantages in practicing this skill

2.2.3. Perseverance, persistence practicing

The teaching in particular, education in general is a complex, long-term process, requiring teachers to perseverance, persistence, control, not be impatient, not be period burning. The perseverance, persistence is indispensable virtues of the teacher personality that should be trained for pedagogical teachers during the education process. Lack of perseverance, persistence teachers can not fulfill their duties well.

One of the basic advantages of the PTM method is practicing perseverance, persistence for students.
To complete a project, students must have perseverance, persistence, fulfillment of the final purposes. The projects in the teaching have many tasks, which are very complex and difficult. So that requiring students have to try hard working to overcome. When students complete the tasks, overcome the difficulties, then the qualities of personality, such as perseverance, persistence, will to rise up the practice, the personal will be improved.

2.2.4. Improve working collaborative skills

Project Teaching can be apply for individual, but often for a group of students. To complete project, all individuals must work together. Team work and cooperation skill is one of the most important skills for modern life. For teachers these skills are even more important. Because for personality education, teachers must know how to coordinate with individuals, various units, collaboration with his colleagues. The teacher can not afford to conduct student education alone.

The personality of student is very complex, multi-faceted, and multi-properties. Each teacher can only help students develop a certain aspect of personality to create a “house” of perfect personality. Therefore, working with others is a mandatory requirement of the teachers. Without teamwork skills teachers will not be able to complete the tasks of teaching and educating for students.

As mentioned above, PTM has the advantage of training this skill for students. Learners are participating in the process of PTM method must have the ability to collaborate with others in the teamwork.

2.2.5. Practicing Assessment Skills

Evaluation is one of the important aspects of teaching. It is important to evaluate how to ensure objectively, honestly, accurately and reflecting the essence of the learners in the training. Teachers should have the ability to assess students through a variety of tests, such as written tests (essay, MCQ tests), oral tests, practice tests, or periodic tests, unexpected tests ...

The PTM require students to comment and assess other’s project or group’s project or event themself projects. Project comment and valuate brings a general overview from the presentation to the contents, from theory to practice (applying theory in to practice). Therefore, PTM is improving capacity of developing effective assessment skills for students. This is an advantage of the PTM in teacher training, which is developing the assessment skills for them.

2.2.6. Improving the skill of using modern teaching facilities, especially the use of computer in teaching

The PTM require teachers and students to use modern teaching facilities, especially computers. The computer software will help learners present their project in the most visual and effective way. To do that learners must have the skills to use them.

Nowadays, the use of computers and modern teaching facilities is very popular in taring. Thanks to them, teachers save energy but they can improve the effective teaching. The students are not only easily to learn but also more comfortable and exciting to learn. Using computers and modern teaching facilities are requirement skills of teachers in the pedagogical universities.

In the PTM method, the students have got more opportunities to practicing different skills. Thus, PTM method has the potential to improve the skills for future teachers, including the skills of using computers and modern teaching facilities.
3. Conclusion

In present there are many different views about PTM, some people think it is a teaching method, others classify it as a form of teaching organization, some say it is a kind of teaching. Each view has its own reasons and depending on the different aspects of their view.

This article looks at PTM as a teaching method, which takes into account its advantages in teacher training at pedagogical university. Based on the basic advantages of the PTM method, we recognize that this approach has many advantages in teacher training, especially in improving the teaching skills. That is the training of presentation skills; problem resolving skills; team work skills; evaluation skills; using computer and modern teaching facilities skills etc.

REFERENCES

The project-based teaching in Vietnam and advantages of project-based teaching method in teacher training


