

Deepen Reform of Teaching, Strengthen Awareness of Participating

----Practice of Teaching Reform of Project Management

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ABSTRACT: In order to consolidate lots problems at the existence of Project Management teaching, the new teaching system including six parts of idea, content, process, effect and evaluation was designed to strengthen the students' participation. Then with the design of Simulation Project Management, not only did the students can integrate theory with practice, but also took initiative to learn technology of Project Management, grasped more skills, and will have significant effects in promoting the students' interest in learning, the self-learning ability, the team consciousness, and in strengthening teacher's professional quality and accomplishment.

KEYWORD: Project Management; Students' Participation; Simulated Project; Team Consciousness

1 INTRODUCTION

Chairman of the Project Management Professional Certification Committee Paul Grace pointed out, "In today's society, all are projects, all will become projects." [1] CEO of Project Management Institute, Virgil Carter pointed "With the integration of the global economy and S&T, Project Management, as the management model of the one-off creation activities, has become the most viable management tools to adapt to the new economic era." [2] American scholar Tom Peters and David Cleland said: "In complex world, project management is the key to success"; "Strategic Management and Project Management will play a key role in response to changes in the global market!" [3]

Holygoals International, Project Management professional consultants pointed that the successful operation and sustainable development of an organization were based on the effective integration of Strategic Management, Operation Management and Project Management. [4] Strategic Management sets goal and direction for organizational development and implements the different stages of decomposition target action of organizational strategies; Operations Management and Project Management provide the favorable support to achieve organizational strategy. In certain implementation phase of organizational strategy, Operation Management protects the orderly conduct of business of organizations in the normal order, as well as saves energy for the sustainable development of organization. When this process reaches a certain

level, a simple quantitative change of energy savings has been unable to make the breakthrough of qualitative change, the organization will undertake business activities to promote their ability to upgrade to a new level through the form of project, and Project Management is the effective mean to ensure the success of these activities.

Although the project of human can be traced back thousands of years ago, but as a science research, the Project Management can only be traced back to 1965, the first professional international organization IPMA (International Project Management Association) established. After nearly 50 years' efforts, the Project Management has been widely used in construction, finance, financial, advertising, medicine, law and aviation community, and many other areas of economic life and at all levels, both large groups and small businesses; not only the importance and basic concepts of project management has been a preliminary consensus with the varieties of professional organizations springing up, developing rapidly, but also the learning and applying the knowledge of project management have become the prerequisites to formulate and implement the strategic planning for the national government agencies and industries, the project manager has become one of the hottest career.

Undergraduate Education has begun to award project management degree in the United States, the project management degree at the undergraduate level has set up in our country in the early 1980s, the Project Management Research Committee (PMRC) and the National Educational Guidance Committee

for the Postgraduate of Engineering Management (GEGC- ME) had signed the agreement to award the Master of Engineering degree in Project Management at the graduate level, to obtain the International Project Management Professional Certification (IPMP-Level-D) from the International Project Management Association (IPMA) launched.

2 CHARACTERISTICS OF COURSE OF PROJECT MANAGEMENT

2.1 Wide Application

With the advent of knowledge economy and information age, Project Management has integrated into all aspects of S&T, economy and life. Whether the students of economics and management, or science and engineering will be involved more or less in the project and project management work in the future work and life, therefore, to learn the knowledge system of Project Management and to understand project management will help them not only to cooperate with the project manager actively, but also to grow in the project management and become the professional project managers in future.

2.2 Science System

Because the principles and methods of modern project and project management are completely different from the traditional construction project management and Operations Management, people began to study and propose the modern project management PMBOK since the 1980s, and launched the first official version in 1996, the ISO drawn up ISO10006 standards revised version in the 2000; PMBOK has been recognized as a global standard, and been the general term content theories, methods and tools for a range of modern project management.[5]

2.3 More Practical

There are 9 knowledge systems for Project Scope Management, Project Time Management, Project Cost Management, Project Quality Management, Project Procurement Management, Project Risk Management, Project Communication Management, Project Human Resource Management, Project Integration Management would be introduced in detail, and this 9 knowledge systems throughout the 5 specific management the process of project management, starting, planning, execution, control and ending, and every knowledge system with many specific, practical tools and methods, which will be used in future project management practice, need to be understood and mastered, so it is a very practical course.[6]

3 PROBLEMS IN TEACHING OF PROJECT MANAGEMENT

3.1 *Difficult to Understand the Pure Theoretical*

The basic knowledge, idea and tool methods had come mostly from the practice of project management. As to the students, no leaving school, lack of project experience and little contacting with the project, it was difficult to understand abstract concepts, to know how to use methods.[7]

3.2 *Difficult to Accept the Large Information*

There are more contents in the knowledge system of Project Management involves in 5 process and 9 knowledge systems. It was necessary to give deep explanation to the project management knowledge system because of the lack of the experience of project management and the capacity to quickly grasp and master the key of management. It was difficult to accept the large information teaching for the limited of teaching time.

3.3 *Difficult to Grasp the Methods*

There are many specific, practical tools and methods in 5 process and 9 knowledge systems, if they could not be applied, it was difficult to grasp.

4 REFORMS IN TEACHING OF PROJECT MANAGEMENT

In order to solve the problems in teaching of Project Management, to effectively promote students to master the knowledge, especially the tools and methods of Project Management comprehensively and systematically, the following reforms in the of teaching of Project Management were carried out to enforce students participate in teaching:

4.1 *Ideas in Teaching with Students Centered*

The previous idea of "giving priority to teaching and teacher centered" had changed to "giving priority to learning and student centered", with which to design and implement the teaching reformation in order to help students to grasp of the theory and method of the knowledge system of Project Management comprehensively and systematically.[8]

4.2 *Contents in Teaching with Simulation Projects*

Targeted with the college students, the contents in teaching added the analysis of the management of the simulation projects, such as group tourism, Christmas party, welcoming performance, campus marketing competition, preparing for postgraduates/civil servants examination and other projects the students had been involved in, to enhance students'

perceptual knowledge of Project Management, and the use of the knowledge of the 9 knowledge systems to analysis these simulation projects would help the students to grasp of knowledge system of project management, and to understand the framework and contact of the 9 knowledge systems.

4.3 *Process in Teaching with Discussion*

To explore the discussion teaching type of "Teachers designed simulation projects— Students managed simulation projects — Teachers evaluated management practices— Students improved project management" with the in-depth analysis of methods, steps and contents of Project Management.

(1)Teachers Designed Simulation Projects. After introducing the basic concepts of Project Management teachers would design a series of simulation projects closely combined with the life and learning of students, such as group tourism, Christmas party, welcoming performance, campus marketing competition, preparing for postgraduates/civil servants examination, and require the students to design management of these projects.

(2)Students Managed Simulation Projects. Students with teams (usually 3~5 students) management simulation projects based on the learned knowledge of Project Management, the reading of the extracurricular books and literatures, the collection and collation of related data and some practice and advantages; then introduced how to management the projects with PPT to other teams and communicated each other.

(3)Teachers Evaluated Management Practice. Teachers would evaluate each team's practices, praise the reasonable, and focus on the analysis of the defects and problems in the project management to help students to correctly use the knowledge, tools and methods of Project Management.^[9]

(4)Students improved project management. Students would modify and improve management according to teachers' analysis, combined with late course study, which was help to deepen the understanding of the knowledge system and to learn to use the tools and methods of Project Management.

4.4 *Process in Teaching with Management Tools*

The presentation and demonstration of the basic tools and methods of Project Management, such as Project software, Excel form, Work Breakdown Structure (WBS), Earned Value Analysis (EVA), helped students to use these tools to manage projects, even to master these methods and tools.

4.5 *Effect in Teaching with Comprehensive Capacity*

Through the above teaching reforms, the teaching way transformed from "Teaching in class" to

"Learning both in and out class, the teaching contents changed from "Teaching with books" to "Teaching for application", purpose of students' learning from "Learning for test" to "Learning for ability"; students not only learned a course, but also enhanced the comprehensive ability through the learning and training inside and outside the classroom to master the basic content, tools and methods of Project Management, and through the classroom display, thinking and discussion to preliminary practice the management of projects.

4.6 *Evaluation with objectively and fairly*

The evaluation of course would consider the theory accomplishment, practical skills, creative ability and other factors of students'. Through the open, flexible, personally diversified establishment of taking the students as main, focusing on process evaluation, summative assessment as a supplement, to realize the objective, just and comprehensive evaluation. The evaluation consists of three parts:

(1) Classroom Performance. It would include attendance, homework, analysis and discussion of Project Management.

(2) Project Management Report. Surrounding with the simulation projects, the students teams had proposed the management, introduced to the other teams with PPT and improved the management, and finally submitted the Project Management Report. For this assessment, teachers should evaluate both the management of simulation project and the cooperation consciousness of the teams, with specific evaluation of teacher evaluation, supplement with student self-evaluation and mutual evaluation of students.

(3) Final Examination. The design of final examination would not focus on the basic knowledge and concept as usually, but emphasize on the use of the basic tools and methods of Project Management, outstanding the integrate thinking of Project Management, and paying attention to evaluate the occupation ability and accomplishment.

5 EFFECT IN TEACHING OF PROJECT MANAGEMENT

5.1 *Help to Stimulate Interest in Learning*

As multifarious of contents of Project Management, and the theoretical far from the actual of students contacted, the former students felt boring more or less, and lower and lower interest along with the theoretical teaching. While the use of this teaching reform of strengthening awareness of participate, the students would feel shortage of knowledge of Project Management at the beginning practice of simulation project management, but with the interaction of extracurricular autonomous learning and exchange of teams, the basic concepts and methods appearing

repeatedly in the analysis and discussion, not only did the students master the theory and technology of Project Management, but also enhance the practice skills of Project Management, reach the teaching goal of knowledge, ability and the qualification, greatly stimulate students interest in learning.

5.2 *Conducive to Cultivate Self-study Ability*

The teaching reform of strengthening awareness of participates would strengthen two points for students to self-study: one was to self-study chapters relatively easy to understand by students, the other was to analysis the simulation projects. This did not only require students to understand and grasp the basic concepts, contents and methods, but also be able to teach to the other students. So the self-study needed read both textbooks and a lot of extracurricular reading -- including library information and network materials, to achieve a certain level to teach other students. Of course, teachers would give and improve the proper complement for the yet no clear to students.

5.3 *Conducive to Cultivate Sense of Team*

In the process of management of simulation projects, students could experience the process of project management, and the experience of the whole process of building, conflict, cooperation, management, perfect of teams, and want to be "the most lovers". These experiences, not only conducive to understand and grasp the relevant knowledge of Project Management, but also strengthen the spirit of cooperation and the sense of collective honor, the team competition consciousness was effective to promote the mutual communication and cooperation among members, and the optimization of team.

5.4 *Promote Comprehensive Quality of Teachers of Ascension*

During the previous teaching, the teacher was just the teacher of Project Management, while in the teaching reform of strengthening awareness of participates, the teacher was a project manager of "teaching project", and the delivery of this "project" was the students' master of knowledge system and methods of Project Management. Teacher had to played some role:

(1) Teaching Organizer. Teachers should think, organize and arrange carefully in advance which chapters to teach, how to teach to make students understand and master, which sections by self-study, problems maybe encounter by students' self-study.

(2) Classroom Activator. How to strengthen the students' participation in the process of discussion, so that every student can overcome the psychological fear into the projects? How to create an equal and friendly atmosphere to enhance the consciousness of

equality, participation of students? How to cultivate the students' positive learning emotions, progress and promotion in the team work, then obtains the achievement in the acquisition of knowledge and ability?[10]

(3) Studying Guider. In the teaching reform of strengthening awareness of participates, learning and application of much knowledge was completed by the students' self-study in teams, so the teachers know nothing in advance about the references, the books, technology used by students, only in the discussion and evaluation in the classroom. Therefore, as studying guider, the teachers had to read a lot of materials to improve their own level and the guidance prior to students, with students, following students and guiding students learning.

(4) Team Leader. The team is the unity of the individual components with harmony, common responsibility mission and complementary. In the forming of the teams, teachers should search for the balance among teams through guiding different levels and characters in the team, and guide the team manage the simulation project; in the running of the teams, teachers should guide students to strengthen the cooperation consciousness, collective advantage, to realize fair competition within the complementary advantages among team members.

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