

IT of Information Flow in Tutor-system Activities

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ABSTRACT

IT (information technology) was used in many fields, especially in the information flow from complex activities. In this paper, the information flow from innovation activities based on the double tutor system for undergraduates was discussed. The results showed that IT of the information flow was used in Tutor-system activities and the information in these activities was sorted by individual information, team information, subject information and activities information. The management tree of information flow from innovation activities based on the double tutor system was constructed and information technologies including Excel table, Word document, video and audio were used in this practice.

INTRODUCTION

Double tutor system, credit system and class organizational system are combined name as three education mode [1-3]. Since the 19th century, tutor system was implemented in Oxford University and the striking characteristics were closely related between teachers and students [4-5]. Teachers should not only guide students' learning, but also guide their lives and career planning [6].

In recent years, Chinese universities has been exploring to establish tutorial systems of undergraduates for a new type of education teaching system, in order to better implement the modern education idea, better adapt to the requirements of quality education and the transformation of talent training goal. With deepening research of engineering education mode, it is becoming a hot topic to strengthen students' practical abilities, the corresponding model of double tutor system among colleges. Innovative practice activities under double tutor system of education mode includes setting objectives, determining the practice project, the project discussion, project research, stage inspection, project acceptance, achievements investigation and so on. To transplant the information flow smoothly, it is necessary to open appropriate transmission channels, set up corresponding model for the information flow management.

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DOUBLE TUTORIAL SYSTEM UNDER THE TSEP MODE

To enhance the innovation practice ability of engineering students, the STEP training mode was set up to strengthen the innovation of training professional teachers practice based on forerunner of teacher practice training as "Teachers + Students + Enterprise + Project" mode (called TSEP mode). This mode was based on the platform of university-enterprise cooperation, target of enhancing the practice innovation ability, the guide by the demands of corporate practice, bond of enterprise project. This system application has been used to research on enterprise project guided by enterprise tutors and college tutors to enhance innovation engineering practice abilities of college teachers, to cultivate innovation practice ability, improve their innovation quality, and enhance the level of engineering education.

BASIC INFORMATION OF TSEP ACTIVITIES

Information of TSEP activities under the background of the innovation practice activity mainly includes four information modules about teachers and students information, enterprise information and project information. The information covered 30 items of information, information contents were shown in table 1.

Table 1. Basic information of TSEP activities.

Codes	Types	Modules	Contents
ST1	Teacher and students	Professtion teachers	Title degree, professional level, engineering background
ST2	Teacher and students	Proffetional students	Professional performance, career planning, innovation practice
ST3	Teacher and students	Professtional arguments	Training objectives, basic requirements and practical ability
E1	Enterprise	Practice enterprice	Management products, the development demand, talent team
E2	Enterprise	Enteprice teachers	Practice experience, and the ability to develop skills, guidance
P1	Project Planning	Setting project	The project name, during execution, project goals
P2	Project Planning	Project planning	The stage plan, goals and ability training
P3	Project	Project process	Title degree, professional level, engineering background
P3	Project implementation	Projext results	Professional performance, career planning, innovation practice
P3	Project implementation	Skills and abilities	Training objectives, basic requirements and practical ability

INFORMATION FLOW FROM INNOVATION ACTIVITIES OF TUTOR SYSTEM

During the research on innovation activities of the tutorial system, information of the innovation activities was transplanted by the requirements of the activities through information delivery channels (called IDCs) and formed the information flow for tutor system innovation of. The IDCs included two-way communication such as face-to-face discussion, information platform, seminar, debate, etc.. The transmission types of the information flow by these IDCs channels was shown in figure 1.

In the figure 1, the information flow was related to tutor team, student team(Stud Team), inspection team(Insp Team), enterprise tutor(Ente Tutor) and professional student(Prof Stud), professional tutor(Prof Tutor)groups. By the information delivery channels, information was transmated including the project requirements, guidelines, requirements, standards, practical skills, project progress, project planning, research summary, research record, the research results, stage planning, stage goal, project objectives, enterprises, enterprise tutors, professional tutors, professional student.

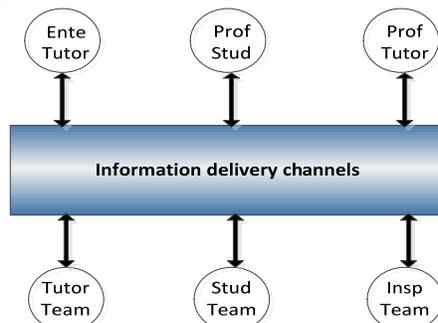


Figure 1. Information flow from innovation activities of tutor system.

INFORMATION FLOW MANAGEMENT OF INNOVATION ACTIVITIES

Technologies And Channels Of Information Flow

Information flow from innovation activities based on tutor activities included individual information, team information, project information and activities information. The IT management of the information low included Excel table, word document, video and audio, and so on. The IDCs included WeChat, QQ, E-mail, examination, inspection, acceptance, report, group discussion and data analysis. The contents were shown in table 2.

Table 2. Technologies and channels of information flow.

Code	Information Modules	IT	IDCs
SI	Individual Information	Excel table	WeChat, QQ, E-mail
GI	Team Information	Excel table	Materials, group discussion
II	Project Information	Word + Excel	E-mail, report
AI	Activities Information	audio+vidio+ Word + Excel	examination, inspection, acceptance

The Construction Of Management Tree Of Information Flow

According to figure 2, the management tree of information flow was constructed. The management tree includes four first class with individual information(Indi info), team information(Team Info), project information(Proj Info) and activities information(Acti Info).

Secondary class includes fifteen items with tutor information(I1 Tu) student information(I2 St), enterprise information(I3 Et), tutor team information(T1 Tu), student team(T2 St), subject team(T3 Su), inspection team(T4 In), project application(P1 Ap), project implement(P2 Im), project report(P3 Re), application

activities(A1 Ap), research activities(A2 RS), report activities(A3 Re), inspection activities(A4 In) and acceptance activities(A5 AC). Under secondary class, the management tree was further extended by sub class, such as A4(secondary class, inspection activities) was extended by project inspection, subject intermediate inspection, team activities inspection tutor guidance, team seminar, team work, individual job, etc.

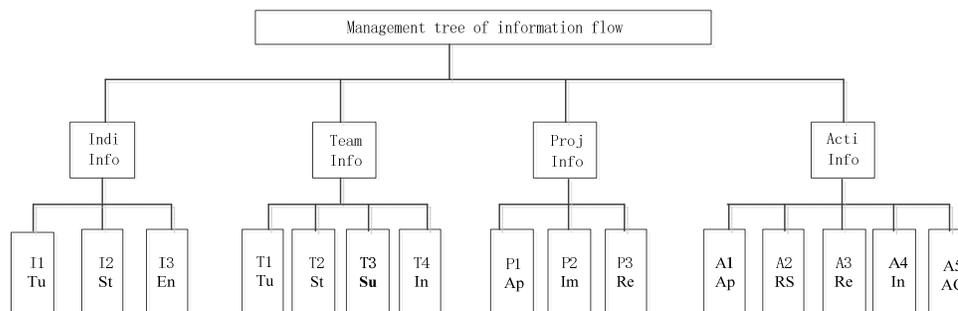


Figure 2. Management tree of information flow.

This research was used in Food Science department of Beihua university(China) and the results showed that the management tree of information flow had been used in the management information of tutor-system activities and it was confirmed as orderly management, smooth communication, high efficiency, data integrity, strong coordination, good stability, good results.

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