CONSTRUCTING AN INTERACTIVE ENVIRONMENT FOR FACULTY INSTURCTIONAL DEVELOPMENT

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ABSTRACT

This study describes a novel interactive platform for faculty development, particularly focusing on transmitting some subtle teaching experiences, e.g., interaction with students inside and outside of class, face to face and via the Internet. This work examined two outstanding instructional faculties at the National Central University, including an astronomy faculty (called professor A) and a mathematics faculty (called professor B). The data collected from the website can benefit for assist in further study on identifying some subtle but important characteristics of these outstanding teaching faculties. Moreover, these characteristics may exert long term influence on both new faculty members and students.

Keywords: Faculty Instructional Development, Information Technology, knowledge management

INTRODUCTION

Sorcinelli, Austin, Eddy & Beach (2006) identified four ages in professional faculty development: Scholar, Teacher, and Learner (p.1). Notably, they initiated a new age: the Age of the Network. Currently offered programs on faculty development, including perceived importance from the view of the developer, include: (1) teaching for student-centered learning; (2) new faculty development; (3) integrating technology into traditional teaching and learning; (4) active, inquiry-based, or problem-based learning; (5) assessment of student learning outcome; (5) multiculturalism and diversity related to teaching; (6) scholarship of teaching; and (7) writing across the curriculum (p.72). Additionally, according to the literature (Davis, 2001; Gillan, McFerrin, & Karan, 2000), many institutes endeavor to implement faculty development programs. Some focus on providing training courses for integrating information communication technology (ICT) into teaching and learning (Childress, 2000; Braun, 2000), while others focus on implementation strategies for conscientious objectors and the evangelists (Belvin & Baines, 2000).

However, the above programs seldom focused on transmitting teaching experiences between experienced and new faculty members. Numerous excellent teaching experiences cannot be systematically preserved by information technology. Moreover, the valuable teaching experiences of numerous faculties disappear as soon as those individuals retied or leave the jobs.

Faculty development in Taiwan appears to have attracted more concern in the research dimension, but not the instruction dimension. The above phenomena have been quite true in research-oriented universities during the decade. To eliminate the phenomena mentioned, the Ministry of Education (MOE) appealed to universities to pay attention to instructional development for faculty. To respond to the appeal of MOE and seek a balance between teaching and research, many Taiwanese universities have established “Faculty Development Centers” (FDC) to help faculty members (both new and veteran) to improve their teaching quality.

Some incentive project has also been initiated to promote faculty participation. “The Prize of the Outstanding Teaching Faculty” (POFT) is one of these projects. The National Central University (NCU) initiated POFT in 2003. Besides, to help new faculty members rapidly learn some tips for teaching techniques, to help all faculty integrate information technology into teaching and learning, and to develop instructional materials (especially for multi-media instructional materials), some holistic strategies exist to support the FDC, including: conducting a two-day workshop once a semester, training faculty to use the “Blackboard Learning System”, to establish the Multi-media Development Studio, and providing financial support for faculty who will adopt Blackboard Learning System, and conducting creative instruction in the classroom.

The workshops for exchanging ideas among faculties, the financial support, and training are easy to conduct but it is difficult to assess their effectiveness. For example, during several 2-day workshops, the FDC of NCU invited the faculties of POFT to share their teaching experiences with new faculty members. However, because of many new faculty members and a lack of time, few of them participated in the workshops from the beginning to the end. Thus, the effectiveness of the workshops differed from expectations. Besides the problems of a lack of time to participate in the instructional workshops, there have also been some other problems, such as: (1) a lack of deep interaction between the new and experienced faulty members; (2) a lack of sustained interaction following the workshops, and (3) a lack of feedback of students to instruction of the POFT faculties. Accordingly, the PDC of NCU proposes constructing an interactive platform for faculty of POFT to share their excellent teaching practice with the faculty of NCU and to interact with students via the Internet.

This study describes details the “Interaction Platform Faculty Instructional Development (IPFID)” in terms of the main idea used to construct the platform, the function of the platform, as well as its development process, characteristics, and

expectations.

PURPOSE OF THE STUDY AND SAMPLES

The purpose of this work is to describe the interactive platform for faculty development, and focuses especially on transmitting some subtle teaching experiences (such as interaction with students both in and out of class, face to face, via the Internet, and so on.) This work studied two outstanding instruction faculties at National Central University (NCU), including a faculty of astronomy (called professor A), and a faculty of mathematics (called professor B). Professors A and B were chosen because both of them have possessing: (1) many years of teaching experience; (2) having received an Award for Outstanding Faculty in Teaching at NCU; (3) having willingness allocat*es* their time for this time-consuming project.

METHOD

Observation, individual interviews, and document analysis were used to gather data for this study. Video camera, and digital recorder were used to record the observations and interviews, and the contents were typed into transcripts for data analysis. The study was a long-term project and was the result of 2006.

Constructing An Interactive Platform For Faculty Insturctional Development (Ipfid)

Goals of IPFID

IPFID is designed to: (1) provide an interactive channel for new faculty members and outstanding faculty in teaching; (2) preserve the teaching experiences of outstanding faculty regarding teaching systematically via information technology; (3) collecting the feedback from students and faculty of NCU about teaching practices of outstanding teaching faculty.

Process for developing the content of IPFID

- Classroom observation, recording, and analysis**.** To understand the teaching characteristics of professors A and B, this study chose some courses to observe (for approximately 2 hours per week), and used video tapes to record teaching activities throughout the observation period. Two video cameras were used to record student learning activities, and one to record teacher activities. The taped record was then carefully monitored. Both video tapes were analysed to obtaining some examples of teaching that were worth of further discussion in terms of the teaching strategies used, the interaction between instructors and students, and subtle teaching practices with implications for the spiritual and intellectual growth of students. Finally, the film was edited, to demonstrate some examples of special teaching practice at the IPFID. Thus, professors A and B can obtain feedback from students and faculty at NCU. Additionally, the platform in includes an "interactive discussion area" , and thus all professor A, professor B, students, and faculty at NCU, participants can express their ideas about topics addressed in respond to the film we presented in the platform. The responses provide data for further analysis.
- Interviewing, analysing, and clarify. Following the classroom observations and analysis, In-depth interviews were conducted following the classroom observations and analysis. All transcripts of interviews were made memo, note, coding and finally were analysed. This approach help clarify the educational beliefs of professors A and B, as well as clarifying the way in which they interacted with students. For example, both professor A and professor B have instructional websites; and both are good at integrating information technology (IT) into teaching and learning. Furthermore, both of them have skills required to provide a distance course.
- Forming the primary content of IPFID. Based on the analysis of the interviews and observations, this study developed some important content for the IPFID, including: (1) the characteristics of professors A and B; (2) the life stories explaining their professional development, especially why they dedicate so much effort to teaching; (3) films presenting instructional strategies (each films approximately two minutes long) for students and faculty to observe via the Internet and
- providing responses, discussion, and interaction regarding the "discussion area" of the platform ; (4) Internet resources on instruction development (such as Faculty Development associate, Centre for Instructional Development and Research); (5) special topics regarding the most attractive reason for students to take the course of professors A or B, feedback after reviewing the films presented in the Internet, and the students could be inspired by professors A and B, and why? The content of the website was revised based on the responses of the students and faculty members. Increase numbers of browsing, the response rate, and quality are the main reason for the revisions. Figure 1 and figure 2 show parts of the content of the website of professor A and B.

Figure 1: Part of content for teaching analysis of Professor A

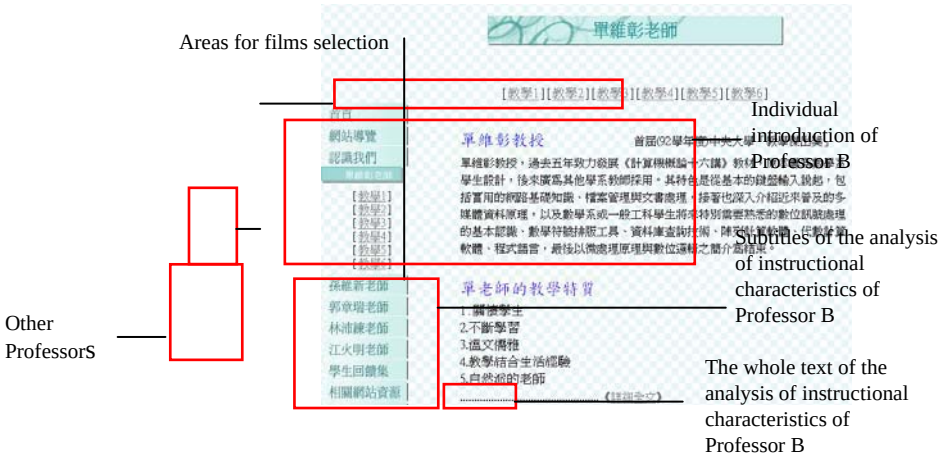

Figure 2: The main content of general analysis of Professor B

- Planning some disseminate activities. To encourage students and faculty to browse and provide responses on the website of IPFID, this study conducted several dissemination activities. For example, a “top five response rate” incentive activity was arranged to attract students to browse the website review instructional films and feedback on the topics presented on each of the films. Several e-mails were sent to faculty members to inform them that NCU has a website for exchanging teaching experiences among the faculty members. The website is also designed to join the “new faculty instructional promoting project” through which new faculty members can browse the website of IPFID and voice their opinions regarding professors A and B. Their response is then taken as evidence of their active effort to involve themselves in learning teaching experience from professors A and B.

Characteristics of IPFID

- Focusing on continuous interaction between students and faculty members. In the research-oriented university, it is difficult for faculty members to observe the teaching practice of other faculties, as well as interacting with students and faculty members regrading outstanding instruction faculty (e.g., their teaching strategies, and ways of communication with students.) The reason that this study focuses on this point is because student voices are rarely heard in university community. Student voices and timely feedback are important for faculty members to revise their teaching, and increase instruction effectiveness. The interaction between faculty members and students acts as a formative assessment in teaching activities, and the data gathered from this interaction provides valuable information to help instructors revise their teaching to benefits students.
- Systematically preserving faculty teaching experience. Most programs for the development of faculty instructional methods in Taiwan are based on workshop-like seminars, or sharing experience through one-day or two-day seminars.

Long-term plans for preserving the teaching experience of experienced faculty are rare. One of the objectives of IPFID is to try and encourage faculty to use the platform to preserve faculty teaching experiences in terms of their instructional belief, teaching practice, and interaction with students. The platform is designed not for improvisation, but collecting and analysing to systematically preserve faculty teaching experience.

- Combing faculty instructional development and research. Though one of the purposes of IPFID is to provide an interaction platform for new faculty and experience faculty with excellent teaching experience, this study analysed the data show in the platform, conducted interviews, and analysed the website content. In the further study, this study will use a narrative inquiry to explore the instructional and professional development of professors A and B and will use multiple inquiry methods (interviews, observation, and content analysis) to collect research data holistically, and thus identified the main influences on their professional development of instruction.

PRIMARY RESULT OF EXPLORING PARTICIPANT TEACHING CHARACTERISTICS

The main finding of this study in relation to professors A and B was that both shared some general teaching characteristics, while also having some unique characteristics. This study aims to integrate the results of data analysed into the IPFID (including films, guided articles, notes, and narrative stories) and expects that there would provide some inspiration for faculty members to modify their teaching methods and ways of concern students.

General Characteristics

- Integrating information technology into teaching and learning. Both of professors A and B are proficient users of information technology, and both have personal websites. One of the landmark courses of professor A, understanding the stars, is conducted by distance learning over ten Taiwanese universities. Moreover, professor B uses his IT proficiency to teach a creative course, learning Mathematics calculus in creativity way.

- Dedicating their profession to general education. Though professors A and B are both science professionals, they believe that general education is much more important than professional education for undergraduate students. Our classroom observations, demonstrated that both of professors emphasized the cultivation of positive attitudes toward life. Thus, in their teaching shared life experiences with students. To increase peoples' interest in science and mathematics, both of professors A and B participated in programs in a Broadcasting Station, and they made considerable effort to integrate science with daily life.

For example, professor A has been expressed his concern about students to make efforts to learn about two things when they are studying at university:

1. *He or she can know himself or herself via learning and making friend.*
2. *Trying to cultivate some experiences of life that nobody can take away.*

> *Many students responded to these expectations with touching expressions. One student responded:" Well, this is what excellence teacher do, according to the words mentioned [above]; I can feel deeply about Professor A's high expectations about us. This is the reason that I feel make sense to take general education course." Another student responded as:" These words are impressing to me; I want to do the things as what professor A encourages us. Even though I am a junior student, I still have two years to make effort to learn, to make friend, to cultivate my life experiences. It never too late if you take actions."*
>
> The ways of professor B to facilitate students to cultivate affection is another story. One of his students feel that "Professor *B is a quite warming person; from his words, you can tell he is really concern about you. I never met a professor like him at the university.* Some students enjoy chatting with Professor B, *"because chatting with him make our relationship closer, and I see him as my role model."*

The student feedback or responses on the "discussion area" via Internet not only inspired the professor, but also encouraged the students. Other faculty members can be inspired by the interaction shown on Internet. This is the benefits of the interactive platform.

Unique Characteristics

Professor A

- Early years experiences with a drama troupe. As an undergraduate student, professor A participated in a drama troupe, an experience that left a lasting impression. For example, professor A narrated a life story of a star observer due to his early experience in a drama troupe. Furthermore, the professor encourages students to come up to the front of the class and actively participate, and demonstrate certain concepts via role playing.

- Conducting numerous activities. Professor A not only uses television broadcasts in his teaching, but also conducts many face-to-face activities throughout the year. In 2006, professor A conducted many projects and employed seven assistants

to help in their execution. However, various problems arose. Notably, given limitations of time, whether interaction with students suffers without face-to-face interaction is a key question. Therefore, by conducting many activities for many departments may have some positive influence on many people, but there may be some limitations in terms of the time available for students.

- High proficiency in Chinese literature literacy**.** The students expressed their surprise at Chinese literature literacy of professor A. Professor A wrote a best selling book on the field of General science. Owing to being well-know by many people in the science education, the astronomy course of professor A has become extremely popular at NCU. Thus, many students wanted but were unable to take his course because of enrolments being oversubscribed. By out observation, students really enjoyed his teaching style, particularly his polished classroom expression.

Professor B

- Interacting with students via the Internet. Because of the attribution of mathematics, not easy conducting discussion in class, especially at the graduate level, professor B admitted that it is extremely difficult to achieve sufficient interaction with students. However, professor B enjoys good interactions with students after class via e-mail and MSN. Moreover, professor B enjoys has established student portfolios on his website, to describe his impressions, interactions, and memorable issues. Examining these portfolios revealed that professor B was highly perceptive. Professor B also interests closely with students after class.

- Enlarging the learning scope**.** Professor B is a mountain climber and also a good prose writer. He has expressed the belief that people should learn things without boundaries of place and time. For example, he emphasized that mountain climbing has taught him to respect nature, a form of respect that he sees as important for all people. Professor B was also inspired by the greatness of nature, and realizes that it is very important for humans to get along with nature. Professor B thinks that life is like a book, and thus we should keep the attitudes toward learning anything from someone and something else.

CONCLUSIONS

This faculty instructional development project attempts to construct an interactive platform to facilitate interaction between new faculty members and outstanding faculty members, students and students, and students and faculty members. Instructional development in numerous faculties focuses on teaching strategies, and new technology application. However, the voices of students are seldom heard. Additionally, how to systematically transmit excellent teaching experiences to outstanding faculty is an important issue in the higher education. During the information age it has become increasingly easy to preserve teaching practice via websites, digital cameras, and, software (such as real player). Lots of valuable teaching experience thus can be retained even after the teachers themselves retire. Constructing an Interactive Platform for Faculty Instructional development is one way of achieving the above goals. The data gathered from the website, in the long-run if there are more outstanding faculties in teaching joint, can help in conducting further study to identify subtle but important characteristics of outstanding teaching faculty. Moreover, these characteristics may influence both new faculty members and students for an extended period.

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