Implementing Educational Aims: Community of Practice, Cooperative Learning and Deep Learning

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ABSTRACT

In the Fall of 2006, The Hong Kong University of Science and Technology College of Lifelong Learning in conjunction with University of Warwick began a Higher Education Foundation Programme (HEFP) in Hong Kong. In operation for over twenty years, the HEFP prepares business students for academic life in the United Kingdom by offering university level courses in Business, Economics, Mathematics, Sociology, and English. To meet the demands of the programme, a 'Community of Practice' was fostered between the stakeholders (teachers, administrators, and students) that increased communication between the groups, and provided a base for the implementation of 'Cooperative Learning' among students (Johnson & Johnson, 1999; 2005; Lave & Wenger, 1991). The result was a high level of motivation and satisfaction between the various members, as well as 'Deep Learning' among students. This was because topics in one course would be simultaneously taught in another, thus building recursive learning into the process (Biggs, 1992; Murphey, 2001). The strengths and limitations of this programme are discussed and implications for application to other situations considered.

Keywords

Community of practice, deep learning, cooperative learning, recursion

INTRODUCTION

The setting for this research is the Hong Kong University of Science and Technology's "College of Lifelong Learning", which, in conjunction with the University of Warwick, began a Higher Education Foundation Programme (HEFP) in September 2006. The HEFP has been in operation for over twenty years in the United Kingdom. Our aim is to prepare Hong Kong business majors for academic life in the United Kingdom. Students studied a variety of courses:

(1) Business Studies, including organization, accounting, marketing, human resources management and business law;

(2) Economics, and related topics in competition and monopoly, analysis of wages and labour and market institutions, macro economic issues of inflation, unemployment and economic growth;

(3) Mathematics and Statistics, covering Algebra, Calculus, Probability and Statistical Analysis;

(4) Sociology which includes concepts and theories related to work, occupational change, gender and ethnic variations in employment;

(5) and English and Study Skills aimed at improving academic English, and fundamental principles in research.

The courses were conducted in English, making use of the most modern equipment: computers at each desk, overhead projectors which beamed PowerPoint Presentations, and email between students and staff. Teachers employed a variety of techniques including more formal teacher-centred lectures and note-taking, as well as general Cooperative Learning techniques where pair and group work fostered sharing of ideas centred on task-based activities.

Students interacted not only with teachers, as part of the 'Community of Practice', but with administrators who provided information on courses and counselled them during moments of difficulty or when course work was too stressful. In addition meetings were conducted between the various members. These brought together student representatives, teachers and administrators so issues relevant to all could be discussed.

The data for this study, therefore, consisted of observation notes of classroom activities and meetings, formal and informal, which occurred throughout the programme, and student interviews and copies of selected course work. Comparative Analysis of these data showed patterns relevant to the research aim of discovering how a Sociocultural Community of Practice, through Cooperative Learning, created opportunities for Deep Learning among the students.

LITERATURE REVIEW

Sociocultural Theory is based on research by Vygotsky (1978) who argued that individual cognition developed through a process of '*mediation*' where "humans deploy culturally constructed artefacts, concepts, and activities to regulate (i.e. gain voluntary control over and transform) the material world and their own and each other's social and mental activity" (Lantolf & Thorne, 2006, p. 79). Learning involves the continual mediation of current action with previous psychological tools according to changing external conditions (or environments) in what has been called 'recursive' activities (Bruner, 1986; Murphey, 2001).

One area of Sociocultural research which attempts to examine the social environment is that which discusses a Community of Practice (Cole, 1988; Engeström, 1996, 2007; Leont'ev, 1981; Lave & Wenger, 1991; Wenger, 1998). Fellowship emerges through emotional solidarity, commitment, mutuality and trust (Smith, 2001), as people interact within a particular locale (Willmott, 1989), and produce 'Social Capital' (Putnam, 2000, p. 19).

It is in community that people build social relations by 'tuning' into each other as they seek to fulfil common interests, and this necessarily promotes learning (Wenger, 1998):

Over time, this collective learning results in practices that reflect both the pursuit of our enterprises and the attendant social relations. These practices are thus the property of a kind of community created over time by the sustained pursuit of a shared enterprise. It makes sense, therefore to call these kinds of communities *communities of practice*. (Wenger 1998, p. 45)

A Community of Practice exists, therefore, when people of a given locality form common interests while pursuing solidarity, commitment, mutuality and trust between its members.

In educational settings, a Community of Practice can involve specific social practices, similar to those found in Cooperative Learning. Teachers often encourage the use of particular types of activities, pair and group work, to foster (1) *Interdependence*, (2) *Individual Accountability*, (3) *Interaction, Social Skills*, and (5) *Group Processing* (Johnson & Johnson, 1989, 2005), and these activities may well develop Deep Learning strategies amongst Chinese students (Biggs, 1992, 1993, 1994, 1996a, 1996b; Tang, 1996; Watkins & Biggs, 1996, 2001). However, the effects of examining a larger Community of Practice, beyond that of a single classroom, are unclear when attempting to ascertain how Deep Learning potentially occurs when faced with multiple classes and institutional environments where knowledge in one area influences learning in other areas. With Sociocultural Theory as a base, this research project attempts to examine a particular Community of Practice, its use of Cooperative Learning, and how the potential for Deep Learning is developed.

SUMMARY OF RESULTS

The process by which a Community of Practice was fostered occurred through establishing clear objectives, centred around the aim of admitting all of the students to their university of choice (Wenger, 1998). This common aim was expressed through various sub activities, as represented by each community. Administrators, for example, attempted to achieve the major goal by organizing information sessions for students on application procedures, and provided personal one-to-one counselling concerning students' intended career paths, which involved presenting information and responding to emotional needs.

The HEFP Community of Practice fostered Cooperative Learning by promoting fundamental principles of community building (Johnson & Johnson, 2005) through creating a larger social environment where all members sought to fulfil the five ideals of Cooperative Learning[1]. Teachers built on these activities by promoting Interdependence through group work, such as creating questionnaires (in the English skills course), followed by having students survey their friends, or by researching topics in the business course and having students create group reports and presentations. Throughout the programme, students were held accountable through individual assignments which followed on pair and group activities. Active interaction was encouraged throughout as students shared their opinions, questions, and ideas with classmates, teachers, and administers concerning the course content and inter-personal issues. Passive Interaction also occurred through the sharing of research materials, largely through email, and by means of print materials. Some of these materials, however, showed evidence of 'text borrowing' (Pennycook, 1996) or 'patch writing' (Pecorari, 2003), which raised questions of complicity among the students.

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[1] Interdependence, Accountability, Interaction, Social Skills, and Group Processing (Johnson & Johnson, 2005).

Students also took it upon themselves to use MSN chat while at home and discussed each lesson, prepared their assignments, or simply discussed socially related issues. Thus, the use of students' Social Skills coupled with Group Processing continuously occurred between students, teachers, and administrators.

The effect of community building and cooperative activities was that various forms of learning resulted. Vertical learning occurred when teachers presented content through a variety of mediums (PowerPoint lectures, discussions, debates) and provided interactive group exercises that encouraged deep discussions. Continuously sharing information allowed for students to propose hypotheses on how particular operations functioned, and gave other students the interactive space to evaluate these ideas, thus allowing for recursion to occur (Murphey, 2001). Students utilized their Presage by applying their previous knowledge with the current data being presented (Biggs, 1996), and then produced products which demonstrated this developing understanding.

In addition, Deep Learning had a horizontal effect when teachers in one subject, Economics, for example, taught on Adam Smith and the Division of Labour in the marketplace, and Sociology, which examines the social side of Division of Labour such as sexism or labour conflicts. By cooperating in the curricula and scheduling topics to coincide with each other, teachers created opportunities for students to broaden their understanding of the topics, and further the depth of knowledge that students can obtain. Ideas in each discipline spawned discussions that moved past a particular subject area and broadened students' understanding, thus promoting creative and critical thought.

CONCLUSION

Creating a Community of Practice that encouraged Cooperative Learning resulted in a broad spectrum of learning possibilities, utilizing vertical learning or discussion of topics and horizontal influences where curricula were coordinated to match that of other subjects, and necessarily influenced students' Deep Learning. Students were able to continuously review the subjects and issues in an environment that supported their aims through community building activities that stressed the success of the group over that of a competitive-based model of instruction.

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