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COMMUNITIES OF PRACTICE AT UNIVERSITY: A PRELIMINARY STUDY

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Abstract

A lot has been written about the benefits of Communities of Practice (CoP) at university. The benefits of Communities of Practice have been described with respect to lecturers' qualifications and teaching competencies influencing students implicitly, as well as to areas related to the students themselves. Many studies have proved the fact that the process of learning is of a social character (e.g. Lave, Wenger, 1991). That is why Communities of Practice present a suitable environment for collaborative learning, which makes the processes of generating, sharing and storage of knowledge easier. The present paper defines the concept of Communities of Practice on a theoretical level and moreover, provides a brief overview of the latest research on Communities of Practice with regard to education. Another part of the article focuses on pre-research into the Communities of Practice at the Faculty of Economics and Management (FEM) of the Czech University of Life Sciences Prague (CULS). Although the authors conform to the opinion that Communities of Practice are a natural feature and spontaneously develop wherever there is a need for sharing implicit or tacit knowledge, the pre-research focused on the verification of this premise in order to continue with research of a quantitative nature. The existence of the Communities of Practice was verified on the basis of fundamental characteristics following Wenger's model. Other characteristics considered significant in relation to Communities of Practice by McDermott were also investigated. Based on a group interview, the existence of Communities of Practice of the students at FEM of CULS was verified and a conceptual model created. The determined work prerequisites will be investigated in another phase of the research.

Key Words

Introduction

Many authors pay attention to the concept of communities in the area of education. In recent years, studies have focused both on teachers and students.

He An (2009) focuses on language teachers. She explores the theme of brokering as a situational factor which contributes to learning in a multi-party learning community. By means of empirical study, He An (2008) responds to the call for a more detailed probe into the collective learning experiences in communities of language teacher education and shows that the greater the knowledge gap among participants, the more brokering is needed.

Hezemans and Ritzen (2004) identify the benefits of Communities of Practice for individuals and educational organisations. They demonstrate these in the case of the University for Professional Education and Applied Science, Utrecht. They identify 15 benefits divided into 4 main categories: optimisation of the learning environment and educational innovation (related to organisation), raising the quality of work and innovation by the profession (related to community members). Andrew et al. (2009) confirm one of the benefits identified by Hezemans and Ritzen (also mentioned by Wenger, McDermott, and Snyder, 2002). They emphasise the importance of Communities of Practice in the process of developing professional identity. Andrew at al. (2009) focus their attention on the role of Communities of Practice in the process of developing a professional identity for nursing academics.

Vescio et al. (2008) deal with the impact of professional learning communities on teaching practices and student learning and prove that well developed professional learning communities have a positive impact on both teaching practice and student achievement. Learning communities are also examined by Wilson and her co-authors (2009), but they focus on the community of students. They investigate whether keeping Baccalaureate nursing students together in the same learning community throughout their entire clinical rotations (four semesters) is more or less helpful in fostering student satisfaction and team effectiveness. But they can find no correlation there. It is necessary to add that, in its approach, a learning community is not the same thing as a Community of Practice. It is more like a class which has been established by the university, not by student preferences, but according to different factors. There is the possibility that this class could become the Community of Practice, but it is not necessarily so. As stated by Wenger, McDermott, Snyder (2002), Communities of Practice are a most natural phenomenon and they appear spontaneously. Therefore, it is not necessary to create them artificially.

Chang et al. (2008) propose the construction of a journal-publishing community in a web-based coursework environment, designed to improve the efficiency of knowledge-sharing for a programming course, by endowing learners with roles. They indicate that the analysed journal-publishing community can effectively promote knowledge-sharing, improve the quality of students' coursework, and accordingly advance learning performance. Thrysoe's et al. (2010) also focuses on students. Their empirical study examines the influence of participation by final-year nursing students in a CoP. The results show that the students' membership in a CoP depends on what both the students and the members of staff do to make participation possible. Student participation is strengthened by the students and nurses showing an interest in getting to know each other professionally and socially and also by the students having the opportunity to contribute their knowledge. Thrysoe et al. (2010)

state that participation in CoP can become an essential factor in the clinical phase of nursing education.

The aim of the paper is to propose a conceptual model of Communities of Practice at FEM of CULS in Prague and to define work prerequisites as a starting point for further research.

To obtain a general overview of the investigated issues, the literature focusing on the concept of Communities of Practice in general and studies dealing with Communities of Practice in education were surveyed. Further, by conducting a group interview, we investigated the existence and basic characteristics of the students' Communities of Practice at FEM of CULS in Prague. Based on our findings, we determined work prerequisites for subsequent research and we compiled a conceptual model.

Material and Methods

Definition of explored concept

The framework for the concept of Communities of Practice is based on a publication by Etienne Wenger and his co-authors, considered to be the most recognised authors in this field. The articles used for the introductory part of this paper were found in the Scopus database, which ensures the quality of these sources.

Etienne Wenger (2004) defines three basic characteristics of Communities of Practice, i.e. domain, community and practice. He defines the sphere of action as a field of knowledge which interlinks the members of the community and thus creates the community identity. Communities are groups of people who are concerned with the sphere of action, with the quality of mutual relationships and also with the line of demarcation between the internal and external environments of the specific group. Wenger argues that experience constitutes the fundament of knowledge (methods, instruments, biography, events and documents) which is shared and further developed by community members. He assumes that, by combining these three elements, Communities of Practice are able to manage knowledge (Wenger, 2004).

Richard McDermott (1999) also uses three important attributes. He considers as crucial the type of knowledge (explicit information, tacit know-how, and thinking) that is shared by the community. Furthermore, he considers the level of involvement and identification of the members of a community (individual, community) and also the closeness of the ties between the shared knowledge and everyday work of the employees (special events, integrated into work). Every community shares both explicit and tacit knowledge. In each community there are both individual as well as collective relationships and each community takes into consideration the everyday work of its members. The only difference is in the importance assigned to the one or to the other option (McDermott, 1999).

Chris Collinson and Geoff Parcell (2004), argue that Communities of Practice are meant to bring together people with similar interests and experiences, who subsequently share their know-how, either in order to increase the qualifications of each individual, enabling them to do their job better, or to attain a common goal. Wenger (2005) also emphasizes similar interest and defines them as groups of people who share a common interest in something that they are already acquainted with, interacting with each other on a regular basis, in order to learn more about it. Leader and Strock (2001) also mention common interest and regularity of meetings. They speak of Communities

of Practice as groups based on a common interest, with members who regularly share information and learn from one another.

Hasanali et al. (2002) find that communities "can be a highly structured group that follows well-defined procedures for sharing practices or a very informal, loose collection of individuals sharing ideas." Communities of Practice have emerged as a potential theory of knowledge creation (Roberts, 2006) in recent years. McDermott (2000a) considers Communities of Practice to be "ideal vehicles for leveraging tacit knowledge because they enable person-to-person interaction and engage a whole group in advancing their field of practice. As a result, they can spread the insight from that collaborative thinking across the whole organisation." According to Krogh, Ichio and Nonaka (2000), communities offer an environment in which members of an organisation feel at ease, and thus, without fear, can discover unexplored regions.

Group interview

According to Tharenou (2000), interviews are usually conducted for the purpose of asking questions to discover the respondents' thoughts about and feelings towards issues, events, behaviours etc. The aim of the interview is to ascertain the interviewees' feelings and thoughts about a topic, rather than the interviewer influencing them.

Tharenou (2000) mentions several categories of interviews, such as structured, unstructured and semi-structured ones. Tharenou (2000) describes the group interview as an interview conducted of groups, where the group of people is the analysed unit.

The group interview took place according to a prepared scenario:

a) A group of 2nd-year students of Systems Engineering was chosen (the group consisted of 13 students plus one moderator);

b) The interview took place during the Summer semester in the academic year of 2010/2011 as part of a lesson on the subject of Knowledge Management SYI;

c) The session was divided into two parts - in the first part, students were introduced to the concept of Communities of Practice (definitions, basic characteristics, development models, community roles, typology of communities and their benefits and costs). The second part was dedicated to the group interview - the moderator developed basic fields of discussion (perception of the membership of a community; basic characteristics of the community based on Wenger's model and the three-dimensional model as defined by McDermott (as mentioned below) – members and their relations, focus, shared contents, interaction and identity). The moderator asked the question and then let students to discuss the topic. When one area had been covered moderator brought another question;

d) A written record of the interview was created;

e) Results were evaluated - information gained were sorted according criteria (Community, Practice, The kind of knowledge, Community interaction and identity and The relation of shared knowledge to studies) based on work of Wenger and McDermott;

f) Assumptions for further research were set.

Results and Discussion

Based on a group interview of 2nd-year students in the Master's study programme majoring in the field of Systems Engineering, we carried out the pre-research into the Communities of Practice at FEM of CULS. As a domain (Wenger, 2004), we advisedly selected issues connected with the studies at CULS. Other parts of Wenger's model (community and practice, see Materials and Methods) were subject to discussion. Further, the discussion focused on determining the individual elements of the model (see Materials and Methods) as defined by McDermott (1999).

Community

The students confirmed their awareness of belonging to a particular community and of sensing the borders of the community, i.e. the notion of the internal and external environments of the community. Members of the class of the same year are perceived as the core of the Community of Practice. In the case of this field of study, the year of class coincides with the study group, which is not always the case for other fields of study at CULS. Students in lower year classes are perceived as peripheral members.

With regard to these members, the students spontaneously expressed their frustration, as described by Wenger, McDermott and Snyder (2002). This is caused by the unequal engagement of individual members and, consequently, by their contribution to enlarging and maintaining the knowledge base of the community.

Even though the students were not able to determine their role within the community, they clearly identified their community coordinator whose role, according to Wenger, McDermott and Snyder (2002), is crucial for the community functioning. He/she is the main organiser of community events. His/her tasks include securing communications, stimulating interest and enthusiasm in the community and organising personal meetings.

Except for the students of lower year classes in the same field of study, the students described the community as closed, without members from other fields of study. However, students admitted that a connection exists with other study fields (specifically with Informatics and Economy and Management), because they have some similar subjects. They usually share study materials, tips and information about lecturers. They ruled out the membership of students from other universities. As an explanation, they mentioned the prejudice existing among students in similar fields of study at different universities.

This closeness may be conditioned by the very essence of the field of study which, unlike other fields of study at FEM, tends to be greater and more technically oriented. In other fields of study with a higher number of students and similarly in regard to their specialisation (e.g. Economy and Management and Business and Administration), we can expect the closeness not to be so intense.

Practice

As regards shared experience, this concerns the specialist knowledge necessary to pass exams successfully. Furthermore, it includes lessons learned, stories, tips and study materials. The students admitted that, within these areas, they also share with students in other study fields who took similar courses.

The sharing is done by means of personal communication as well as by ICT. The community runs web pages which serve both for sharing knowledge and storing it. This can again be determined by the specialisation.

The kind of knowledge

As was mentioned above, students share explicit knowledge in the form of study materials (e.g. lectures, lesson notes, information about lecturers, sample tests, essays etc.) and knowledge of an implicit nature in the form of lessons learned, stories, tips.

Community interaction and identity

The 2nd-year Master's study programme students majoring in Systems Engineering in most cases expressed a strong feeling of belonging to the community under discussion. However, if we had also included in our discussion students in lower years, we could assume that, with respect to the nature of their membership, their identification with the community would be weaker.

### The relation of shared knowledge to studies

The group interview revealed that the community shares both the knowledge related directly to studies as well as the knowledge which is instead related to the students' social life as such. Although the latter knowledge does not lead to the deepening of specialist knowledge, it has its own significance. It supports the development of the informal and friendly atmosphere which is essential for the life of the Community of Practice.

Based on the presented findings, we have compiled a conceptual model of the SE students' Communities of Practice at FEM of CULS (see Figure 1).
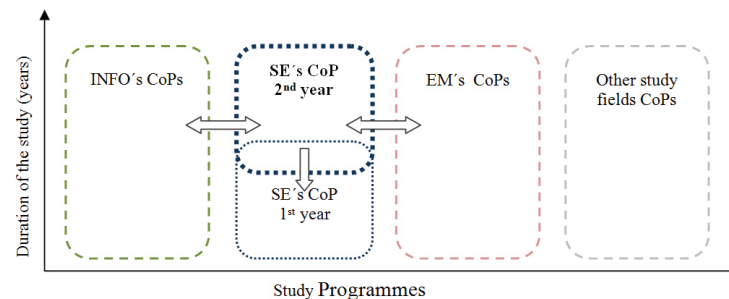
Fig. 1: SE Students' Communities of Practice at FEM of CULS

Figure 2 describes the 2nd-year SE´s Community of Practice, which is composed of core members (2nd-year students of SE) and of peripheral members. The core members foster knowledge and share the knowledge with the peripheral members.
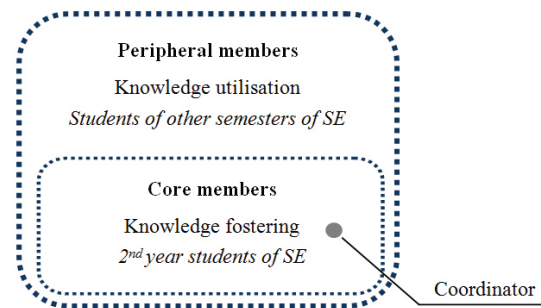
Fig. 2: Communities of Practice of Systems Engineering Students in the 2nd year

Conclusion

On the basis of the group interview results, we defined the prerequisites which will be verified by further research:

- Students' Communities of Practice are a common part of studies at FEM of CULS.
- Students' Communities of Practice at FEM of CULS mainly develop within individual study groups.
- Students of other universities do not belong to the students' Community of Practice at FEM of CULS.
- The students' Communities of Practice at FEM of CULS share lessons learned, stories, tips and study materials.
- Connections exist among study fields at FEM of CULS.

The nature of these links will be explored through subsequent research. Further research will also focus on the influence of Communities of Practice on students' success in their studies at FEM and on the benefits provided to their members.

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